Section I

Setting Standards

Setting Standards

"The National Council for Teacher Education as a statutory body came into existence in pursuance of the National Council for Teacher Education Act, 1993 (No. 73 of 1993) on the 17th August,1995. The main objective of the NCTE is to achieve planned and coordinated development of the teacher education system throughout the country, the regulation and proper maintenance of Norms and Standards in the teacher education system and for matters connected therewith. The mandate given to the NCTE is very broad and covers the whole gamut of teacher education programmes including research and training of persons for equipping them to teach at pre-primary, primary, secondary and senior secondary stages in schools, and non-formal education, part-time education, adult education and distance (correspondence) education courses" (NCTE website).

Though the norms and standards relating to physical aspects of the institutions are in place which is regulated by the NCTE, the need for setting functional standards still needs to be explored and implemented. The present theme on setting standards had some papers which have given some opinions about it. The recommendations from the theme papers have indicated a need for framing standards, covering the profile of teacher educator as well as the taxonomy of competencies at different levels. The code of conduct for teacher educators should be prepared, widely discussed and

used as non negotiable components of teacher preparation programmes.

There is a need to delineate the value addition components of professional development of teacher educators, in terms of service related issues covering improving qualifications, contributing professionally by way of attending conferences, seminars, symposiums on the one hand and output performance indices to achieve benchmarks in the transaction of the curriculum and excelling in one's own profession on the other.

There is also a need to articulate about treating teacher education program as a single continuum with teacher preparation as a starting point and providing on the job training and continued professional support by way of providing professional development platforms for teacher educators. In this process, teacher educators should be prepared to be reflective practitioners themselves and serve as a living model for their trainees in their training programmes. Hence, equipping all teacher educators with the philosophy and inherent aspirations of reflective practice has to be ensured.

The NCF (2005) has emphasized on important concerns which have served as significant departures from the earlier curriculum frameworks. They include Constructivism, Critical Pedagogy, Professional Autonomy of Teachers, Systemic Reforms, Subsidiarity Principle, and also

has listed major shifts from conventional perspective to learner centred perspectives. There is a need to reach out to teachers about their basic ideologies, their aspirations and prerequisites. For this to happen, teacher educators must be sufficiently equipped. Teacher educators are not only to adapt to the above concerns, they need to adapt to different changing contexts and circumstances as and when situations demands. They must also be able to communicate the need and necessity for contextualization of education so that their trainees would be able to achieve them when they actually become teachers. These adaptabilities and skills commensurate with the above could come with the development of meta cognitive abilities. Therefore, our approach should be to develop abilities to become relevant to all learners in varying contexts by becoming autonomous practitioners who are capable of the consequences of their autonomy of their own decisions and practices. Our standard setting activities need to keep the above in mind. The national level organizations like NCTE, and NCERT can take lead in articulating on the above issue and pave the way for enhancing the credibility of teacher education programmes in the country.

However, in the present seminar, different issues which can potentially contribute for setting standards have been discussed, though in an assorted manner. They include; the use of e sources for professional development of teacher educators, Quality issues in teacher educators, opportunities and challenges for professional development of teacher educators at elementary level, Teacher educator's competence

and attitude towards ICT, Professional development of teacher educators through use of ICT, Availability and utilization of ICT among teacher educators, Opportunities and challenges in the professional preparation and development of teacher educators, Facilitating professional development of teacher educators through web based programmes, and Strategies for integrating ICT in the professional preparation and development of teacher educators.

Editors

1. Reflective Practices and Teaching Competence among Teacher Educators

Introduction: The study is designed to explore the influence of the reflective practice on the teaching competence of the teacher educators. If teachers acquire teaching competencies and if they are enabled and empowered to their multiple tasks in the class room as well as in the school and the community in a genuine manner, then a chain reaction may begin with a sound teacher performance and its reaction of high quality learning among students. Professional competencies are necessary for every teacher to master by himself or herself. The study has been carried out on 110 teacher educators.

Reflective practices have very important role in teachers' professional and personal development and there by the development of the society. It gains wider acceptance in this technologically developed era even when the studies pertaining to them are very rare. Reflection is the fundamental process that enhances professional development. It is a kind of practice, which is subject to usual self-review for bringing their work in to more sophisticated forms. A sound and effective system of education results in the emboldment of learners' potentialities, enlargement of their competencies and transformation of their interest, attitudes and values. This emphasizes the greater importance in teacher cognition and

reflective thinking. Therefore the Teacher education must focus on enhancing the abilities of student teachers by introducing a strategic approach based on reflective practices.

Objectives of the Study: The present study intends to find out the influence of the reflective practices on the teaching competence of the teacher educators of Kerala. The specific objectives of the present study are stated below.

1. To test whether significant difference exists between the mean scores of reflective practices of male and female teacher educators of Kerala.
2. To test whether significant differences exists between the mean scores of reflective practice of teacher educators belonging to different levels of teaching experience.
3. To test whether significant differences exists between the mean scores of reflective practice of teacher educators working in urban and rural areas.
4. To test whether significant differences exists between the mean scores of reflective practice of teacher educators working in government, aided and unaided institutions.
5. To test whether significant differences exists between the mean scores of teaching competence of male and female teacher educators of Kerala.

6. To test whether significant differences exists between the mean scores of teaching competence of teacher educators belongs to different levels of teaching experience.
7. To test whether significant differences exists between the mean scores of teaching competence of teacher educators working in urban and rural areas.
8. To test whether significant differences exists between the mean scores of teaching competence of teacher educators working in government, aided and unaided institutions.
9. To assess the influence of the Reflective Practices of Teacher Educators on their Teaching Competence for the whole sample and the sub samples based on sex and teaching experience of teacher educators and locale and type of management category of the institutions.

Hypotheses: On the basis of the objectives of the study, the following hypotheses are formulated.

1. There will be significant differences between the mean scores of reflective practice of male and female teacher educators of Kerala.
2. There will be significant differences between the mean scores of reflective practice of teacher educators belonging to different levels of teaching experience.

3. There will be significant differences between the mean scores of reflective practice of teacher educators working in urban and rural areas.
4. There will be significant differences between the mean scores of reflective practice of teacher educators working in government, aided and unaided institutions.
5. There will be significant differences between the mean scores of teaching competence of male and female teacher educators of Kerala.
6. There will be significant difference between the mean scores of teaching competence of teacher educators belonging to different levels of teaching experience.
7. There will be significant differences between the mean scores of teaching competence of teacher educators working in urban and rural areas.
8. There will be significant differences between the mean scores of teaching competence of teacher educators working in government, aided and unaided institutions.
9. There exists significant correlation between the Reflective Practices of Teacher Educators and their Teaching Competence for the whole sample and the sub samples based on sex and teaching experience of teacher educators and locale and type of management category of the institutions.

Methodology: The study is a descriptive one based on empirical data. The data for the study has been collected from a representative sample of 110 teacher educators of Teacher Training Institutes in Kerala using random sampling technique. Reflective Teaching Practice Scale for Teacher Educators and Teaching Competence Inventory are used as tools. The collected data has been analyzed using descriptive and inferential statistics.

Results: The summary of findings of the comparison of mean scores of reflective practice scores of teacher educators are given in table.1

Table 1 Comparison of Mean Scores of Reflective Practice among Sub Samples

Groups Compared						CR
N_1	M_1	σ_1	N_2	M_2	σ_2	
Male X Female						1.392
50	105.12	7.86	60	102.63	10.86	
Less Experienced X Middle Experience						**2.653****
48	105.67	9.69	30	102.93	12.35	
Middle Experienced X More Experienced						1.721
30	102.93	12.35	32	101.69	5.67	
Less Experienced X More Experienced						2.467*
48	105.67	9.69	32	101.69	5.67	

Government X Aided						**2.3666***
48	104.33	8.27	8	91.50	5.78	
Aided X Self Financing						2.4627*
8	91.50	5.78	54	105.07	10.10	
Government X Self Financing						**1.820**
48	104.33	8.27	54	105.07	10.10	
Rural X urban						1.791
42	100.52	8.75	68	105.76	9.70	

* Significant at 0.05 level

** Significant at 0.01 level

From the table 1 it is seen that the critical ratio obtained, when means scores of reflective practices of male and female teacher educators were compared is 1.39, which is not significant. So there exists no significant difference between the mean scores of reflective practice of male and female teacher educators.

The difference in mean scores of less experienced, middle experienced and more experienced groups of teacher educators was tested for significance. The difference in mean scores of groups 1 and 2, 1 and 3, and 2 and 3 were tested for significance by calculating corresponding critical ratios. The result indicates that there exists significant difference of mean scores of reflective practice of teacher educators of less and middle experienced group at 0.01 level. The difference between mean scores of reflective practice of teacher educators of less and more experienced group is also significant at 0.05 level. But the analysis reveals that there exists no significant difference between the mean scores of reflective practice of teacher educators of middle and upper experience group. The less experienced teacher educators possess higher mean scores of reflective practice compared to the other two groups.

The difference in mean scores of teacher educators working in urban and rural institutes was tested for significance by computing the critical ratio. From the table it is clear that even though there is a difference in mean

scores of reflective practices of teacher educators working in rural and urban areas, it is statistically not significant. This means that there exists no significant difference between mean scores of reflective practice of teacher educators working in rural and urban areas.

The critical ratio obtained when the mean of the reflective practice scores of teacher educators working in government and aided were compared is 2.36 and the critical ratio obtained when the mean scores of the reflective practice of teacher educators working in aided and self financing institutions is 2.46. (Statistically significant at 0.05 level). But there is no significant difference between the mean reflective practice scores of teacher educators working in government and self financing institutions. It reveals that the reflective practice scores of teacher educators belonging to aided institutions are comparatively lower than the other two groups.

The summary of findings of the comparison of mean scores of teaching competence scores of teacher educators are given in table 2.

Table 2 Comparison of Mean Scores of Teaching Competence among Sub Samples

Groups Compared						*CR*
N_1	M_1	σ_1	N_2	M_2	σ_2	
Male X Female						*1.84*
50	*80.50*	5.11	*60*	82.38	5.65	
Less Experienced X Middle Experience						1.34
48	82.96	6.08	30	81.13	5.55	
Middle Experienced X More Experienced						*1.20*
30	81.13	5.55	32	79.75	3.70	
Less Experienced X More Experienced						*1.09*
48	82.96	6.08	32	79.75	3.70	

Government X Aided						1.483
48	80.54	4.68	*8*	81.25	6.76	
Aided X Self Financing						*1.51*
8	81.25	6.76	*54*	82.44	5.86	
Government X Self Financing						1.04
48	80.54	4.68	*54*	82.44	5.86	
Rural X urban						*1.01*
42	81	4.70	*68*	81.85	5.91	

From table 2 it is seen that the critical ratio obtained, when mean scores of teaching competence of male and female teacher educators were compared is found to be 1.84, which is not significant. Hence, there exists no significant difference between the mean scores teaching competence of male and female teacher educators.

Table No. 2 gives the result of test of significance of difference between the mean scores of teaching competence for different experience groups. It reveals that there exist no significant differences between the mean scores of less experienced, middle experienced and more experienced groups in the case of teaching competence.

The critical ratio obtained between mean scores of teaching competence of teacher educators working in rural and urban areas is 1.01 which is not significant and hence, there is no significant difference between the mean scores of teaching competence of teacher educators working in rural and urban areas.

The critical ratios obtained by comparing the mean scores of teaching competence of teacher educators working in government and aided institutions is 1.48, teacher educators working in government and self financing institutions is 1.04 and of teacher educators working in aided and self financing institutions is 1.51 respectively. It shows that the difference between mean scores of teaching

competence of teacher educators working in government, aided and self financing institutions are not statistically significant.

Relation between Reflective Practice and Teaching Competence of Teacher Educators

The correlation between Reflective Practice and Teaching Competence of teacher educators belongs to various sub sample based on sex and length of experience of teacher educators and locale and type of management of institutions are also calculated. The result of the correlation anlysis is presented in the table No. 3

Table 3 Pearson's Product-moment Correlation between Reflective Practice and Teaching Competence for the Total Sample and for the Sub-samples

Samples	N	r
Total	110	0.24*
Male	50	0.36**
Female	60	0.22*
Govt.	48	0.41**
Aided	8	0.91**
Unaided	54	0.22*
Rural	68	0.21*

Urban	42	0.28*
Lower Experience	48	0.36**
Middle Experience	30	0.36**
Upper Experience	32	0.38**

* Significant at 0.05 level

** Significant at 0.01 level

Table 3 shows the correlation between the reflective practice scores and teaching competence scores of teacher educators belonging to various sub categories and for the total sample. From the table it can be inferred that the reflective practice and teaching competence of teacher educators are positively and significantly correlated. It means, the reflective practice contributes to the nurturing of teaching competence of teacher educator.

Conclusions: Reflective Practices of Teacher Educators and their Teaching Competence are related and it influences the teaching competence positively. So the teacher education programmes at all levels must include strategies and programmes for the development of the reflective practice of the teachers as it will result in the improvement of the teaching competence of the teachers.

2. Does Professional Attitude influence Professional Development of Teacher Educators?

Introduction: The progress of a country depends upon the quality of its teachers and for this reason, teaching is the noblest among all professions and the teachers are called nation builders. But a teacher cannot perform his or her multifarious tasks and responsibilities as expected until he or she is updated professionally. So, like various other professions teacher education has assumed a special significance. Teachers with high attitude towards teaching profession may contribute much to the profession and seek pleasure in continuing in the profession. They remain dedicated to the profession even if other factors are not favorable. Such a teacher will be intrinsically motivated to remain in the profession and will derive pleasure out of it.

Therefore teacher preparation acquires a lot of importance. The success of teacher education depends on the quality of teacher educators. Professional development of teacher educators could be a contributing factor in this regard. Studying what influences the professional development of teacher educators would provide necessary insights to the management is creating a favorable atmosphere to facilitate professional development. The present study examines the professional attitudes of teacher educators with reference to background variables and also its correlation with their professional development.

Need and Significance of the study: It is the role of teacher educators to prepare future teachers to be lifelong learners and educational workers to create a learning society. Teacher educators can play such type of role effectively only if they develop professionally. The positive attitude towards profession leads to professional development. So, it is important to cultivate positive attitude towards profession in order to achieve success in professional aspirations. Hence it is necessary to study the relationship between professional attitude and professional development of teacher educators to improve quality of teacher education.

Objectives:

(1) To find out if there is any difference between teacher educators in their professional attitude with reference to background variables.

(2) To find out if there is any difference between teacher educators in their professional development with reference to background variables.

(3) To find out if there is any correlation between professional attitude and professional development of teacher educators with reference to background variables

Hypotheses:

1) There is no significant difference between teacher educators in their professional attitude with reference to background variables.

2) There is no significant difference between teacher educators in their professional development with reference to background variables.

3) There is no significant correlation between professional attitude and professional development of teacher educators with reference to background variables.

Methodology: The investigator has used survey method in the study. The population of the study comprised teacher educators from the colleges of education in southern districts of Tamil Nadu. A sample of 310 teacher educators was drawn by simple random sampling technique from the above population. Professional Attitude Scale developed by V. Srinivas (2008) and The Professional Development Checklist of Francisca (2009) were used to collect the data. The data was treated using the mean, standard deviation, t-test and correlation analysis.

Results and Discussions: The results and discussions of the study are reported Hypothesis wise.

Hypothesis 1: There is no significant difference between teacher educators in their professional attitude with reference to background variables.

Table 1 Difference between teacher educators' professional attitude with background variables

Variable	Categories	Count	mean	SD	t Value	Result
Gender	Male	120	50.53	9.36	0.75	NS
	Female	190	49.67	10.39		
Marital Status	Married	239	50.94	9.92	3.13	S
	Unmarried	71	46.82	9.68		
Years of Experience	20 & below	172	49.09	9.51	1.77	NS
	21 & above	138	51.13	10.51		
Qualification	With Ph.D.	101	50.84	10.55	1.00	NS
	Without Ph.D.	209	49.59	9.72		

S – Significant at 0.05 levels.

NS – Not Significant

From the above table it is evident that teacher educators differ significantly with reference to marital status in favour of married teacher educators, but not on any other variables such as gender, teaching experience & qualifications. It implies that professional attitude is not influenced by either by gender, experience or qualification, while marital status does. Probably the age of the teacher of the married is a contributing factor. However, this needs further exploration

Hypothesis 2: There is no significant difference between teacher educators in their professional development with reference to background variables.

Table 2 Difference between teacher educators in the professional development with reference to background variables

Variables	Categories	Count	Mean	SD	't' value	Result
Gender	Male	120	52.44	12.89	3.09	Significant
	Female	190	48.46	7.26		
Marital Status	Married	239	50.83	10.84	3.94	Significant
	Unmarried	71	47.09	5.36		
Years of Experience	20 & below	172	47.60	5.08	4.51	Significant
	21 & above	138	53.00	13.30		
Qualification	With Ph.D.	101	54.32	14.66	4.24	Significant
	Without Ph.D.	209	47.91	5.63		

Significant at 0.05 levels.

Analysis of the above table indicates that teacher educators differ significantly on their professional development with reference to gender, marital status, years of experience and qualification.

Hypothesis 3: There is no significant correlation between professional attitude and professional development of teacher educators with reference to background variables.

In order to study the relationship between the professional attitude & professional development, the data were subjected to correlation which yielded the following.

Table 3 Correlation between professional attitude and professional development of teacher educators

Variable	Categories		Count	'r'
Gender	Male	Professional Attitude	120	0.269*
		Professional Development		
	Female	Professional Attitude	190	0.338*
		Professional Development		
Marital Status	Married	Professional Attitude	239	0.280*
		Professional Development		
	Unmarried	Professional Attitude	71	0.369*
		Professional Development		

Years of Experience	20 & below	Professional Attitude	172	0.233*
		Professional Development		
	21 & above	Professional Attitude	138	0.322*
		Professional Development		
Qualification	With Ph.D.	Professional Attitude	101	0.337*
		Professional Development		
	Without Ph.D.	Professional Attitude	209	0.279*
		Professional Development		

*Significant at 0.05 levels.

The above table shows that there is a significant positive correlation between professional attitude and professional development of teacher educators across gender, marital status, years of experience & qualification. It indicates that they are directly related. As one goes up the other one also goes up. This finding contradicts the findings of Sylvester (2010). On gender, the male & the female differ significantly in favour of male. It means the professional development of male teacher educators is better among male than the female. This needs to be substantiated from other studies. As regards marital status, the married differ significantly from the unmarried in favour of the married teacher educators on their professional development. Probably age is a factor that can contribute here. As regards the years of experience, those who are 21 years & above differ significantly from those who are 20 years & below in favour of the former. This indicates that higher age is a favorable factor for professional development. With regard to qualification, those who have Ph.D have been found to be having significantly higher professional development in comparison to those who do not have Ph.D. This is easily understandable one. Professional development is higher among male, married with higher experience & higher degree. No significant difference is found between teacher educators in professional attitude with respect to gender. This finding contradicts the finding of Sumangala and Ushadevi (2008) & Sajna Jaleel (2007).

Conclusions: The results discussed above indicate that the professional attitude influences the professional development of teacher educators. The educational authorities should provide healthy academic environment in the training colleges so that the teacher educators feel satisfied and comfortable. They may give opportunities to attend to orientation programmes, refresher courses, workshops etc. This will help in updating teacher educators' knowledge, skills and competencies to cultivate positive attitude towards profession which in turn helps professional development. Since professional development refers to skills and knowledge attained for both personal development and career advancement, it is an essential part of guiding teacher educators to meet the challenges of teaching. Healthy academic environment, more salaries and other facilities may enhance the teacher educators' professional development.

3. Preparation of Teacher Educators through Outreach Programmes: An Examiner's Perspective

Introduction: To provide opportunities for the learners who either cannot or will not pursue their education in traditional universities and colleges, offer innovative courses and to meet the challenges of higher education, alternative programmes were attempted by many universities in India and abroad. The outreach is one of the alternative models to meet the challenges of higher education. According to Housego (1974), "The term outreach, which applies to community outreach and outreach counseling and refers generally to 'efforts to increase the availability and utilization of services, especially through direct intervention and interaction with the target population,' has been in use since 1974. The Karnataka State University Act 2000 made a provision for conducting various UG, PG including Specialized Courses through external mode of instruction through the Outreach Institutions within or outside University. The Karnataka State Government has endorsement for outreaching the specialized programmes like MBA, BBM, MCA and BCA. The Statute for Outreach mode to offer programs outside University area is duly approved by the Government of Karnataka and the Syndicate of the University after fulfilling the essential requirements. This is mentioned in the Karnataka State University Act 2000 under Sec. 5, Sec. 29(2) (t), Sec. 40(1) and Sec. 66. The outreach institutions must have the following essential facilities:

Infrastructure Facilities: The minimum Built up area and Carpet area of each Campus – Minimum 5000 sq ft.

1. Minimum 4 classrooms with capacity of 30 students in each.
2. Separate Rooms for Faculty.
3. One Seminar Hall with a capacity of 75 with audio video system and an Auditorium.
4. Psychology Laboratory with one instrument for every 10 students in Teacher Education Courses.
5. Common rooms for Male and Female students separately with all essential facilities.
6. Toilet facilities for male and female students and separate toilets for staff.
7. Office room for supporting staff and separate room for the Director.
8. Indoor recreation facilities.
9. Canteen Facility.
10. Hostel Accommodation separately for male and female students within the campus or out campus.
11. Computer Lab with one PC for every 10 students.
12. Open space with an approach to the Auditorium.
13. Library facilities as per the NCTE norms. The Library must have facility to access national and international journals as well as research reports of different organizations.

14. The faculty student ratio suggested in Karnataka University Act is 1:12. The NCTE has suggested 1:7 for Post Graduate Teacher Education Programme.
15. The nature of above infrastructure can be either by own or by lease.

The Karnataka State University Act 2000 has made a provision to go beyond the jurisdiction of the university and higher learning institutions to provide higher education to the students who are interested in higher learning. This has helped to overcome the obstacle of the jurisdiction of the university and helping the aspirants of higher education and aspirants of various innovative courses offered in different universities and higher learning institutions. The University of Mysore, Mysore, provides an opportunity for learning through the innovative courses through the Outreach Programmes based on the provisions given in Karnataka State University Act 2000. The University has started the Directorate of Outreach Courses to identify the institutions and courses to offer through the outreach institutions in India and abroad.

An outreach Programme operates as a stand-alone facility using a variety of approaches to meet the individual needs of learners in higher education institutions to complete the courses. The Outreach Programmes will provide students with educational services like regular students in traditional institutions of higher learning. These provisions are in addition to distance learners.

The teacher educator preparation programme known as Masters Degree in Education (M.Ed.) is one of the courses offered by the University of Mysore, Mysore for candidates who desire to pursue post-graduate degree in education. This programme is for preparing teacher educators. It also aims to provide training to the educational administrators, supervisors and researchers. This programme has the combination of theoretical courses including specialized courses in the discipline of education and related practical/field work including exposure to and training in a teacher education institution. In addition to this, research work in the form of a dissertation is essential. It provides opportunities for students to extend their knowledge and understanding in education in general and teacher education in particular. It also helps acquisition of research skills in education.

The University of Mysore, Mysore has offered this teacher educator preparation programme known as Masters Degree in Education (M.Ed.) through the outreach centres in various parts of the country based on the norms of Karnataka University Act 2000. The University of Mysore has entered into Memorandum of Understanding (MoU) with the institutions and organizations which fulfill the norms as specified by the Government of Karnataka in their Karnataka University act 2000. The institutions and organizations that are having the above mentioned essential facilities and infrastructure to offer the Masters Degree in Education (M.Ed.)

course through the outreach programmes have applied for setting up the outreach centres.

The Masters Degree in Education (M.Ed.) is a professional course to prepare the teacher educators. The teacher educators are the role models to student teachers and teachers. The competence of teacher educators will have impact on the professional preparation of teachers. Therefore, the NCTE has stipulated certain norms for Teacher Education Institutions to offer Teacher Education Programmes at Graduation as well as Post Graduation levels. The NCTE has provided norms and standards for Master of Education (M.Ed.) programme to prepare the quality teacher educators who can work effectively in teacher education institutions. To achieve this task through the outreach institutions, the University of Mysore, Mysore made an attempt by entering MoU with the institutions and organisations in Chittoor and Kakinada in Andhra Pradesh, Jammu in Jammu & Kashmir and Savaimadhapur in Rajasthan.

The present paper is an attempt to provide a critical analysis of the norms and standards of NCTE and essential requirements for running Outreach courses as Karnataka University Act 2000 course objectives, transactional approaches adopted and monitoring mechanism and support of the university to focus on issues related to relevance, suitability and lacunas in the course organization. The following table gives a comparison of essentially required facilities to

run outreach programmes as mentioned in Karnataka University Act 2000 and essential physical facilities required for teacher education institutions to offer M.Ed. Programme:

Physical Facilities specified in Karnataka University Act 2000	**Physical Facilities required for M.Ed. course as per NCTE norms**
Minimum Built up area and Carpet area of each Campus - Minimum 5000 sq ft.	4000 sq. mts. of exclusive land with a built-up area with a built up area of 500 sq.mts. Exclusively earmarked for the M.Ed course shall be necessary.
Minimum 4 classrooms with capacity of 30 students in each and 9 sq. ft. space per student	One classroom and Separate Activity Rooms for various instructional activities.
Separate Rooms for Faculty	Separate rooms for the Professor/Head and for faculty members to accommodate seven to eight students
One Seminar Hall with a capacity of 75 with audio video system and an Auditorium	One Hall cum Seminar room

Laboratory - Must for science courses	Psychology Laboratory with one instrument for every 10 students in Teacher Education Courses
Common rooms for Male and Female students separately with all essential facilities	Common rooms for Male and Female students separately with all essential facilities
Toilet facilities for male and female students and separate toilets for staff	Toilet facilities for male and female students and separate toilets for staff
Office room for supporting staff and separate room for the Director	Office room for the administrative staff and a store room
Indoor recreation facilities	Not specified in NCTE norms
Canteen Facility	Not specified in NCTE norms
Hostel Accommodation separately for male and female students within the campus or out campus	Hostel Accommodation separately for male and female students within the campus or out campus

Computer Lab with one PC for every 10 students	Computer Lab with modern PCs and Educational software.
Not Specified	Separate Lab for Educational Technology with necessary equipment.
Open space with an approach to the Auditorium	Not specified in NCTE norms
Library facilities/learning resources - Must with min of 100 titles for each branch of study, also must have facility to access national and international journals	The Library must have facility to access national and international journals as well as research reports of different organizations
The faculty student ratio is suggested in Karnataka University Act is 1:12.	The NCTE has suggested 1:7 for Post Graduate Teacher Education Programme with one Professor, one Associate Professor and three Assistant Professors for a basic unit of 25 students.

Nature of Infrastructure: Own/Leased. In case of lease, lease agreement should be at least 5 years from the date of commencing the Outreach programs.	Nature of Infrastructure: Own/Leased. In case of lease, lease agreement should be at least for a period of 30 years.

The author visited the Outreach Institutions of University of Mysore, Mysore offering the M.Ed. programme at Chittoor and Kakinada as an examiner. The following observations are made:

Component	**Chittoor**	**Kakinada**
Intake	25 students	25 students
Staff	5 Academic Staff. One staff member retired from State Government and others were not having any experience of teaching.	5 Academic Staff. All the staff members do not have any experience of teaching in teacher education institutions.
Class rooms	One class room	One class room
Psychology Lab	No Psychology Lab	No Psychology Lab
Educational Technology Lab	No Educational Technology Lab	No Educational Technology Lab

Library	No separate room and books and other equipment are not adequately available.	No separate room and books and other equipment are not adequately available.
Hostel	Not available	Available only for Women Students in a Rented house
Staff rooms	No separate staff rooms. It is common room for all the staff	No separate staff rooms. It is common room for all the staff
Play Ground and Play material	No play ground and play material	No play ground and play material
Building	Rented building and it is not as per the NCTE norms and Karnataka University Act 2000	Rented building and it is not as per the NCTE norms and Karnataka University Act 2000
Any other institutions managed by the same trust	No educational institution in Chittoor	Only Kakinada is having their own secondary school.

The University visits the outreach centre only once to verify the requirements of the university. The university has not taken the responsibility of monitoring the instructional activities. Due to this, the instructional activities are not conducted as per the expectation of the university. The University of Mysore appointed the author as an examiner to conduct the viva-voce examination at Outreach Centers in

Chittoor and Kakinada. It was observed that the quality of dissertations is very poor. The students have very poor knowledge of various components of research methodology. This was reflected in the University examination also. The academic staffs who are involved have not taken keen interest in equipping these prospective teacher educators. There is no permission from NCTE to run Master of Education (M.Ed.) programme through these outreach centres. The university also realized the obstacles in running Master of Education (M.Ed.) programme through outreach centres and therefore, limited it to one year. The university should have evolved common norms for permitting to run the Master of Education (M.Ed.) programme through outreach centres based on NCTE norms and standards and Karnataka University Act 2000. The university should have permitted the institutions and organizations which have the experience in managing teacher education courses. It would have been little better, if the university had recognized selected teacher education institutions which have necessary facilities.

The M.Ed. programme comprises theoretical courses like Philosophical Foundations, Psychological Foundations and Sociological Foundations of Education; Research Methodology in Education and using of Statistical methods for data analysis, along with specialized courses like Educational Technology, Management of Education, Inclusive Education, Teacher Education and Educational Evaluation. All these courses have

related practical work which is to be done in the laboratory like Psychological experiments etc., and the related field work like exposure visit to different teacher education centres, in-service teacher training centres and the Internship in the teacher training in a teacher education institution. In addition to this each of the prospective teacher educator should carry out a minor research work in the form of a dissertation which is an essential part of the M.Ed. programme. This programme is aimed at promoting opportunities for prospective teacher educators to extend as well as deepen their knowledge and understanding of Education with a specialization in selected area of Teacher Education along with acquiring of research skills. Therefore, the organization of M.Ed. programme through the outreach centers is difficult to promote research skills and essential skills required for teacher educators. Hence, the University of Mysore, Mysore has taken the decision to stop the offering of M.Ed. programme through the outreach centres.

4. Making Assessment a part of Learning: Teacher Educators Design Rubrics for their Classrooms

Introduction: Assessment is defined as a systematic and ongoing process of gathering, analyzing, and using information from multiple sources to draw inferences about the characteristics of students, programs or an institution for the purposes of making informed decisions to improve the learning process (Linn and Miller 2005). This comprehensive definition of assessment gels well with the ideas that emerged from current reforms and deliberations in the field.

Shifts in our understanding of assessment: In the past few decades, there has been a paradigm shift in our understanding of assessment and issues that relate to it (Gipps 2010, Gifford and O'Connor 1992). Acknowledging the shift, from an over-reliance on psychometrics to the current forms of reflection and critical engagement, has brought along a fresh perspective. The change has not just been in our understanding of the purposes and tools for assessment but also in the implications that it has for teaching-learning practices. The ferment has generated literature replete on purposes of assessment, what and how to assess, how to interpret and respond – the five dimensions suggested by Rowntree (1977). It is hard to miss a synchronous development in curricular documents which promote efforts towards integrating novel assessment strategies. However, what is missing in the entire canvas of these developments is the support available to the

teacher. Rarely are opportunities tailored to encourage teachers to appreciate and engage with the diverse issues that underlay assessment in learning.

Promising, but a less chartered territory: The current discourse on educational reforms envisages assessment to include, in a deeper sense, the impact of the role of a teacher, student and the relationship between them in teaching-learning environment. Coupled with these discussions, is a veracious belief in the need for continuous and comprehensive evaluation (CCE), which is equally heartening. For instance, the National Curriculum Framework for Teacher Education (2009) asserts: "In the view of the many-sided objectives of teacher education, the evaluation protocol needs to be comprehensive and provide due place for the evaluation of attitudes, values, dispositions, habits and hobbies, in addition to the conceptual and pedagogical aspects through appropriate quantitative as well as qualitative parameters."

These ideas, though promising, do not discuss the means to realise these larger goals. In all the deliberations on assessment, there seems to be a tacit understanding of an external agency or a 'standard' framework or as Elliot (1993) refers to "a construction of 'outsiders' rather than 'insiders'" who design appropriate ways of assessing the teachers' performance. Such a tunnelled understanding of assessment for merely accountability misses out on the value and purposes

of assessment in learning, which Earl (2003) describes as 'Assessment *of* learning', 'Assessment *for* learning', and 'Assessment *as* learning'. Teacher education and development programmes need to integrate experiences that go beyond prescribing strategies, frameworks or standards. A means of assessment that is contextual and authentic, engages individuals to collaboratively develop criteria as well as performance markers, and involves a shared understanding of the processes and goals of teaching-learning, is something to strive for. This, till date, remains an uncharted territory and has been largely left unexplored. This paper attempts to show through an example, how rubrics could serve a means to empower teacher educators to review their ways of thinking about assessment in teaching-learning by helping them to provide constructive feedback to teachers.

Rubrics: Means to assess and give feedback**:** A rubric is a scoring scheme or guide that consists of specific characteristics of a product, project, or performance at varying levels of achievement, developed to clarify expectations and give feedback on the performance (Mertler 2001, Moskal 2000). Johnson, et al (2010, p48) characterise rubrics as tools for: (a) communicating specific expectations and grading criteria based on examples, (b) measuring or quantifying a stated objective or standard (e.g. performance behaviour, skill, or quality), (c) assigning levels or using a range to score performance, and (d) describing the degree or amount to

which a standard has been met, based on ascending levels. What emerges from the description and characterisation is the fact that rubrics can play several significant roles. They can be variously employed to making a judgment of quality, a meta-cognitive analysis of progression through different levels of learning or an evaluative description of performances on benchmark descriptions.

Rubrics can be broadly classified as holistic and analytic (Johnson et al., 2010). A holistic rubric is for scoring the overall process, product or performance as a whole without judging component parts separately. For instance, a level of performance can be described by taking into account criteria of a process, product or performance, as a whole. In, contrast to this, an analytic rubric involves thick descriptors for each of the criteria that tells about the level of performance and what does being at a particular level mean. Performance on each criteria can then be summed together to obtain a total score or a complete understanding of the product, process or performance being assessed.

To illustrate the features of a rubric, I draw upon an example of a part of an analytical rubric designed by a group of Educational Officers (henceforth referred to as EOs) for analysing their teachers engaged in classroom teaching (see Figure 1) as part of the study mentioned in this paper. In an analytical rubric, the three important aspects that need consideration have been discussed by Dornisch and

McLoughlin (2006). Criteria are specific categories on which product, process or performance is being evaluated. Levels of performance are the ratings that differentiate between varying levels of quality in judgments about product, process or performance, which may be expressed as qualitative labels and/or quantitative points / scores. Descriptors are textual narratives that describe the evidence on which a work is judged across criteria and levels of performance. This study discusses design and potential use of analytical rubrics by teacher educators / EOs as an effective means to make informed judgments about teachers and their teaching practices.

Methodology: The intervention study is part of a 5-day workshop on "Constructivism in Education" conducted for the Education Officers (EOs) of an institution which runs more than a thousand English medium schools in several parts of India. The work profile of EOs includes field visits to schools; monitoring academic activities; conducting enrichment sessions for teachers; and observing classrooms and giving feedback to teachers so that they improvise on their teaching practices. Besides, EOs also mediate problems and concerns of teachers to the school principals and authorities. Hence, they serve a critical, supportive role in the school system.

The study: A four hour session addressed issues of assessment in learning. The session was organised to include a presentation, a group activity followed by sharing and discussion of ideas. The 40 minutes presentation began with

an effort to make a connect between the supportive role of EOs with the purposes of assessment. It was followed up with a discussion on the forms of assessment, tools for assessing, and aspects of validity and reliability. Rubrics were discussed as one of the important means of assessing individuals' performance and for giving elaborate feedback. The presentation was followed by an activity of designing rubrics which encouraged the EOs to work together in groups and help them see how assessment strategies could be brought to use in practice. A few examples and general principles for constructing rubrics were also shared. The EOs volunteered to organise themselves in groups of 3-5 individuals each. They engaged in developing a rubric for observing active classrooms and for giving supportive feedback to teachers. The groups then shared their rubrics with other groups and discussed the criteria employed. The rubrics were then showcased on a board so that the discussion and sharing could continue informally as well.

Data and Unit of analyses: The presentation, audio-visual records of the session, rubrics designed and feedback are all sources of data that help draw useful insights from this intervention study. More importantly, the unit of analysis, is distributed in the process (dynamics) of engagement as well as in the outcomes (rubrics as products) and reflections of teacher educators /EOs. In a nutshell, this paper is an attempt to present the dynamics during the intervention and through an empirical case, demonstrates how such an engagement

holds promise of bringing about a meaningful and productive interaction between teacher educators and teachers. Such an approach has important implications for programmes of teacher education and continuous professional development of teachers.

Analysis and insights: This paper reports an experience of a workshop with education officers, who were exposed to the idea of rubrics and were later engaged in designing appropriate rubrics for analysing classroom teaching. An exposure to rubrics and its value in assessing teachers and providing feedback were important aspects that the Educational Officers (EOs) so readily related to. EOs engages in this process quite often and interprets the classrooms to give appropriate feedback, usually formulated along the well-laid norms of the standard classroom observation schedule. The activity of designing rubrics to make meaning of observations of classrooms was taken positively by EOs who frequently engages in interactions with teachers. This section presents insights from the analysis of the intervention, the rubrics that the EOs generated, and feedback they shared. The analysis is organised in terms of insights from the activity followed by those from the outcomes. It is important to mention that this distinction of processes and outcomes is a superficial one. In reality, the two seamlessly interact and influence each other.

Insights from the activity (processes): Designing rubrics to observe and assess teachers in classrooms was a

novel activity for the teacher educators /EOs. They mentioned that usually the set of criteria or a framework comes from the authorities, which they need to fill in during their school visits, while informing the teachers about the problems found through classroom observations. A classroom is a complex space of an ongoing, dynamic discourse. To tease out factors that may contribute to effective teaching-learning is also a way to disentangle the construct of classroom. This activity helped realise the potential of a shift in perspective. A framework accepted as a 'given' from authority to be implemented can now be seen as 'emergent' with flexibility to construct, reflect and revise based on field experiences. The engagement in creating the assessment module, which they would use in their classrooms, gave rise to discussions on the nature and kinds of practices expected from teachers seen in light of the prior experiences (of classroom observations) that EOs recalled and referred to.

Initially, groups of EOs tried to draw ideas from their standard classroom schedule, but they soon realised that the rubrics require them to give criteria, levels of performance as well as thick descriptors, measurable for each level. Such a situation stimulated them to think about the nature and kinds of criteria to be used. In a sense, teacher educators were trying to operationalize the construct of 'effective classroom practices' through explication of various criteria and descriptors for levels of performance. The groups made drafts and scribbled their ideas on rough sheets till they achieved a reliably satisfying set

of criteria and descriptors. The general observations become specific while discussing descriptors and ascribing them to appropriate levels of performance achievement. The EOs realized that the rubric places the teacher/learner on a progression trajectory rather than just ascribing a numerical value or a statement left to diverse interpretations. Besides, they also mentioned that there is scope for an ongoing refinement and enrichment that also draws from field experiences. Observing contexts of practice allows one to include and fine tune the descriptors. EOs mentioned that the activity helped them make meaning of assessment tool and relate to it in more informed ways. Engaged in the task of creating rubrics, negotiations on their role as EOs was carried out. It was discussed that rubrics need to be designed with the perspective of being able to support the teachers and give them feedback which is useful in improving the teaching-learning practices. Another interesting discussion among them was on selecting the appropriate number of levels of performance, which sufficiently describe the complexity of teaching in classroom. A lot of conversations triggered among individuals within a group and across groups continued till the end of the sessions, and the experience of creating rubrics was often related to discussions in other sessions.

Insights from the Products (Outcomes): Each group shared their rubric with others. They responded to queries and clarified the doubts raised. They willingly refined their rubrics in response to the feedback from their peers. It was

noticed that the groups preferred either a 3 or 4 point scheme for levels of performance in their rubrics, with an effort to ensure that the labels reflected a progression and were carefully defined. The levels were validated by other teachers by posing real situations of classroom observations and identifying their place in the rubric. Interestingly, groups had variations as well as similarities in the criteria they had selected and described to be a part of their rubric. If we were to pool the different criteria from all the groups, a set of 14 different criteria emerged to analyse classrooms. This clearly is a testimony of the richness and value of a collaborative endeavour involving design of rubrics for assessing active classrooms. More importantly, the criteria were not just limited to those that addressed issues of content (e.g. content knowledge, preparedness of teacher, etc.) and pedagogy (e.g. strategies used, use of teaching aids, demos/activities, etc.). They included issues of classroom management, and meta-cognitive elements of post-lesson reflection and nature of curricular transactions. The reflections gained from the years of experience of teacher educators was evident in the ways they explained their categories and substantiated its significance for assessing teacher learning.

The findings of the study suggest that rubrics were used as concrete aids for identifying and reflecting on areas that teachers need to work on. Teacher educators can use these as means of constructive feedback to teachers, in line with the objective of assessment *for* learning. In a subtle sense, rubric is a way of explicating not just *what* and *how much* one has

achieved, but also what one *needs to strive for* to make progress in learning. This clarity and awareness in terms of learning is quite insightful for further progress. Also, the rubric in a democratic sense highlights one's areas of strengths and weaknesses rather than labelling someone as bluntly incompetent or inefficient. Rubrics thus can be a powerful resource for communicating messages that exhibit transparency and is open for self-reflection and mapping progression to facilitate learning.

Drawing on the analysis of rubrics, insights from engagement of EOs and their appreciative feedback, it is further argued that rubrics have potentials for engaging teachers and teacher educators in rethinking about the strategies for assessment and in making learning much more meaningful.

Learning for Continuous Teacher Professional Development: In recent years, the need for continuous professional development of teachers has been emphasised (NCTE 2010). Drawing insights from this experience of an interaction with EOs / teacher educators, an effort is made here to bring to light some learning's that could be integrated with programmes of teacher education and continuous professional development of teachers.

In programmes of teacher education and development, a lot of emphasis is laid on internalising the strategies and formulating ways of achieving well-laid outcomes. Assessment,

which is one of the most challenging areas in education, is a vivid example of case where the tools for assessing and standards for measuring performance come as a 'given'. In such cases, there seem to be a following of norms. Teachers, who in principle can be agencies of change and bringing about social transformation, turn out to take the role of 'meek dictators' (Kumar 1991/2005). In light of reforms in education, it would be fruitful to re look at issues of assessment and how it could be effectively tied to inform practice.

Using the experience of an engagement in designing rubrics for assessing teachers and their classroom practices, this paper illustrates that assessment makes more meaning when embedded in the context and gains relevance when evoked from practical circumstances of the people involved. In this particular case, the freedom to think of criteria for developing a rubric for classroom observations of teachers, led groups of EOs to encapsulate their ideas of an effective classroom practice. Besides appreciating diverse ideas, such a collaborative activity creates a sense of ownership from sharing of ideas and concerns about practice. This engagement becomes an 'authentic' context to talk and discuss about teaching-learning and reflect on concerns of teachers as well. It is proposed that emergent rubrics thus developed, would allow scope for contextually driven criteria, with a greater sense of ownership and involvement of teachers. The community may benefit from the supportive interactions among peers and teacher educators.

Also, this paper argues that in contrast to having pre-determined frameworks for observing, monitoring and feedback, assessment rubrics designed by teacher educators are to be used for giving appropriate feedback to teachers. The rubrics designed through a collaborative venture of EOs are grounded in rich, contextual field experiences gained from observing teacher practices. Such an endeavour, in true sense will contribute to developing a process for teacher education envisaged in the document of National Focus Group on Teacher Education for Curriculum Renewal. The process envisaged is one that "provides opportunities for self-learning, reflection, assimilation and articulation of new ideas; developing capacities for self-directed learning and the ability to think, be self-critical and to work in groups" (NCERT 2006). The questions on sustainability of ideas developed from such collaborative endeavours and trialling of such ideas which support teachers and teacher educators, can pave the way for further inquiries in the field of teacher education and development.

5. Emotional Intelligence: A *Sine Qua Non* for Professional Development of Teacher Educators

Introduction: Teacher Education Programme aims at equipping prospective teachers with essential skills suiting to the very nature of students and continuous up gradation of those skills, so that teachers can play vital roles they are supposed to play. Only, quality teacher education programme can help teachers in overcoming difficulties associated with pedagogy. But, quality of teacher education programme is determined by professional qualities of persons who participate in its transaction. Theory of 'Observation Learning' proclaims that each individual tries to assimilate some attributes from the behavior of others provided that, he/she is in direct or indirect interaction with them. Undoubtedly, professional skills of teacher educators exert influence on the prospective teachers. A teacher educator with good professional skills will exert salutary effect on the professional development of prospective teachers, and becomes a model for them.

So, professional development of teacher educators cannot be taken for granted. Teacher educators must be encouraged and helped to develop such skills suiting to the very nature of their profession. Question arises here - what constitutes professional development of teachers educators? Teaching by its very nature exists in social context, so, teacher educator must develop such personal and social competencies, which will facilitate creative and effective handling of inter-

personal relationships. It is the conduciveness of social context that facilitates a dynamic interchange between the minds of the teacher and students, which is the hallmark of effective pedagogy. According to Goleman (1995) - personal and social competencies constitute, what is called 'emotional intelligence'. Emotional intelligence is social and emotional learning, which comprehends awareness of emotions in self and others, monitoring and regulation of emotions, and social skills.

According to Goleman (1995), IQ accounts for only 20% of a person's success in life, the balance can be attributed to 'emotional intelligence'. Emotional intelligence of a teacher helps cultivate positive, warm, and supportive relationships with students and his/her community. Emotional Intelligence can be easily cultivated and nurtured in individuals. The way emotional intelligence of teacher educators can help students and teachers navigate successfully across academic career and translate his/her potential into optimum performance at work place. This can be understood when we ponder over the competencies which come under the umbrella of emotional intelligence. Competencies which constitute emotional intelligence are enumerated under different dimensions of emotional intelligence-

Dimensions of Emotional Intelligence

Self-Awareness

- Recognizing and naming one's emotions

- Understanding the reasons and circumstances for feeling, as one does Self-Regulation of Emotion
- Verbalizing and coping with anxiety, anger and depression
- Controlling impulses, aggression, self -destructive, and anti-social behavior
- Recognizing strengths in and mobilizing positive feelings about self, school, family and support networks.

Self-Monitoring and Performance

- Focusing on tasks at hand
- Setting short-term and long-term goals
- Modifying performance in the light of the feedback one gets
- Mobilizing positive motivation
- Activating hope and optimism
- Working towards optimal performance states

Empathy and Perspective Taking

- Learning how to increase and develop feedback mechanisms for use in everyday life
- Becoming a good listener
- Increasing empathy and sensitivity to others' feelings
- Understanding others' perspectives, points of view and feelings

Social Skills in Handling Relationships

- Managing emotions in relationships, harmonizing diverse feelings and viewpoints
- Expressing emotions effectively
- Exercising assertiveness, leadership and persuasion
- Working as part of a team/cooperative learning group
- Showing sensitivity to social cues
- Exercising social decision-making and problem solving skills
- Responding constructively and in a problem solving manner to interpersonal obstacles

Source: *Elias et. al.*

Emotional Intelligence and Teaching Profession: A study carried out by Singh (2003) revealed that high level of emotional intelligence is essential to succeed in teaching profession. It further added that a teacher with high IQ may not necessarily be high on competencies associated with emotional intelligence.

A study by Singaravelu (2008) revealed that Emotional Intelligence of student teachers in Puduchery was above average. With respect to Self-Awareness, their performance was found to be high. The group appeared to be high on this perspective of ability to read own emotions and others' and manipulated them accordingly. In the case of Self-Management and Social Awareness, the teacher educators' performance

was found slightly above average. Findings of various studies brought into light, the necessity of cultivation and nurturing of emotional intelligence in teachers.

Emotional intelligence is a skill of self-control, zeal and persistence and the ability to motivate oneself (Goleman, 1995). This concept advocated for the skill that was reflected through effective performance. Goleman (1995) viewed emotional intelligence as a sum total of personal and social competencies. Personal competence determines how we manage ourselves, whereas social competence determines how we handle our inter-personal relationships.

Personal Competence of Emotionally Intelligent: Personal competence comprises three dimensions of emotional intelligence, such as, self-awareness, self-regulation and motivation. Self-awareness is the ability of an individual to observe himself/herself and to recognize 'a feeling as it happens' (Goleman, 1995). It covers,

(a) Self-confidence:- The courage that comes from certainty about our capabilities, values and goals.

(b) Emotional awareness: - The recognition of how our emotions affect our performance and ability to use our values to guide decision making.

(c) Accurate self-assessment- A candid sense of our personal strengths and limits, a clear vision of where we need to improve and the ability to learn from experience.

A teacher educator with competencies of emotional awareness and self-control will recognize underlying reasons of good or bad feeling of emotions and will also identify which one can derail performance. He/She subsequently, can manage his/her impulses and distressing emotion well and will stay composed and positive. Charters and Waples, (1929); Jensen and Witty, (1947); Evans, (1962); and Naidu, (1979) in their studies have identified self-confidence and self-control (calmness, control over impulses and sobriety) as important traits of successful teachers (as cited by Adaval, 1979). A teacher with accurate self-assessment competency becomes aware of his/her strengths and weaknesses and shows capacity of self-criticism and willingness to learn from experience and feedback. Panton (1948) found that a capacity of self-criticism correlates with teaching efficiency (as cited by Adaval, 1979).

Self-regulation is the ability to control emotions and to redirect those emotions that have negative impact. The hallmarks of this ability are-

(a) Trustworthiness:- Displaying honesty and integrity.

(b) Adaptability:- Flexibility in handling change and challenges.

(c) Self-control:- Managing disruptive emotions and impulses effectively.

(d) Conscientiousness:- Dependability and responsibility in fulfilling obligations.

(e) Innovation:- Being open to novel ideas, approaches and new information.

A teacher with competencies of trustworthiness and conscientiousness will display honesty and integrity and try to keep commitments and promises. Charters and Waples,(1929); Evans, (1962); & Naidu, (1979) in their studies found adaptability, consistency, self-control, honesty, control over disruptive emotion and the like as important traits of successful teachers(as cited by Adaval,1979). A teacher with competence of adaptability is capable of handling change and is able to act in uncertain situations. Charters and Waples (1929) in their studies found adaptability as significant trait of teacher (as cited by Adaval, 1979).

Motivation is the ability to channelise emotion to achieve a goal through self-control and by moderating impulses as per the requirement of the situation. The components of this ability are-

(a) Optimism

(b) Commitment towards organizational as well as individual goals, and

(c) Achievement drive

Teachers with motivational competencies are goal oriented and show perseverance and persistence toward achieving the target despite obstacle and setback. It implies that they possess achievement drive and optimism. Panton &

Witty, (1948); Charters and Waples, (1929) in their study, identified- persistence, perseverance, goal-orientation, optimism, patience, industry and the like as important traits of successful teachers (as cited by Adaval, 1979).

Social Competence: It comprises two dimensions, namely empathy and social skill. Empathy is the ability to feel with others and get concerned for others, take their perspective and to treat people according to their emotional reactions. People with this ability are experts in (generating and) motivating others. Empathy represents the foundation skill for all social competencies (Goleman, 1998). These include;

(a) Understanding others:- Sensing others' feeling and perspectives and taking an active interest in their concerns.

(b) Service orientation:- Anticipating, recognizing, and meeting individual's needs.

(c) Developing others:- Sensing others' developmental needs and bolstering their abilities.

(d) Leveraging diversity:- Cultivating opportunities through diverse people.

(e) Political awareness:- Reading the political and social currents in an organization.

Teachers with competencies of empathy are capable to emote and empathise with students in interpersonal relationship. They can sense needs, feeling, and perspectives and take active interest in students' concerns.

Singh (2003) found that teaching profession requires emotional competencies such as rapport, harmony, and comfort while dealing with class. Ability to empathise with students is a foundation stone for establishing rapport and cultivation of harmony in inter-personal relationship. A teacher can empathise with students only when she is attuned to them. Attunement reflects how well a teacher connects and reacts to students.

Empathy is an imperative cluster of emotional intelligence for handling interpersonal relationship aptly; it is *sine qua non* for cultivation of leadership qualities in teachers. An empathic teacher can sense developmental needs of students and bolster their abilities. With these competencies, the teacher will be capable of creating a conducive environment in the classroom setup. Empathy is a pre-requisite for wielding effective tactics of persuading students for desired behaviour and goal.

Leadership, interest in students' problems, kindliness and consideration for the individual and sympathy are discerned as significant qualities of efficient teachers [Jensen & Witty, (1947); Myers and Williams, (1948); Charter and Waples, (1929) Evans, (1962) and Naidu, (1979) as cited in Adaval, (1979)]. All these traits require empathy. In the opinion of Palmer (1908) teachers must have empathy and sympathic-imagination –a limberness of mind, which enable them to think in terms of the other's limitation, interest and needs an aptitude

of what he called – altruistic vicariousness(as cited by Adaval,1979).

Social skills are abilities to build rapport and to manage relationships with people. Teachers having this skill are very effective in persuasiveness and team management. Social skill is culmination of all other components of emotional intelligence assuming that people can effectively manage social and work relationship only when they can understand and control their own emotion and can emphasize with the feeling of others. Social skill is the ability to handle another person's emotions artfully which underlies several competencies (Goleman, 1998). They are-

(a) Influence:- Wielding effective tactics of persuasion.

(b) Communication:- Sending clear and convincing messages.

(c) Conflict management:- Negotiating and resolving disagreements.

(d) Leadership:- Inspiring and guiding.

(e) Change catalyst:- Initiating, promoting or managing change.

With the help of empathy and social skill clusters of emotional intelligence, teachers can create emotionally warm relationship between them and students (Characterized by open communication, support and involvement), which can provide students with a sense of security within the school's setting,

which, in turn, will promote exploration and comfort, as well as social, emotional and academic competence*(*Pianta,1999*)*.

Emotional Intelligence and Teaching Behaviour: A study carried into by Pandey (1981), discerned four kinds of teaching styles namely-democratic, empathic, traditional, and oratorical teaching style. Emotional intelligence, by its very nature, appears to have associated with democratic and empathic teaching styles. As mentioned above, 'empathy' is a competency which comes under the umbrella of emotional intelligence. Empathic teaching style attunes to the very nature of students. In this type of teaching style, teachers listen to students patiently, praise students' initiation and try their best to increase the level of students' participation. Teacher asks divergent questions which facilitate divergent thinking and deep understanding of the subject-matter taught (Pandey, 1981; pp 170-171).

On the contrary, in traditional teaching style, teachers appear to have dominated and brought about fearful atmosphere in the classroom (Pandey, 1981; pp 171-172). Traditional teaching style possess striking resemblance with autocratic teaching style, In this teaching style, teacher only uses categories 5, 6, and 7 of FIACS (Flander's Interaction Analysis Category System), which stands for lecturing, instructing and criticizing, respectively. On the contrary, in empathic teaching style ,teacher appears to have employed more categories-2, 3, 8 and 9 as compared to 5, 6 and 7

categories of FIACS, categories 2, 3, 8 and 9 stand for praising, utilizing students' ideas, students' responding and students' initiation, respectively (Pandey,1981; pp 170-172).

On the basis of above discussion related to various teaching styles, it can be inferred that emotional intelligence appears to play a vital role in shaping teaching style and creating conducive psycho-social environment in the classroom. Teacher, who is low on various dimensions of emotional intelligence, will teach in traditional teaching style and will strangulate students' initiation. On the contrary, a teacher who is high on various dimensions of emotional intelligence, will tend to teach in empathic and democratic teaching styles which is favorable to the all round development of students.

Conclusion: Nobody in the teaching profession can be expected to navigate successfully across his/her entire academic career, if he/she tends to be low on various dimensions of emotional intelligence. Our policy makers show deep concern about improving the quality of pedagogy and making classroom environment lively. For this, initiatives must be taken on the basis of top down approach. It implies that qualities of preparation of teacher educators, in turn, influence training of prospective teachers. So it necessary that cultivation and nurturing of emotional intelligence in the teacher educators must be given due importance.

6. Perception of Work Culture by Teacher Educators of University of Mysore

Introduction: To neglect an individual's education today is to condemn him or her to mediocrity tomorrow. Education is the cornerstone of a free society, the bedrock upon which a strong, healthy state is built and sustained. The demands of the modern era are being pushed at ever increasing speed by extraordinary advances in technology. Those societies which anticipate these advances and best prepare their children for the future are likely to reap the most benefit from them. A characteristic of modern democracies is the freedom citizens have to select from a wide variety of goods and services. Quality improves when competition is vigorous. The same principle of choice holds true with institutions of higher learning; increasingly, it is being applied to primary and secondary schools as well. Workplaces can become effective sites for the development of knowledge and employees can be helped to learn in informal ways, such as learning from colleagues, and through observation and listening. These methods are consistently reported as effective means for employee learning.

Workplace learning can be improved in various ways; for example the development (and implementation) of a work environment which invites individuals to learn the tailoring of a workplace learning curriculum to particular tasks, and the encouragement of participation by both those learning and those guiding the learning. Developing a culture of learning,

where participation in some form of learning is expected is a facilitative measure. Where a range of curricula is available, a range of staff may become involved and the development of skills can become de-stigmatized. Practitioners using organizational communications analysis report that this is effective, as the approach examines individual learning needs as well as structural, emotional and socio-cultural issues in (and barriers to) learning.

Human Solutions Report (2008) suggests the factors affecting that contribute to psychological well being at work – Transformational leadership: a leader who can elevate the employees through his or her ability to demonstrate humility, values and concern for others. This style of management motivates, stimulates and the individual consideration to employees is strongly associated with increased work productivity. Clarity in work load and pace, role clarity, autonomy, work place justice, status distinctions, social relationship at work and extrinsic factors like physical comfort, place of stay etc are the other factors contributing to a sense of wellbeing among the employees.

Work Culture: "Every individual has the potential to perform if he/she gets proper motivation, the right opportunity and the freedom to work. In the long run, success is achieved when ordinary people perform extraordinarily. It is important to keep an open mind rather than drawing preconceived impressions about people, more often than not,

such impressions will be proven wrong." This quote is reproduced from 'Leading the Way' – an article by Mr. Shekhar Bajaj in the Corporate Dossier of Economic Times on January 14th, 2005. In this article, he says that a strong belief that has given the right kind of inspiration, excitement and motivation, reaches the heart and soul of people so that ordinary people can perform extraordinarily. This is the core of our work culture.

The culture at the work place influences the performance of the institution to a large extent.. Educational institutions (especially schools and colleges) should provide excellent motivation to every individual to put in her/his best performance in an enthusiastic and charged up environment that is sans any fear of failure. The work culture prevailing in the institution has a great role in improving the status of institution as well as that of the individuals. The institution must provide work culture in such a way that every individual should feel a part of the organization, and therefore, more involved, more excited, and more loyal to the organization. They must be given an opportunity to take part in decision making and implementation of the plans, which in turn improves the overall performance of the institution.

If one has to make the staff think well of themselves, the work environment must be friendly instead of hostile, open instead of closed, supportive instead of discouraging, relaxed instead of rigid, inclusive instead of divisive – all the best

thinking that books on leadership and empowerment advocate.

Zensar's Culture which is based on the 5-F framework can be adopted even in the field of education. The 5 F's stand for the concepts explained below. Fast: The organization believes in speedy actions in whatever we do. Friendly: The organization believes in and practices strong people orientation (Zensar has an open culture). Flexible: Zensar believes in the sprit of innovation and agility to respond to changing business situation. Fun: We believe in having fun at the work place while focusing on complex business problems. Focused: The organization remains strongly focused on its business objectives and strategies.

Ideally, organizational culture supports a positive, productive environment. Happy employees are not necessarily productive employees. Productive employees are not necessarily happy employees. It is important to find aspects of the culture that will support each of these qualities for your employees. The concept of culture will become useful to the success and profitability of your organization by emphasizing the following aspects- Integrity, Compassion, Accountability, Respect, & Excellence. Rarely has any study been done on work culture that too of teacher educator's perception of the work culture prevailing in their institutions. Hence a study like this, which would help in throwing light on the work culture of teacher education institutions, was taken up.

Objectives of the study: (1) To examine the teacher educators' perception of the work culture prevailing in their institutions. (2) To study the difference in teacher educators' perception of the work culture prevailing in their institutions with respect to their

- type of institution
- gender
- length of service

Research questions:

1. How do teacher educators perceive the work culture in their institutions?
2. Is there any difference in the perception of teacher educators on the work culture of their institutions with respect to their
   - type of institution
   - gender
   - length of service

Hypotheses:

1. The teacher educators perceive a healthy work culture in their institutions.
2. There is no significant difference in the perception of work culture among the teacher educators with respect to their type of institution.

3. There is no significant difference in the perception of work culture among the teacher educators with respect to their gender.

4. There is no significant difference in the perception of work culture among the teacher educators with respect to their length of service

Methodology: A survey method has been employed in the present study. The data was collected from all the B.Ed. colleges in Mysore City. A sample of all the teacher educators working in 14 B.Ed colleges, one government, three aided and ten unaided institutions were considered.

Table 1: Sampling framework

Type of institution	Novice		Experienced		Total
	Male	Female	Male	Female	
Government	0	0	8	8	16
Aided	2	2	11	11	26
Unaided	19	14	27	18	78
Total	21	16	46	37	120

Selected sample of 120 teacher educators include 37 novice and 83 experienced teachers. Among them 67 were male and 53 were female teacher educators. Among them, 16 teacher educators were from government, 26 from aided and 78 were from unaided teacher education institutions. Work Culture Scale has been prepared by the investigator which

comprised of 30 statements with two alternatives: yes or no. The statements are prepared keeping the key points, emphasized in Human Solutions Report (2008), namely transformational leadership, workload and pace, work schedule, role clarity, autonomy, workplace justice, social environment etc. Data was collected from the selected sample and scored. The data was subjected to statistical analysis and the results are tabulated below. In order to answer the research question, how do teacher educators perceive the work culture in their institutions, frequencies of the perceptions of teacher educators on the work culture prevailing in their institutions were calculated and tabulated as below.

Table 2: Frequency & Percentage of Teacher Educators' Perception of Work Culture

Work culture	Frequency	Percentage
Healthy	93	77.5
Moderate	26	21.7
Unhealthy	1	0.8

Among the 120 teacher educators, 93 (77.5%) perceived a healthy work culture in their institutions, 26 (22%) felt a moderate work culture and only one teacher educator perceived an unhealthy work culture in their institutions. It is understood that majority of the teacher educators have expressed the existence a healthy work culture in their institutions.

Table 3: Frequency and Percentage of Teacher Educators' Perception of Work Culture in their Colleges

Type of institution	Level of Perception						Total
	Healthy		Moderate		Unhealthy		
	Male	Female	Male	Female	Male	Female	
Government	6	5	2	2	0	1	16
Aided	11	13	2	0	0	0	26
Unaided	32	26	14	6	0	0	78
Total	49	44	18	8	0	1	120

An analysis of the above table indicates that only one female teacher from a government college perceived an unhealthy work culture prevailing in the institution. Out of 78 teacher educators from unaided institutions, 58 of them indicated a healthy work culture. All teacher educators except two of the male teacher educators from aided institutions indicated a moderate work culture and all others indicated a healthy work culture. This is an encouraging sign for the progress of the courses and institutions.

Table 4: Frequency of Teacher Educator's Perception of Work Culture Gender wise

Gender	Perception of Work Culture			Total
	Healthy	Moderate	Unhealthy	
Male	49	18	-	67
Female	44	08	1	53
Total	93(77.5%)	26 (21.7%)	1(0.8%)	120

Out of 67 male and 53 female teacher educators, 49 male and 44 female teacher educators perceived healthy, and 18 and 8 male and female teacher educators respectively, perceived moderate and only one female teacher educator perceived unhealthy work culture in their respective institutions. To find out whether this difference is significant, student't' test was employed and the results of the analysis are tabulated below:

Table 5: Descriptive Statistics of Male and Female Teacher Educators and their Perceptions

Gender	N	Mean	S.D.	t value	Sig.
Male	67	23.87	4.18	0.210	0.834
Female	53	24.04	4.77		

The mean score obtained by the male and female teacher educators on Work Culture Scale were 23.87 and 24.04 respectively. The t value was 0.210 which was not significant. Thus there was no significant difference in the perceptions of male and female teacher educators in the work culture prevailing in their institutions.

Table 6: Frequency of Novice and Experienced Teacher Educators' Perception of Work Culture in their Colleges

Length of service	Perception of Work Culture			Total
	Healthy	Moderate	Unhealthy	
Novice	27	10	0	37
Experienced	66	16	1	83
Total	93(77.5%)	26(21.7%)	1(0.8%)	120

Out of 93 teacher educators who perceived their institution's work culture as healthy, 66 were experienced and 27 were novice teacher educators. Sixteen experienced and

10 were novice teacher educators who felt that their institutions have moderate work culture. Only one female teacher educator working in Government institution expressed an unhealthy work culture in her institution.

Table 7 Significance of the Difference between the Mean Scores of Novice and Experienced Teachers

Length of service	N	Mean	S.D.	't' value	Sig.
Novice	37	23.16	0.67	1.290	0.199
Experienced	83	24.29	0.50		

An analysis of the above table indicates that there is no significant difference in the perceptions of novice and experienced teachers with respect to work culture of the institutions as the t value (1.290) was not significant. It means that irrespective of the number of years of teaching experience all of them perceived a healthy work culture.

Table 8: Frequency and Percentage of Teacher Educators' Perception of Work Culture in Different Types of Colleges

Type of institution	Perception of Work Culture			Total
	Healthy	Moderate	Unhealthy	
Government	11	4	1	16
Aided	24	2	0	26
Unaided	58	20	0	78
Total	93(77.5%)	26(21.7%)	1(0.8%)	120

Out of 93 teacher educators who perceived healthy work culture in their institutions 11 are from government, 24 from aided and 58 from unaided institutions. 26 teachers expressed the opinion that the work culture was moderate, out of them four, two and twenty were from government, aided and unaided institutions respectively. Only one teacher educator from a government institution indicated an unhealthy work culture in her institution.

Table 9: Descriptive Statistics of Type of Institution of Teacher Educators and their Perceptions

Type of . Institution	N	Mean	S.D.
Government	16	23.81	6.08
Aided	26	25.00	3.56
Unaided	78	23.62	4.31
Total	120	23.94	4.43

Table 10: Results of ANOVA for Perceptions and Type of Institution where Teacher Educators are working

Source of variance	Sum of squares	df	Mean square	F	Sig.
Between groups	37.69	2	18.84	0.95	0.38
Within groups	2298.89	117	19.64		
Total	2336.59	119			

An analysis of the above table indicated that the 3 types of institutions did not differ significantly as the obtained F value was not significant. It means the three groups did not differ significantly.

Major findings: (1) 77.5% teacher educators perceived a healthy work culture in their institutions. Where as 22% felt a moderate work culture existed and only one teacher educator perceived an unhealthy work culture in their institutions. (2) Irrespective of gender, length of service and the type of institution the teacher educators are working in, all of them perceived the work culture in their institution as being healthy.

Conclusions: It is understood that an organization can flourish only when there is good work culture. Work culture promotes the individual and institutional growth if provided a healthy environment. Every individual has a responsibility in improving the performance of an institution. Especially being the nation builders, it is the responsibility of the teachers and teacher educators to uplift the down trodden in society by educating their wards and preparing wonderful teachers who are technologically advanced hands and possess high team spirit. When the working climate or organizational climate is congenial, there will be peace and harmony, a sharing attitude, and dedication among the staff along with the overall improvement in performance of the organization.

7. Professional Ethics for Teacher Educators – An Analysis

Introduction: Quality in any profession happens only when you care enough to do your best for the profession. We all know that teaching is considered as the noblest profession Teacher-Educators plays a key role in this profession. Becoming an effective teacher educator is a continuous process that stretches from undergraduate years to the end of a professional career. This profession demands certain ethical values from the teacher educator in order to continue its professional sacredness. Caring, responsible, competent, committed, passionate, principled, disciplined, qualified and above all a good humane teacher educator is the need of the day.

Teacher Educators at all levels are responsible for imparting training for those per-service teachers who in turn are going to serve the society as teachers at different levels. No wonder that personality of a teacher educators is of crucial importance; moreover, some teachers educators turn into extremely important people for the whole life due to the impact they make while presenting themselves as worthy role models in front of their trainee students. During the training period many a times, trainees should master certain skills in a simulated school setting. When such is the case, teacher educators should be well versed with the school setting and also the mind set of those school going students. Since each

and every action, saying and behaviour of the teacher educator will be imitated by the trainee knowingly or unknowingly and will be carried lover with them to the respective school setting when they actually join the profession, teacher educator should definitely follow the ethical principles of the profession at this point. That is why the statement that, "what the teacher is, is more important than what he teaches", expressed by Karl Menninger is really true. (oct 18,2006 by Daniel Hunt).

Question of teacher's educator's ethics has been on the agenda since teachers appeared and it is still important to talk about that. Whatever happens in the school with children during imparting education to them, directly or indirectly training colleges are responsible for that, since those teachers are produced by these training colleges. As long as children go to school to get knowledge and develop themselves, teachers are in need. This need and demand has to be taken care of by these professional colleges. As long as teachers are working with young personalities, the question of their professional ethics continues to be relevant. In this context definitely we have to discuss about the Professional Ethics of Teacher Educator's which is the need of the day.

Objectives: The main objectives of this paper are as follows:

1. To analyse the need and importance of Professional ethics of a teacher.
2. To analyse the challenges and constraints to be faced by the organization while implementing

these Professional Ethical Principles among teacher educators.

Concept of Professional Ethics: The concept of Professional Ethics is partly what a professional should, or should not do at the work place. It also encompasses a much greater part of the professional's life. A professional is to have ethics then that person needs to adopt that conduct in all his dealings. Things that are included in professional ethics are concepts like: professional respect, avoidance of dishonest or fraudulent activity such as plagiarism and the professional development of the individual. Another aspect of this is the enhancement of the profession and the Organisation within which the professional works.

The Code of Professional Ethics for teacher educators provides a framework of principles to guide them in discharging their obligations towards students, parents, colleagues and community. Increased awareness of the ethical principles governing profession is essential to ensure 'professionalism'.

The teacher educator engages in ongoing professional learning and uses evidence to continually evaluate his/her practice, particularly the effects of his/her choices and actions on others(learners, families, other professionals and the community) and adapts practice to meet the needs of each learner.

Report of the Committee appointed by the NCTE (2010) for the preparation of *Code of Professional Ethics for School Teachers* in the context of the Right of Children to Free and Compulsory Education Act, (2009) has pointed out that:

"Right of Children to Free and Compulsory Education Act, 2009 entails on teachers some onerous professional responsibilities to be internalized by them in the performance of their duties. Accordingly, it is considered necessary that the Code of Professional Ethics be evolved and adopted by the teaching community".

Need and importance of Professional Ethics: *"The teacher's place in society is of vital importance. He acts as the pivot for the transmission of intellectual traditions and technical skills from generation to generation and helps to keep the lamp of civilization burning"* — Dr. S. Radhakrishnan

The teacher educators play an important role in grooming the teacher who is the yardstick that measures the achievements and aspirations of the nation. The worth and potentialities of a country get evaluated in and through the work of the teacher who has been trained in the profession by the teacher educators. The people of a country are the enlarged replica of their teacher. They are the real nation builders. Teacher Educators are architect engineers in moulding and designing these teachers.

It needs no description that the teacher educator is the pivot of any educational systems. On him/her rests the failure or the success of the system. If the teacher educators are well committed to the profession and if they are intellectually alive and take keen interest in their job, then only, success is ensured. But, if on the other hand, if they lack in imparting quality training in education and if they cannot give their heart to their profession, the system is destined to fail. Hence, the teacher educator is vital component of the profession.

Teacher educators are the people, who should serve for their trainee students not only as examples of high education but of decent behaviour as well. Role Models are people who set good examples by the words they speak and by the actions they take. Students tend to copy the behaviour and mannerism of the teacher educator. The teacher educator's entire personality is a reflection on the mind of the students. If the teacher educators is honest, leads a balanced and disciplined life, the trainees adopt these virtues as a ideal conduct unconsciously. The ideal teacher educator is one who, through his thoughts, words and deeds, gives an impression of an honest upright life which can serve as a model for the teacher trainees to copy, follow and emulate.

That is why each violation of teacher educator's ethics may cause some really serious consequences and turn into crucial mistakes. It is vital that they grow in a healthy

atmosphere, surrounded by professional teachers who can not only give knowledge but also give lessons of ethics too.

What kind of a person one needs to be an ethical teacher educator?

It shall be our primary duty to be sincere and honest to our work and to go thoroughly prepared to the class, to endeavour to maintain our efficiency by study and other means; not to do or say anything which may lower our prestige in the eyes of our student; not to exert any pressure upon our students or their parents to achieve our self motives.

Now let us concentrate area wise, the ethical code of principles to be followed by the teacher educator.

Code of Professional Ethics for Teacher Educators:

I. Teacher Educators and their Responsibilities:

Whoever adopts teaching as a profession assumes the obligation to conduct himself in accordance with the ideal of the profession. A teacher educator is constantly under the scrutiny of his/her students and the society at large. Therefore, every teacher educator should see that there is no incompatibility between his precepts and practice. The national ideals of education which have already been set forth and which he/she should seek to inculcate among his trainee students must be his/her own ideals. The profession further requires that the teachers should be clam, patient and communicative by temperament and amiable in disposition.

Teacher Educator should:

1. Adhere to a responsible pattern of conduct and demeanour expected of them by the community.
2. Manage their private affairs in a manner consistent with the dignity of the profession.
3. Seek to make professional growth continuous through study and research.
4. Express free and frank opinion by participation at professional meetings, seminars, conference etc. towards the contribution of knowledge.
5. Maintain active membership of professional organizations and strive to improve education and profession through them.
6. Perform their duties in the form of teaching, tutorial, practical and seminar work conscientiously and with dedication.
7. Co-operate and assist in carrying out functions relating to the educational responsibilities of the college and university such as: assisting in appraising applications for admission, advising and counseling students as well as assisting in the conduct of university and college examinations, including supervision, invigilation and evaluation.
8. Participate in extension, co-curricular and extra-curricular activities including community Service.

II. Teacher Educator and Teacher Trainee:
Teacher Educator should:

1. Respect the right and dignity of the trainee in expressing his/her opinion.
2. Deal justly and impartially with trainees regardless of their religion, caste, political, economic, social and physical characteristics.
3. Recognize the difference in aptitude and capabilities among trainees and strive to meet their individual needs.
4. Encourage trainees to improve their attainments, develop their personalities and at the same time contribute to community welfare.
5. Inculcate among trainees scientific outlook and respect for physical labour and ideals of democracy, patriotism and peace.
6. Be affectionate to the trainees and not behave in a vindictive manner towards them for any reason.
7. Pay attention to only the attainment of the trainee in the assessment of merit.
8. Make themselves available to the trainee even beyond their class hours and help and guide students without any remuneration or reward.
9. Aid trainees to develop an understanding of our national heritage and national goals.

10. Refrain from instigating trainees against other students, colleagues or administration.

III. Teacher Educator and Colleges:
Teacher Educator should:

1. Treat other members of the profession in the same manner as they themselves wish to be treated.
2. Speak respectfully of other teachers and render assistance for professional betterment.
3. Refrain from lodging unsubstantiated allegation against colleagues to higher authorities.
4. Refrain from allowing consideration of caste, creed, religion, race or sex in their professional endeavour.

IV. Teacher Educator and Authorities:
Teacher Educator should:

1. Discharge their professional responsibilities according to the existing rule and adhere to procedures and methods consistent with their profession in initiating steps through their own institutional bodies and/or professional organizational for change of any such rule detriment to the professional interest.
2. Refrain from undertaking any other employment and commitment including private tuitions and coaching classes which are likely to interfere with their professional responsibilities.

3. Co-operate in the formulation of policies of the institution by accepting various offices and discharge responsibilities which such offices may demand.

4. Co-operate through their organization in the formulation of policies of the other institutions and accept offices.

5. Co-operate with the authorities for the betterment of the institution keeping in view the interest and in conformity with dignity of the profession; should adhere to the condition of contract.

6. Give and expect due notice before a change of position is made.

7. Refrain from availing themselves of leave except on unavoidable grounds and as far as practicable with prior intimation, keeping in view their particular responsibility for completion of academic schedule.

V. Teacher Educator and Non-Teaching Staff: Teacher Educators should

1. Treat the non- teaching staff as colleagues and equal partners in a co-operative undertaking, within every educational institution.

2. Help in the function of joint staff-councils covering both teachers and the non teaching staff.

VI. Teacher Educator and Parent/Guardians:

Teacher Educator should: Try to see through teacher bodies and organizations that institutions maintain contact with the parents and guardians of their trainees, send reports of their performance to the guardians whenever necessary and meet the guardians in meetings convened for the purpose for mutual exchange of ideas and for the benefit of the institution.

VII. Teacher Educator and society:

Teacher Educator should:

1. Recognize that education is a public service and strive to keep the public informed of the educational programmes which are being provided.
2. Work to improve educational in the community and strengthen the community's moral and intellectual life.
3. Be aware of social problems and take part in such activities as would be conducive to the progress of society and hence the country as a whole.
4. Perform the duties of citizenship, participate in community activities and shoulder responsibilities of public offices.
5. Refrain from taking part in or subscribing to or assisting in any way in activities which tend to promote feeling of hatred or enmity among different communities, religions or linguistic group. They need to work for National Integration.

As per NCTE Report on Code of Professional Ethics: the present Code Professional Ethics for school teachers has been evolved to provide direction and guidance to the teachers in enhancing the dignity of their professional work.

The (NCTE) has prepared this document as a facilitative mechanism for professional bodies of teachers to use it as a template for discussion among them, make any amendments, if necessary and adopt it to give dignity to their profession.

1. Obligations towards Students:

1.1 Treats all students with love and affection.

1.2 Respects the value of being just and impartial to all students irrespective of their caste, creed, religion, sex, economic status, language and place of birth.

1.3 Facilitates students' physical, social, intellectual, emotional, moral and spiritual development.

1.4 Respects basic human dignity of the child in all aspects of school life.

1.5 Makes planned and systematic efforts to facilitate the child to actualize his/her potential and talent.

1.6 Transacts the curriculum in conformity with the values enshrined in the Constitution.

1.7 Adapts his/her teaching to the individual needs of students.

1.8 Maintains the confidentiality of the information concerning students and dispenses such information only to those who are legitimately entitled to it.

1.9 Refrain from subjecting any child to fear, trauma, anxiety, physical punishment and mental and emotional harassment.

1.10 Refrain from any act involving sexual abuse of the child.

2. Obligations towards Parents, Community and Society

2.1 Establishes cordial relations with parents/guardians.

2.2 Desists from doing any thing which is derogatory to the respect of the child or his/her parents/guardians.

2.3 Strives to develop respect for the composite culture of India among Students.

2.4 Refrains from taking part in such activities as may spread feeling of hatred or enmity among different communities, religious or linguistic groups.

3. Obligation towards the Profession and Colleagues

3.1 Strives for his/her continuous professional development.

3.2 Creates a culture that encourages purposeful collaboration and dialogue among colleagues and stakeholders.

3.3 Treats other members of the profession with respect and dignity.

3.4 Refrains from engaging himself/ herself in private tuition or private teaching activity.

3.5 Refrains from accepting any gift, or favour that might impair or appear to influence professional decisions or actions.

3.6 Refrains from making unsubstantiated allegations against colleagues or higher authorities.

3.7 Avoids making derogatory statements about colleagues, especially in the presence of pupils, other teachers, officials or parents.

3.8 Respects the professional standing and opinions of his/ her colleagues.

3.9. Maintains confidentiality of information concerning colleagues and dispenses such information only when authorized to do so.

Note: The Code can be further enriched by Teacher organizations at different levels by incorporating additional articles related to ethical principles, if required.

Challenges and Constraints: The challenges and constraints to be faced by the organization in implementing the Code of Professional Ethics:

Ideally, the code of Professional Ethics should be prepared by the professional organizations of teachers themselves as it is their responsibility to administer the code in the form of an oath to its members and to ensure its

observance as a self-imposed discipline on the part of the members. Unlike other professional bodies, there is a multiplicity of professional organizations in the case of teachers. A number of challenges and constraints with regard to the issue of professional ethics can be listed.

- Codes of conduct mandate specific behavior in particular situations but do not promote individual adherences to ethical principles.
- The organization or system can mandate what not to do in particular situations but it is impossible to list all possible situations that arise.
- Training individuals to adhere to particular ethical principles when making decisions may not be possible.
- Ethics training conceived as a formal learning program delivered to teachers because of the unavailability of skilled facilitator.
- The impact of workplace culture is intermingled with ethics training and codes of conduct.
- The associated personal learning that takes place involves the identification of principles upon which to operated in a given workplace and the reconciliation of these principles with the values and understandings held by the individual.
- Ethics training is delivered as part of pre service training rather than during the induction phase. But during pre

service phase there is no such mention made about the concept in the syllabus.

- ❖ It is difficult to decide whether ethics training is more effective following periods of experience in the workplace or during the induction phase for the freshers.
- ❖ Sufficient time is not provided during the pre service phase for extended practicum or internship progamme for the teacher trainees.
- ❖ The development of professional ethics and the emergence of each individual's commitment to ethical principles is a dynamic process-in contrast with the relatively passive acceptance of mandated practice. Teacher commitment is again a relative term which is difficult to assess.
- ❖ Continuous student feedback or appraisal report towards teachers is not done regularly by the management in all the institutions. Since students are the better judges to judge teachers' performance related to all aspects of teacher duties and responsibilities including personality and behaviour.
- ❖ Feedback reports of students and their queries are not considered in a positive way by many teachers and the management.
- ❖ Regular face-to-face meetings with the staff by the management is not conducted in many institutions which will help the management to solve many problems related

to indifferences among teachers, communication gap and politics played by some teachers. This will in turn affect the academic atmosphere of the institution.

- ❖ Disciplinary action to be taken immediately against the guilty among the teachers impartially so that dignity and morality of the profession can be upheld. But this is not happening in the profession due to some vested interest shown by the management or the concerned departments.
- ❖ Caring and sharing each others feelings and emotions among the colleagues is disappearing and professional jealousy is creeping in. This makes the teachers to go at any extent to safe guard their personal motive by sacrificing other fellow teachers' career. Rarely those teachers are punished since evidences are not available on records.
- ❖ Case Studies of the organization to be discussed in an open meeting to analyse the academic decisions made on those issues. This is not happening in the institutions.

Conclusion: Ethics can be inborn but it can be and should be developed. Some people are born tactful, tolerant and moral enough to become good professionals in terms of ethics. Some are taught how to behave in order to adhere to necessary requirements of ethical conduct.

The rapid developments in science and technology and the challenges of globalization are posing additional challenges to the education system in the country. This is also the time

when parental care to the children is on the wane. The adverse effects of the media on the mental development and moral values of the younger generation are being felt increasingly in all spheres of life. Gross consumerism has distorted the outlook of persons into one of equating possessions with richness. Exploitation of natural resources is proceeding without reference to sustainability. There are gaps in technological developments in terms of building the skills and knowledge; it also needs to address the more fundamental issues of the social and moral consequences of such unregulated activities, in this context, values, particularly among the teacher trainees who are responsible for building the Nation.

Section II

Opportunities and Challenges

Opportunities and Challenges

Opportunities and challenges obviously focus on the present and the future issues. In either case the need for integrating ICT or ICT mediated instruction/ education is the opportunity as well as the challenge. Perhaps the first and the immediate task are to reduce the gap between those who are comfortable and not comfortable with the digital world among teacher educators. If this is achieved, there can be a hope that teacher preparation programme will be a smooth affair as for as ICT is concerned. ICT platform with free and open software apart from web based learning and professional development platforms are our opportunities as well as challenges. The professional development of teacher educators will have to be individual need based and must be able to cater to the needs as and when needed by teachers and teacher educators. This requires getting connected to web bases sources. It implies that there must be enough materials developed and made available in the Indian context on the one hand and enabling teacher educators to learn to access open and free sources available on the other. If teacher educators can develop confidence and conviction about this, they can in turn develop abilities in teacher trainees. Therefore, empowerment of teacher educators is uppermost important.

There are enough indications and evidences that teacher educators in general have a positive attitude towards ICT and this should be our basis for building further. In fact,

ICT can also be a specialized area for trainees too. It is not out of place to think of roping in the IT companies in honing up the skills of teacher educators and teachers. Perhaps, development of a national portal for teacher education for continuous professional development of teacher educators is the need of the hour. National organizations like NCTE, NCERT and such must take initiative in this direction.

There has been so much of hope about ICT and ICT mediated instruction as the future agenda of teacher education programmes for both in service and pre service areas. The ICT mediation indeed can contribute to the enhancement of quality in teaching learning if used meaningfully. But there is a need to study different models of ICT which can suit best at different levels and for different contents.

As a part of teacher preparation programme, institutions need to ensure that ICT trained personnel are available in every institution. This should become a common denominator in all institutions. Such an ambiance with needed ICT accessories can indeed enhance the quality of teacher preparation programmes. Apart from this, it is time we started working towards networking of teacher educators and created e platforms which have easy access to all teacher educators and student teachers. Such arrangements can serve as prerequisites for enhancing quality teacher preparation programmes.

Student teachers need to be selected carefully based on their aptitudes and attitudes. Those who wish to join a teacher preparation programme by choice only need to be taken in, and not those who take it as a chance. Most often this gets neglected. Consequently, problems begin to erode the system. Learning from the past, at least for now, should we not learn from our past? Perhaps, all of us need to take clear views on this issue. On the one hand we are looking for enhancing the quality of teacher education programmes and on the other hand our basic assumptions themselves need to be subjected to scrutiny. It is our professional obligation and professional responsibility to work towards better teacher preparation programmes in future by making use of this medium.

Editors

8. E-Sources for Sustainable Professional Development of Teacher Educators - Priorities and Concerns

Introduction: The idea of teacher professional development as the design and construction of opportunities for professional growth and improved practice is not a new one. For example the works of Day (1993), Gacent (1997), Joyce and Showers (1995), Sparks and Hirsch (1997), Lucks – Hosely, Hewson, Love and Stiles (1998) and Bredeson (2003). These scholars and others have argued that designs for on-going professional learning are critical to successful implementation of various educational reform initiatives focused on enhanced student learning outcomes. Teacher professional development, once referred to as an "educational step-child" (Smiley, 1996) and criticized for being fragmented, incoherent and ineffective (Sparks & Hirsch, 1997), currently enjoys a favourable reputation among policy makers and practitioners in educational reform circles. Continuing professional development (CPD) is a key means of informing staff, enhancing their ability to implement reforms, and changing appropriate. For instance, sometimes we use the terms in-service, staff development, continuing education, training and self improvement interchangeably with professional development with little regard for any conceptual differences. In the words of Bredeson (2003) Professional Development (PD)

Is a "learning opportunity that engages educators' creative and reflective capacities in ways that strengthen their practice". There are many learning opportunities for teaching professionals. What makes PD a unique experience is that it engages the learner's creative and reflective capacities in order to transfer to situations of practice in ways that fit the demands of daily work and meet their personal styles. Thus PD provides practice to integrate the new knowledge with existing professional habits and practice. PD encourages educators to move from one event to another event that is more focused on personal self-reflection and growth over the span of career. As with any educator attempting to provide an environment that supports and challenges learning, a more promising course of action is to align professional career development with specific purpose that will result in the intended learning. For educators this must be related to the improvement of teaching and learning in the classroom and to the improvement of education as a profession. PD plays a key role in the development of Nation itself. The PD programmes availed by educators at each level namely primary, secondary, higher secondary and higher education lays the basement for future of Nation. Those pupils trained by the educators with excelling profile can reform the status of society as well as the Nation. Failing to educate a large number of our young people not only represents a waste of talent and energies of these individuals but also foretells a crisis for our nation. In addition to this we can say educational system is, currently under pressure to implement changes and

achieve greater efficiency (Buchen, 2003; Desimone, 2009). The burdens of implementing such changes have shifted from the administration to the teachers. However, existing research indicates that introducing and implementing pedagogical changes involve great difficulties; in addition existing research indicates that the ability of teachers to play an active role in the process of implementing changes is crucial for the implementation of radical and long lasting reforms throughout the entire educational system. Studies often underscore the need to examine the implementation of reform in relation to the teachers' attitudes and suggest further examination of the various effects of teachers' professional development on their attitudes towards pedagogical changes regarding different teaching strategies, concerning students, teaching content, and the teacher's own educational orientations (Maskit, 2011). The importance of PD reaches a new height, taking into account all these factors. Neglecting the PD will have serious repercussions on the education system and the society in turn.

In service Education and Continuous Professional Development: The idea of in-service education for teachers was discussed by the Kothari Commission (1964-66) and Chattopadhyay Commission (1983-85) as an important step to enable teachers to replenish their professionalism. All initiatives in curriculum, special inputs in subject areas, or infusing new social concerns, have been implemented through the renewal or up-gradation in the knowledge and practice of teachers already in school. Following

the Kothari Commission's report, in several states school clusters were created to forge inter-linkages between primary, middle, and high schools and provided a forum and structure of interaction between teachers and receiving professional inputs. Following National Policy on Education (NPE) 1986 in-service teacher education received support through central government funding for the establishment of Institute of Advanced Studies in Education (IASE) to chosen University Departments of Education and District Institutes of Education and Training (DIET) in each district with a view to provide a space for the conduction of in-service courses for teachers of elementary and secondary schools. The DIETs in addition had the mandate to work to universalizing and renewing elementary education through supporting innovations and strengthening field activity. The District Primary Education Programme (DPEP, 1995-2003) across the country further set up the structures of the block and cluster resource centres (BRC and CRC) with the explicit mandate to provide in-service training to primary school teachers in new, child-centred pedagogic methods and to provide school based support to teachers. The attempt has been to shift away from the idea of subject inspectors and inspectors of schools attached to the education administration office, towards the idea of a resource person (RP) attached to an academic resource and support centre. The Sarva Siksha Abhiyan (SSA, 2001) has also placed emphasis on continuous in-service teacher education requiring each teacher to receive 20 days of training every year.

All teachers are members of associations which have from time to time taken up academic activities and organized conventions and meetings to discuss professionally important developments. Teachers' involvements in textbook preparation and indeed even in the preparation of training modules etc. have grown over the years. Teacher themselves have opportunities to work in the block and cluster centres as well as to contribute to trainings as resource persons. They are also members of committees formulating policies in education. NGO initiatives such as the Hoshangabad Science Teaching Programme (HSTP) in Madhya Pradesh, the Uttarakhand Seva Nidhi of Uttranchal, BVIER, Pune and PRISM of the Homi Bhabha Centre in Mumbai, have developed and implemented models of teacher professional development and support in ways that directly impact the classroom. Furthermore, all agencies trying to reach out to children through special packages, whether to promote AIDS awareness or introduce technology into the classroom, heavily depend on providing related training to teachers to implement their programmes.

Aims of Programmes for Continuous Professional Development of Teachers

As a professional, teachers seek for avenues for their self development (NCTE Curriculum Frame Work, 2009):

- to explore, reflect on and develop one's own practice

- to deepen one's knowledge of, and update oneself about one's academic discipline or other areas of school curriculum
- to research and reflect on children and their education
- to understand and update oneself on education and social issues
- to prepare for other roles professionally linked to education/teaching, such as teacher education, curriculum development or counseling etc.
- to break out of ones isolation and share ones experiences and insights with others in the field, both teachers and academics working in the area of one's discipline, as well as intellectuals in the immediate and wider society.

Education and curriculum planners also seek to provide avenues for the professional development of teachers as a part of curriculum reform.

Various Routes towards Teachers' Continuous Professional Development: Types of In-service Programmes: Keeping in mind the aims of in-service programmes for professional development, there is a need to recognize the variety of types of in-service programme and experiences that can contribute towards and sustain professional development. This is especially so in the context in which 20-days of 'training' for all teachers is being mandated

by government. If it is for the development and strengthening of overall practice of the teacher, then there is need to recognize a variety of activities and interactions that could also contribute towards this.

Short and Long Term Courses: Courses of short and long duration designed to develop either specific skills or areas of interest could be developed and offered to teachers to take over the year. For example, a DIET could design and offer courses in specific topics such as 'teaching fractions', developing secular attitudes among children', 'aids education' etc. Some of these could be of a short duration, say 4 to 5 days, while others may even be for a longer period of time, from 1 to 3 months to enable teachers to develop a specific core area in which they need to strengthen their knowledge-base and professional skills, e.g. using theatre in the classroom, organizing and managing group activities etc.

The Use of Distance Media: ICT including TV, radio and internet are useful as resources for providing access to ideas, or for the wider dissemination of information. Distance media can be effectively used to keep teachers in touch with other professionals in the field and to give access to professionals in education as well as in pure academic disciplines (within universities). This would go a long way in breaking the isolation of teachers while promoting a 'culture' of seeking academic support and providing the necessary platform for the same.

Sabbatical for Study and Research: Teachers could be provided with the option of taking a year off (paid or unpaid), in order to pursue a course or spend time at another school, university or NGO, in order to learn and study. Such sabbaticals could be tied to a report or even a publication for wider dissemination that is produced at the end. Such a sabbatical could also be linked up with an appropriate mentor on the site to guide the teacher during this period. Small research projects through which teachers can reflect on, share and develop their practice must be encouraged. At the same time, the insistence that teachers MUST carry out action research is not productive, particularly in a context where there is little understanding of action research, and virtually no forum to share such research.

Professional Conferences and Meetings: Attending meetings and conferences connected to the profession, e.g. on one's subject areas, etc. could be also counted towards professional development and teachers could be permitted to avail off duty leave 3 to 4 days a year to attend such meetings. Some funding support to travel and attend such meetings could also be provided.

Professional Forum, Resource Rooms and Materials: Providing professional forum such as meetings in the school and in the cluster to discuss and review one's practice, to plan for annual work calendars, and on a weekly and monthly basis to plan for one's teaching as well as to

discuss with colleagues, the school academic head and resource persons at the cluster or block level, is an essential aspect of the teaching profession. At the cluster level, the availability of resources in the form of reference materials, access to internet resources and to resource persons is essential.

Teachers could be encouraged to form subject groups at the block level, which could be provided with support to plan for the development of the teaching of the subject in the block through a variety of ways – seminars for teachers, trainings, meals, children's clubs, etc. These could be given an official status and space at the concerned block resource centre and have linkages with the DIET. Such subject groups could be linked with the faculty of local colleges or universities in order to strengthen interactions between groups and provide for synergy between them. Each district education institute, e.g. DIET or CTE could support a few university faculty fellowships, to enable interested people from the university to come and spend upto 4 to 5 months undertaking activities with teachers and children.

Faculty Exchange Visits and Fellowships: A few exchange teacher fellowships could be provided for each district, to enable selected teachers to go for a period of three months to one academic year to a school in another state within the country, or even outside the country, to teach and learn there. Similarly, schools could play host to such visiting

teachers and plan how best to utilize their services during the period of their stay.

Teachers could also be provided with short term fellowships and funding support (based on proposals) to either come to the DIET, CTE etc. or carry out specific activities for the school children and teachers in their own district.

In-service Programmes and Continuous Professional Development of Teacher at the Elementary and Secondary Stage: At present for the development of teachers in school sector there are many facilities available; which are made compulsory by the concerned authorities to ensure the quality of education. The 'redesigned in-service programmes' offered by DIETs is an important one. The objective of professional development organized by IASE based programmes in elementary education is fulfilled with the help of SCERT-DIET system for training teachers. There are Block Resource Centers (BRCs) and Cluster Resource Centres (CRCs) to strengthen the skills of pedagogy and teacher support by SCERT, and DIETs. Felt difficulty of the teacher can be resolved during "Cluster meetings" which are about to conduct in every month specified geometrical area is allotted for particular 'cluster'. Subject teachers will attend cluster meetings in order to tackle any difficulty in transacting the curriculum. Moreover it is a venue to discuss the innovative ideas regarding teaching and learning. In Kerala

the school teachers have started their own blogs (for mathematics) to communicate with experts from the same stream. An appreciable effort is the formation of 'Wiki-Malayalam version' in association with IT@school project. A study on cluster training (Jibin and Naseema, 2011) revealed that cluster meetings helped teachers for comprehensive planning and to share learning experiences. Most important aspect of these meeting is that, everyone is getting updated with minute reforms happening in school sector. As a result the percentage of pupils getting eligibility for higher studies is rapidly increasing both in secondary school and higher secondary school (Information Bureau, *General Education Department*, Government of Kerala).

Preparing Teacher Educators: It is obvious that the education and training of a prospective teacher will be effective to the extent that it has been delivered by teacher educators who are competent and professionally equipped for the job. The quality of pedagogical inputs in teacher education programmes and the manner in which they are transacted to realize their intended objectives depend largely on the professional competence of teacher educators. The need and importance of professionally trained teacher educators have been underscored in statements on educational policy time and again but the situation on the ground remains grim; there is severe shortage of properly qualified and professionally trained teacher educators at all stages of education.

Existing Arrangements for Training of Teacher Educators – Status and Critique

Early Childhood Teacher Education : The diversity that characterizes the ECE situation calls for development of multiple models of training of workforce with reference to age groups, nature of programme, level of staff and mode and location of training. Available institutional arrangements for preschool teacher education are grossly inadequate considering the expected expansion of pre-school education sector in the coming years. Also there is need to evolve specially designed programmes at the degree and post-degree levels for the training of teacher educators. One possibility is to develop the M.Ed as a teacher educator training programme with specialization in pre-school / elementary / secondary teacher education.

Primary/Elementary Teacher Education: With the establishment of DIETs, two categories of teacher educators at the elementary level have emerged –those who teach in DIET and others who teach in other training institutes, government or private. In most states DIETs are the main supply institutions for 53 elementary teachers (however, this situation has changed with the large scale proliferation of private ETE institutions over the past five years). There are 556 DIETs sanctioned of which 466 are functional (*WG Report on elementary education and literacy XI Five Year Plan 2007-12*).

The DIET functions – pre and in-service teacher training, non-formal and adult education workers, curriculum and materials development, educational research, extension, planning and management – call for high level of competencies and skills especially in educational planning, management, research and technology. Presently DIETs find themselves totally under-equipped in required faculty capabilities; the faculty appointed do not possess the required academic qualifications or professional experience. Many of them do not possess basic experience in primary school teaching, insights into primary education problems and professional skills in teacher training and research. Teacher educators in non-DIET institutions share these shortcomings.

Secondary Teacher Education: The B.Ed programme is offered in Colleges of teacher Education and University Departments of education. The programme is also offered through centers of distance education / open universities. B.Ed is also offered with specializations, for example, child development, home science, science, English, Hindi, Sanskrit etc. There has been a proliferation of B.Ed colleges and courses over the past few years triggered by market factors, their total number as on March 2007 being 4034 with an approved intake of 416472 (*Annual Report*). The curriculum covers educational foundations, pedagogy of school subjects, practice teaching / internship and optional papers in different specializations like: action research, guidance and counseling,

population education, inclusive education, and computer education. Secondary teacher education got a major boost with the elevation of selected institutions as Colleges of Teacher Education and Institutes of Advanced Studies in Education under the centrally sponsored scheme of strengthening teacher education. The CTE / IASE guidelines particularly focused on the need for recruiting persons with high academic and professional qualifications on par with those obtaining at the general arts and science colleges and universities as per university norms. There are 104 CTEs and 31 IASEs functioning in the country (*WG Report*). The scheme envisaged both short and long term selection procedures for recruiting only persons of outstanding ability and record. It also indicated the creation of a separate cadre of teacher educators, parity in pay scales with the general colleges, financial incentives for outstanding performance and promotional avenues. In practice, the typical secondary teacher educator is a graduate with a post graduate degree in education. The NCTE norms prescribe a Master's degree with M.Ed or B.Ed having 55% marks with Ph.D / M.Phil carrying special weightage. Although M.Ed is generally accepted as the requirement for one to become a teacher educator, the programme as offered in most universities is simply an extension of B.Ed seriously lacking in inputs focused on the preparation of teacher educators, secondary or elementary.

As far as the Professional Development of the teacher educators in higher education is concerned it is evident that

the main authority providing in-service/refresher/orientation programmes is Academic Staff Colleges set up in various universities by University Grants Commission. In pursuance of National Policy on Education (1986) and its Programme of Action, (1992), had set up 66 Academic Staff Colleges (ASCs) in different universities/institutions in the country. The ASCs so established are conducting specially designed orientation programmes for newly appointed lectures and refresher courses for in- service teachers. ASCs and RCCs fulfill the requirements of faculty members excluding the discipline of Education. More than any teacher from any stream other than education has his/her own limitation in the area of their work. As in the case of a teacher educator the whole responsibility of preparing a teacher who is going to mould the young buds of nation, is upon his shoulder. Any minute reformation initiated in any sector of education must be noticed by the teacher educator. 'The reformation in lower level is not getting enough importance' has become an issue, for example the implementation of approach of constructivism incorporated with 'critical pedagogy' is implemented in schools of Kerala state. If we analyze the curriculum of B.Ed. course adopted by any University in Kerala, we cannot see this updation of the curriculum. Crucial factor is that the prospective teachers are following the curriculums which are not compatible with the ongoing system in schools. The peculiar feature of the discipline of education is that each and every level is interlinked; we cannot compartmentalize primary from secondary/higher

secondary and both from higher education. Reason is inevitable factor of the system i.e., the faculty. Any slight change in curriculum or strategy of any level is closely linked with each other. Whatever is happening in lower level must be reflected in higher level also. In the present situation such an updation is less in the field of 'Education'. In other words higher education is getting departed from lower levels, which is aversely affecting the whole system. Only concordant updation in reforms can yield fruitful results. The possible remedy lies in laying emphasis on the professional development of teacher educators. ASC provides development programmes participation in which is mandatory requirement for career advancement from lecturer to higher grades. The newly appointed teachers may have to attend the programme up to 6 years of continuous service and also even after 6 years of service. Then after a gap of one year such teachers may opt for Refresher Course.

Lecturers working in the Universities and Colleges, who are included in the list of Colleges under section 2(f) of the UGC Act, even though they may not yet be fit under 12-B of the UGC Act, may be invited to participate in the Refresher courses. It has also been agreed that teachers of colleges which do not yet come within the purview of Section 2 (f), but have been affiliated to a University for at least 5 years, be permitted to participate in the Refresher courses.

The temporary/contract teachers, who have been teaching for at least two academic sessions in an institution

which has been affiliated to a University for at least two years may be allowed to participate in the Orientation Programmes/ Refresher Courses to enhance their skills.

As per the above mentioned criteria most of the teacher educators from self financing colleges will be expelled from such sessions. In Kerala context the number of Regular Unaided Teacher Education Institutions are almost 20 times that of Government/Aided training colleges. So the beneficiaries of refresher programme became teacher educators from Government/Aided sectors. Here arises the problem of deficiency of Professional Development programmes for teacher educators. As compared to lower levels the opportunity of "being together" with the faculty members from identical stream is very less. Moreover, the lesser number of authoritative bodies for further development of teacher educators is also a hindrance to professional development.

In the words of Bredeson (2000), High-quality professional development: (1) focus on teachers as central to student learning, yet includes all other members of the educational community; (2) focuses on individual, collegial, and organizational improvement; (3) respects and nurtures the intellectual and leadership capacity of teachers, principals, and others, in the educational community; (4) reflects the best available research and practice in teaching, learning, and leadership; (5) enables teachers to develop further expertise in subject content, teaching strategies, uses of technologies, and

other essential elements in teaching to high standards; (6) promotes continuous inquiry and improvement embedded in the daily life of educational institutions; (7) is planned collaboratively by those who will participate in and facilitate that development; (8) requires substantial time and other resources; (9) is driven by a coherent long-term plan; (10) is evaluated ultimately on the basis of its impact on teacher effectiveness and student learning, and this assessment guides subsequent professional development efforts.

The list of essential characteristics is not as a prescriptive fix for professional development in schools. Rather, the list provides a framework, one anchored in school-based research and exemplary practices that inform educators as they design, delivery, and evaluate professional learning and its outcomes.

The ASCs situated in various corners of the country though they are providing TA for teacher educators coming from remote areas to attend for such sessions whereas school level teachers are having clusters in their locality for further modification/ development; also they have resource persons to interact. The option for person professional development is through participating short term workshops/seminars organized by various training colleges. It may or may not be UGC sponsored. But the points to be noted is that attendance in such sessions are not compulsory for teacher educators. So it cannot be included in standardized PD strategy.

Suggestions for Improvement: In order to wipe out the difficulties in correlating reforms in various levels through personal development programmes especially for teacher educators can be obtained by providing an *e-learning platform* for all.

It means whenever it is required in the very next moment the system can implement an orientation programme with the support of Information and Communication Technology (ICT). The confidential id and password can help each educator to login to the particular session. In such an e-learning platform each of the faculty member can contribute and share his own ideas with a large group of experts. All the members can take a decision over an issue that is discussed i.e., solution for a felt difficulty came to the finger tip of each members. Making compulsory attendance can be assured by software technology itself. The interaction type software will help to wind up the section in limited time. If the programme is a long term type the activeness can be made sure by assigning tasks to each participants. All the members from various training centres whether Aided/Unaided/Government/ Deemed/ University departments must have an id as the certification of their job; so that the one who is not a member of the "e-platform" will not have the right to educate prospective teachers. Such a concept can develop communities of various subjects also. It is established that cluster resource centered have been functioning as centers for teacher empowerment (Jibin and Naseema, 2011). It is the case of teachers in schools who can be in contact with the teachers from same locale. But in the

case of e-learning platform, it cures the problem of geographical distances. Major merit of the above mentioned strategy is information can be pass to a mass within limited time.

In addition to the e-learning platform all of the teacher educators are required to start their own 'blogs' will enhance the process of professional development, so that they can expose themselves to a group people who are in the similar area of interest. Other than the above mentioned strategy the following will also can support well in the professional development programmes for teacher educators.

- Making use of interactive websites
- Promoting activities in co-operation with Moodle.
- Launching electronically mediated projects for PD with EDUSAT.

The concept can be effectively implemented with the help of EDUSAT and well framed softwares. The use of online synchronous discussion for web based professional development of teachers were studied by Yihusuan (2008) and result was fruitful. Caraline (2008) attempted to list the impacts of using multimedia in teaching in service teachers. It also gave a positive result in PD. Thus obviously the suggested strategies can enhance PD among teacher educators for a better result. Making use of draining brains of Indians, India herself can step into the creamy layer of the world in the light of education.

9. Quality of Teacher Educator and its impact on SSA, RMSA and RTE Act 2009

Introduction: *"There is a growing need for evidence – based resource made available to (future) teacher educators. Since a learning society requires new sets of competencies of the main actors, we are in need of knowledgeable teacher educators who support professional development of their (student) teachers…"* (Joost Lowyek).

The quality of teacher's performance in the classroom and school context is determined largely by initial academic and professional training he/she receives before being inducted to schools as well as recurrent in-service training and professional development support and the job experience gained on an ongoing basis. The global need for teacher education is greater now than ever before. Half of the world's countries will have to expand their stock of teachers significantly, some by tens of thousands, if Dakar framework for action goal of universal primary education is to meet by 2015. In our view, the quality of education is as important as quantity offered. Teacher educators on the top of hierarchy are in a position to ensure quality in education (elementary / secondary). Notable spatial spread and physical access have however, by and large not been supported by curricular intervention, including teaching learning material, training designs, assessment systems and classroom practices, or even suitable infrastructure.

Physical expansion has also not adequately addressed the problem of social access. After the District Primary Education Programme (DPEP) of 1994, the government has launched "Sarva Shiksha Abhiyan" or SSA. SSA was launched through community ownership of elementary education. SSA was launched in 2001, in order to effectively decentralize the management, it has involved Panchayati Raj Institution, school management committees, village and urban slum level education communities, Parent Teachers' Association, Mother Teacher Association, Tribal Autonomous Councils and other grassroots level structures. SSA is a programme with clear time frame in order to improve the quality of elementary education in India. The SSA has emphasized on improving student teacher ratio, teacher programming, teacher training, academic support, facilitating development of teaching learning materials and providing text books to children from special focus group. SSA envisages establishment of block resource centers (BRCs) and cluster resource centers (CRCs) for providing academic support to teacher. It is well recognized that eight years of education is insufficient to equip a child for the world of work as well as to make him/her a competent adult and a citizen. The pressure on secondary education is already being felt due to the success of SSA. Therefore, while secondary education is not constitutionally compulsory, it is desirable that access to secondary education is universalized leading to enhanced participation. Its quality should be improved for all. At the same time, it may not be possible to fully universalize education

at the secondary stage during the eleventh hour. However, with the rising expectation from improved access to secondary education, retention in classes I-VIII will further improve. In order to meet challenge of universlization of secondary education (USE), there is a need for paradigm shift in the conceptual design of secondary education. The guiding principles in this regard are universal access, equity and social justice, relevance and development of curricular and structural secondary education resulting in enhanced intellectual, social and cultural learning. Onus of quality improvement lies with the teacher educators. There are many administrative reforms which are pre-conditions for central assistance. They include provision of necessary professional and academic input in secondary education system at all level,i.e., from school level upwards. Public policy has an important role to play in ensuring learning opportunities for all students irrespective of their home backgrounds, through the use of constitutional provisions.

As SSA was not able to achieve quality continuum of elementary education, urgent need was felt for another educational provision i.e the Right of Children to Free and Compulsory Education Act-2009 which was notified on April 1, pursuant to the 86th Amendment to the constitution (2002) which guarantees elementary education as a fundamental right. The RTE Act and its notification are rightly hailed by many as a landmark in the history of education. But while these are momentous developments they also highlight that

even 60 years after the constitution coming into force, our constitution which promised to provide free and compulsory education to all children within a stipulated time frame has failed to do so. Had this directive principle been implemented in letter and spirit, the need for 86th Amendment and the RTE Act would not have arisen .The RTE Act as well as the accompanying model rules for the first time provide detailed framework for the input required in primary education and provisions related to almost every aspect of education such as accessibility, infrastructure, curriculum, teacher, School Management Committees and guarantee free and compulsory elementary education as a responsibility of the state government.

RTE act and teacher related norms

- It lays down the norm and standard relating to inter alia, pupil teacher ratios (PTRs), building and infrastructure, school working days, teachers working hours.
- Enhancing the quality of the entire teacher workforce to a common national standard and training of untrained teacher, reviewing the content and process of curriculum, undertaking ongoing and continuous evaluation, establishing school management committees and ensuring management and supervision of school with community support.

- Gender concern implying not only an effort to enable girls to keep pace with boys but to view education in the prospective spelt out in the National Policy on Education (NPE 1986/92) i.e. a decisive intervention to bring about a change in the status of women.
- Centrality of teacher to motivate them (students) to innovate and to create a culture in the classroom and beyond the classroom, that might produce an inclusive environment for children specially from oppressed and marginalized background.
- Moral compulsion is imposed through the RTE Act on parents, teachers, educational administrators and other stake holders.
- Convergent and integrated system of educational management is a prerequisite for implementation of RTE Law. All state must move in that direction as speedily as feasible.
- Adherence to RTE stipulation even where it seemed difficult to adhere to the time frame laid down in the RTE law, the committee worked to find practical solution for implementation
- RTE also gave detailed account for conducting teacher eligibility test (TET) in association with NCTE and NCERT.

What have we achieved form RTE 2009?

Almost after a year has passed Right to Education (RTE) was recognized as a fundamental Right in India. Making elementary education an entitlement for children in the 6-14 age group, the Right of children to free and compulsory education Act, 2009 was expected to directly benefit close to ten million children who did not attend school. According to Union Human Resource Development Minister, Sri Kapil Sibal, "the enforcement of this right represents a momentous step forward in 100 years struggle for universalising elementary education".

On April 1st 2001, Mr. Kapil Sibal released the one year report card of RTE. Few had expected that in a year the Act dramatically raised the number of school going children in the country. The explicit commitment was viewed as a beginning to identify and implement innovative measure to realize the goal of providing the elementary education to target population. Like most other official policies the RTE turned out to be more about making the politically correct gestures without adapting to the socially flexible technique for achieving the proposed goal.

Loopholes/drawback in the RTE Act

- RTE Act was proclaimed as revolutionary; it practically left out half of Indian's children: those below six and those between the ages of 14-18

years have been omitted from the purview of the RTE.

- Neighborhood approach of the act was flawed as 17282 eligible habitations in India do not have a primary school within one kilometer of habitation.
- The classic dilemma of centre-state division of responsibility make the RTE a non starter issue of resource and cost burden are cited by the state as hurdle for implementing the RTE.
- Recognition of education as fundamental right implied making the right justifiable and enforceable law. But, there is no recourse for citizens who want to report violation of their rights – leaving the Act largely toothless and not implementable in spirit.
- No special provision/enactment is made for differently abled children.

Challenges faced by teacher educator/teacher training institution

1. Teachers' pre–service education at the secondary level (University degree plus teacher education) suffers from poor standards, week accreditation and monitoring, outdated pedagogical approaches, inadequate supplies of basic teaching and learning materials (including Ids) and few incentives for development. This is a critical issue

facing the country as it proposes a massive expansion of secondary education (RMSA) which will require an estimated 500,000 new teachers plus, replacement of those currently teaching who will retire. A recent research clearly established the importance of well-trained teachers (Hanushek and Wobman, 2007; Mckinsey, 2007). In service teacher professional development at secondary/ primary level is adhoc, poorly resourced and disconnected from classroom realities. Teacher effectiveness is also weakened by lack of teacher accountability. Teacher educators are mostly unaccountable to parents, headmasters and educational administrator, government policies and even sometimes to NCTE.

2. State-mandated testing (Guidelines for conducting teacher eligibility test mentioned in RTE Act 2009) of future teacher –pedagogical and content knowledge has created one of the newer challenges to university based teacher education. As the test result will be reported, critics will charge that many teacher education students (Bed) do not know enough content and pedagogy. Another challenge has come from those who view university based teacher education as a monopoly and who support multiple alternative routes to inter teaching.

3. Teacher training institutions are expanding with an extraordinary energy and resources assessing prospective teachers and compiling data about their programme, and yet they are doing so without a consensus about what

should be measured and how it should be measured. Consequently, much of the information being gathered is of dubious utility. Thus for the most part, answer to the important questions regarding effectiveness of programmes preparing teacher cannot be clearly delineated to the satisfaction of all stakeholders. Curriculum renewal and formulation is another duty entrusted to teacher educators.

4. Challenges faced by elementary school teacher are quite different from secondary school. We must not underestimate the complexity of task as a principle for universalizing elementary education cannot be easily transferred to secondary education. The physical, financial, pedagogical and human resource needs are quite different. Detailed strategies and action plans would need to be worked out rapidly. The recommendation of Sachar Committee need to be seriously considered while planning for this programme. Teacher educator has to assume the role of ICT provider for future teacher as well as act as special educators. There is a need for induction of adolescent education programme (AEP) in the teacher education system (both pre-service and in-service).

5. In order to manage the stress factor in examination, it is necessary for future teacher educator to be well versed in evaluation principle. So they would be able to redesign examination system with attributes like flexibility where student can achieve learning in a flexible time frame and accumulate credits, eliminating test of fixed duration and

adopting continuous and comprehensive evaluation. The practice of avoiding mark sheet should be replaced by portfolio.

6. School education (along with its policy paraphernalia) is not necessarily an assured 'passport to successes'. In a climate of definitive policy claims about various school reform initiatives and their straight forwardly positive effect, it is indeed well to put in mind that entrenched social inequalities often get mirrored within the school system. Education can be seen as social equalizer as well as reproduce social inequalities. Retrospectively looking at our society, we find this through the writings of several prominent scholars (Nambissan, 2000; Velaskar, 1998).

Suggestion/Recommendations: Although ongoing in service training is essential to a high quality work force, pre service programme should be a critical part of any professional development system. With greater support, teacher training programme can more effectively contribute to student's (teacher people) professional development. The following factors represent some areas in which better support from institution, states, researchers, and professional organization could lead to quality improvement programme (SSA, RMSA, RTE) and students.

1. Invest in having sufficient number of fulltime trained faculty.

"I have 150 students this year and only me……". Faculty concern about insufficient number of full –time faculty

was a recurring thread throughout many Institutions. Besides supporting teamwork for quality improvement, adequate numbers and quality of faculty would allow students to experience multiple perspectives to be exposed to a breadth of knowledge, and to receive the kind of teaching and mentoring needed to be effective and working with actual children.

2. Expand faculty knowledge about research and evidence – based practices.

Faculty need help finding and evaluating relevant research, learning about new theoretical perspectives and becoming more informed consumers of research.

3. Promote and support accreditation for teacher training institution

The majority of teacher educator believes in the benefit of accreditation process. Those who had gone through the accreditation reported benefit of the process, such as clearer sense of programme mission, strength, and needs and better assessments of students' competencies. Based on the perceived benefit of the process, accreditation may be a quality improvement activity that national organization and state and institution could more actively promote with the help of additional resources, time and money for faculty with positive results. i.e. participating in the collaboration and self study required of the process could lead many programmes, to be a renewed sense of purpose and tried among faculty as well as sharpen knowledge, skills and disposition among students.

4. Strengthen connections between DIET, NCTE, NCERT, NAAC and NUEPA faculty/teacher educator

It is desirable to create opportunities by faculty across programme to communicate, to learn from each other, and to plan together. Promising collaborative steps are being taken but much more is needed. Such joint activities have the potential to lead to quality improvement at all degree levels, and they may build better bridges for many students/ researchers. Reputation of NCERT, NCTE, NUEPA, DIET among teacher educator allows it to be a trusted source of information and resource, including its link to other professional organizations, researchers, and partners that will further assist programme in their quality-improvement activities. Strengthening these links may multiply potential impact on teacher education by providing resource, training and updated information about current research findings.

In RMSA there is a provision for strengthening of resource institution at various levels, e.g.

- NCERT (including RIEs), NIEPA and NIOS at the national level
- SCERTs, state open schools, SIEMATs etc at the stae level; and
- University department of education, reputed institution of science/social science/humanities/

education, CTEs/institution of advance study and education (IASEs) funded under the centrally sponsored scheme of teacher education.

5. Plan additional research on quality, and quality improvement in teacher training institutions.

A well planned collaborative research of agenda could build on extended research and lead to improving faculty and understanding of, and access to research. It would ultimately lead to creating a field wide consensus about what a high quality teacher education programme look like. Building practitioner capacity is a critical factor in strengthening teaching and learning. Through engagement efforts, educators become responsible for their own continued learning and begin to advocate for quality professional development. The teacher education programme should be guided by a respect for evidence – that a culture of research, inquiry and data analysis should permeate the programme.

6. Organizational Climate

The organizational climate decides and determines the quality of an organization including teacher training institution. Good organizational climate has the greatest potential for generating sustainable systemic change. It could improve teacher skills and capacities, implement whole school change models, develop high academic standards and implement standard. An important requirement of RMSA is environment building and gen rating public opinion.

7. Strategic Interventions –

Community can help build a quality teacher education programme with specific out-come based annual measures of progress and specific roles for stakeholders, policymakers and individuals to play. Community dialogue provides a forum for discovering how the public education system works, identifying the elements of a quality education and using data that reveal how effective the current system is. Community members understand their role in creating quality public education. Community build alliances to identify concerns, demand change, understand how change is enacted and promote a collective responsibility for change. Empowered community can shape public policy and make them accountable. Participation of women, SCs/STs, parents of differently-abled children, educationally backward minorities and other disadvantage groups in the planning process must be ensured. Every intervention must be gender sensitive.

Conclusion: No single influence can be held responsible for young children's development and learning including what degree is held by a teacher. Nonetheless, a teacher's education if it is rich and deep and positive can provide a critical foundation that may constructively influence children's experience.

We need to keep unpacking the "letters after the name" variable, to look more closely at the content and quality of teacher training programmes. Rather, we need to identify the

kind of support that teacher educator need to produce future generation of dedicated, effective teacher. While we are yet to celebrate the dream of universalization of elementary education our teacher training institution/teacher educator are feeling over extended. Recognition of achieved quality is wonderful, but at the same point additional resources are necessary to continue to improving if we are to avoid total burn-out. As Carnoy (2004:9) comments "without improving teacher skill, including subject matter knowledge and pedagogical skills, it has proved difficult to improve teaching and without better teaching it is difficult to improve student academic achievements".

10. Professional Development of Elementary Teacher Educators in India: Opportunities and Challenges

Introduction: Education is empowerment. The Indian Education Commission (1966) rightly emphasized the need for professional development of teachers and teacher educators. It states '….in all professions, there is a need to provide further and special course of study, on a continuing basis, after initial professional preparation. The need is most urgent in teaching profession, because of rapid advance in all fields of knowledge and continuing evolution of pedagogical theory and practice'. The NPE (1986) reiterated that 'Teacher Education is a continuous process, and its pre-service and in-service components are inseparable'. There are more than 20,000 elementary teacher educators including the DIET faculty in India. However, the opportunity for continuous professional development of teacher educators at the elementary level is very limited or neglected compared to the opportunities available for the elementary teachers.

Professional development of elementary teacher educators is also important as that of the teachers. The elementary teacher education in India is at stake due to the pedagogical shift in transaction of the school content and there by the implications for the pre-service teacher education at elementary stage. Further, the programmes for Universalisation of Elementary Education (UEE) such as Sarva Sikha Abhyan (SSA) and Right to Education (RTE) have necessitated that

the teacher educators may undertake multiple roles and responsibilities. The new teacher education programmes at the elementary stage has undergone sea change in the recent years in many of the Indian states following a constructivist paradigm. But the teacher educators who are already in service at the elementary stage have not been able to acquire the necessary skills and education to meet the new challenges. Many a time the experience is alone added to the professional development throughout their professional career. Some times their-own abilities have been taken for granted. Under SSA, there are some mandatory requirements for teachers for certain minimum number of in-service programmes in a year, etc.; however, no such requirements are there for the teacher educators, who will be training the future elementary teachers. The present paper provides some critical reflections on the professional preparation activities of elementary teacher educators and suggest for having a wider platform using the technology driven next generation modes.

Pre-service Education and Training of the Elementary Teacher Educators: It has been stated that the professional development starts from the pre-service training received by a novice teacher. Further, it continues through induction training, recurrent in-service training, experience and exposure at the training institute and on site education and training. According to Berliner, (1995), professional development has been seen as five stage venture that begins

with novice to advance beginner to competence level to proficiency to expertise level.

It is heartening to note that the elementary teacher educators, who are appointed in the Elementary Teacher Education Institutions (ETEIs) including DIETs are trained in Secondary Education with few exceptions. The qualification for appointment of an Elementary Teacher Educator is Graduate/ Post Graduate in a Teaching Subject with B.Ed. or M.Ed with or without elementary school teaching experience. It also varies from state to state.

The M.Ed (Elementary) Programmes offered by the Regional Institutes of Educations (RIEs) of NCERT had been an innovative programme for developing the teacher educators at the elementary level. However, these courses are now discontinued. Further, those who are trained by the RIEs are working in the secondary teacher education institutions. Thus there is need for having specialized pre-service programmes for the teacher educators at the elementary level to improve the quality of teacher education at the elementary level.

In-service Training and Education for the Elementary Teacher Educators: Efforts for providing in-service education and training to teachers and teacher educators on a continuous manner emerged after the major recommendations of National Policy on Education (1986, 1992). Institutional settings like DIETs, CTEs, IASEs and

SCERTs were established in all the Indian states to provide in-service training to teachers and teacher educators. At the regional level, Regional Institutes of Education of NCERT and other specialized institutions like Regional Institutes of English were also catering to the needs of elementary teacher educators. Programmes were also organized by the NCERT, IGNOU and NUEPA (Earlier NIEPA) at the national level for the elementary teacher educators. However, these programmes were mainly organized for the faculty of DIETs. Majority of the Indian elementary teacher educators working in various ETEIs were deprived of having any opportunities for the professional development. Some of the programmes organized for the DIET faculty exclusively and also as a by-product of other programmes are briefly mentioned below.

(a) Special Orientation Programme for Primary School Teachers: Special orientation Programme for Primary School Teachers (SOPT) was a centrally sponsored scheme under Ministry of Human Resource Development launched in the year 1993-94 with a view to improving the quality of primary/elementary education as a part of achieving the Universalisation of Elementary Education (UEE). Though the programme was aimed to train the primary school teachers, a large number of Elementary Teacher educators particularly the DIET faculty were involved as resource persons. Who were given enough training by the SCERTs/NCERT to act as resource person for the programmes organized through cascade mode and also through teleconferencing mode.

(b) In-service Education and Training through Distance Mode: Realizing the limitations of cascade model of training the elementary teacher educators in India and also to provide continuous and recurrent training for the teacher educators, an alternate training strategy through teleconferencing mode was experimented under District Primary Education Programme (DPEP). The District Education Programme (DEP) of DPEP was a collaborative project of the NCERT and IGNOU operationalised during 1996, which inter-alia focuses on training the teachers and other personnel including DIET faculty through distance mode. DEP aims at strengthening the ongoing training programmes of primary education personnel by using distance learning inputs and materials. Teleconferencing, video conferencing and phone-in programmes were the various modes used in DEP supplemented through the Print Self-Instructional Materials (SIMs).

Further, the Teleconferencing, video conferencing and phone-in programmes were also used by many states including southern states like Karnataka and Andhra Pradesh in organizing their training programmes for elementary teacher educators. Use of Television Networks and Cable Networks were another mode used for recurrent training. In-service Primary Teacher's Training through Interactive Television (IPTT-ITV) was experimented in association with UNESCO and ITU in some of the Indian states through which some of the teacher educators were also trained. Programmes were

aired by the Doordashan, Gyandarshan, Gyanvani of IGNOU/ CIET and other state channels for providing training to the elementary teachers and teacher educators.

(c) Experiences through Web based Training

(i) RIE-DSERT Project: A collaborative project was carried out to train the newly recruited DIET faculty through the application of Web Technology by the RIE, Mysore and DSERT, Bangalore. A webpage was created on the Wiki educator platform titled 'Induction Programme for Elementary Teacher Educators'. The newly recruited DIET faculty of Karnataka were trained for a duration of 6 months during the year 2008-09.

(ii) Programmes of DEPSSA-Wiki of IGNOU: Web-based programmes are organised by the DEP-SSA of IGNOU. DEP-SSA is the nodal agency for distance education activities under SSA housed in IGNOU, New Delhi. It endeavors strengthening the activities under Sarva Shiksha Abhiyan (SSA) for Universalisation of Elementary Education (UEE) using distance learning to reach large target groups in a cost effective manner. Regional level training programmes were organised by the DEPSSA for the faculty of DIETs to develop and generate content using wiki-educator platform.

(iii) Other Resources on Web

(a) Vidya Online: Vidyaonline.net is a Repository of resources on primary education meant for teachers,

parents and researchers and the site could even be used for the elementary teacher educators. The objective of vidya online is to nurture a cooperative effort of teachers, teacher educators, academics and concerned individuals and groups. The site offers curricular support materials, books in digital form, help and discussion forums, e-courses and guidance to conduct classroom research. (WWW.vidyaonline.net)

(b) IGNOU Online: IGNOU online is-one stop window catering to the learning needs of IGNOU learner community. Explore the links to access all learning resources available online. e GyanKosh is the digital repository of programme based learning content available in text and video formats. Education Broadcast is a web-casting facility linking you to educational channels – Gyandharshan, Gyanvani and EDUSAT. Virtual Class provides links to all the online programmes of the University. (WWW.ignouonline.com)

(c) Sakshat: NME through ICT: Sakshat is a one-stop educational portal to address all the educational needs of teachers, teacher educators, researchers and lifelong learners developed under MHRD. One of the recent major initiatives is NME.

National Mission on Education through Information and Communication Technology (ICT) is being launched as

a Centrally Sponsored Scheme to leverage the potential of ICT, in teaching and learning process for the benefit of all the learners and teachers in Higher Education Institutions in anytime anywhere mode. Under this about 100 premier institutions are being provided 1 Gbps connectivity under National Knowledge Network (NKN) initially and the number is slated to go up in future, under this Mission, without any duplication, 20000 other institutions of higher learning and nearly 1000 University Departments will be provided connectivity as per their requirement, beginning with a minimum of 5 Mbps for each one of them, through satellites and terrestrial means. This platform can also be used for the elementary teacher educators.

Challenges: As stated earlier, the teacher educator's community at the elementary stage requires a single platform to get enriched from time to time on a continual basis. National portal on Elementary Teacher Education is the need of the hour and it may be developed by the initiation of Central Institute of Educational Technology (CIET), New Delhi.

Using Second Generation Internet (Web 2.0): As you have seen that there are some serious efforts in using the web 2.0 (Wiki Educator) in the professional development for elementary teacher educators. The term 'Web 2.0' was officially coined in 2004 by Dale Dougherty, a vice-president of O'Reilly Media Inc. Web 2.0 is a set of economic, social, and technology trends that collectively form the basis for the

next generation of the Internet - a more mature, distinctive medium characterized by user participation, openness, and network effects. Web 2.0 encourages creativity, communication and networking among the internet users. It is the read write networking platform where the internet users will be able to interact and communicate among each other. Web 2.0 uses XML over HTML which makes it user friendly and machine compatible. Wikipedia's definition, "Web 2.0 is the business revolution in the computer industry caused by the move to the Internet as platform, and an attempt to understand the rules for success on that new platform". The characteristics of Web 2.0 are:

- Web 2.0 promotes user interaction and communication where web masters and the users could network in a better way.
- Web 2.0 is all about social web. Social networking sites, blogging, podcast, wiki all come under this.

  The social web service has turned out to be a huge success on the internet.
- It follows the phenomenon that web is open to all. Anyone could be the author and start their own blog or drop their opinion on somebody else's pages.

- It uses SOA (Service Oriented Architecture). Web 2.0 includes technologies like RSS (Rich Site Syndication), wikis, forums, blogging.

Features of Web 2.0

Search: The ease of finding information through keyword search.

Links: Ad-hoc guides to other relevant information. Connects information together into a meaningful information ecosystem using the model of the Web, and provides low-barrier social tools.

Authoring: The ability to create constantly updating content over a platform that is shifted from being the creation of a few to being constantly updated, interlinked work. In wikis, the content is iterative in the sense that users undo and redo each other's work. In blogs, content is cumulative in the posts and comments of individuals are accumulated over time.

Tags: Categorization of content by creating tags: simple, one-word user-determined descriptions to facilitate searching and avoid rigid, pre-made categories.

Extensions: Powerful algorithms that leverage the Web as an application platform as well as a document server.

Signals: The use of RSS technology to rapidly notify users of content changes.

Web 2.0 Characteristics: The following web 2.0 characteristics take the common technologies together and describe well what is new about them.

Participation: Every aspect of Web 2.0 is driven by participation. The transition to Web 2.0 was enabled by the emergence of platforms such as blogging, social networks, and free image and video uploading that collectively allowed extremely easy content creation and sharing by anyone. Participatory architecture is an architecture where user can add or edit value to the application according to their requirement. Contrary to the traditional web which was somewhat one-sided, with a flow of content from the provider to viewer, Web2.0 allows the users to actively participate online.

Standards: Standards provide an essential platform for Web 2.0. Common interfaces for accessing content and applications are the glue that allows integration across the many elements of the emergent web.

Decentralization: Web 2.0 is decentralized in its architecture, participation, and usage. Power and flexibility merges from distributing applications and content over many computers and systems, rather than maintaining them on centralized systems. It is about communication and facilitating community.

Openness: The world of Web 2.0 has only become possible through a spirit of openness whereby developers and

companies provide open, transparent access to their applications and content.

Modularity: Web 2.0 is the antithesis of the monolithic. It emerges from many, many components or modules that are designed to link and integrate with others, together building a whole that is greater than the sum of its parts. Users are able to pick and choose from a set of interoperating components in order to build something that meets their needs.

User Control: A primary direction of Web 2.0 is for users to control the content they create, the data captured about their web activities, and their identity. This powerful trend is driven by the clear desires of participants.

Identity: Identity is a critical element of both Web 2.0 and the future direction of the internet. We can increasingly choose to represent our identities however we please, across interactions, virtual worlds, and social networks. We can also own and verify our real identities in transactions if we choose.

Use of Web 2.0 Technology for Professional development of Elementary Teacher Educators: There is a large range of Web 2.0 services, all the systems that follow can be grouped under the convenient label of social software, software that exists to facilitate group processes can be better used for continuous professional development if it coordinated and developed in a professional manner. Some of the applications and their uses have been discussed below.

1. **Blogs:** A blog is a system that allows a single author (or sometimes, but less often, a group of authors) to write and publicly display time-ordered articles (called posts). Teacher educators can add comment to posts. Blogs engage people in knowledge sharing, reflection and debate, they often attract a large and dedicated readership. Blogs are becoming an important component of the Internet landscape, providing authors and readers with an avenue for unedited expression, reaction, and connection, without the censorship of mediated chat rooms or formal media outlets.

The simplicity of creating and maintaining blogs means that open discussions can be established almost immediately, making blogs is an ideal venue for far-reaching discussions among the teacher educators' community on new or timely topics. Blogs foster the growth of communities, and the dynamics of collaborative filtering.

Educational Applications: Put into practice with an understanding of their benefits and limitations,

- Blogs are an increasingly accepted self-instructional technology tool. Thus many of the instructional packages for self-learning can be developed under this platform.
- Blogs can be used for reflection about the issues, contents, or current events; they can also capture

and disseminate the contents developed by expert faculty. Thus the teacher educators reflect up on the issues, or respond to a quarry raised by a trainee or a teacher.

- RSS feeds make blog content accessible through newsreaders, allowing bloggers to increase the sharing of this information among interested teacher educators.
- Blogs offer teacher educators and other faculty, staff, students, and others a high level of autonomy while creating a new opportunity for interaction with peers.
- Blogs provide a forum for discussion that goes beyond coursework to include culture, politics, and other areas of personal exploration of a teacher educator.
- Blogs offer another mechanism for peer-to-peer knowledge sharing and acquisition.

2. Wikis: A wiki is a Web page that can be viewed and modified by anybody with a Web browser and access to the Internet. This means that any visitor to the wiki can change its content if they desire. While the potential for mischief exists, wikis can be surprisingly robust, open-ended, collaborative group sites.

Wikis permit asynchronous communication and group collaboration across the Internet. Variously described as a composition system, a discussion medium, a repository, a mail system, and a tool for collaboration, wikis provide users with both author and editor privileges; the overall organization of contributions can be edited as well as the content itself. Wikis are able to incorporate sounds, movies, and pictures; they may prove to be a simple tool to create multimedia presentations and simple digital stories.

Educational Applications:

- Wikis might be the easiest and most effective Web-based collaboration tool for teacher educators. Their inherent simplicity provides the educators with direct (and immediate) access to a site's content, which is crucial in group editing or collaborative project activities.
- A wiki's versioning capability can show the evolution of thought processes as a teacher educator can interact with the site and its contents. These collaborative projects help promote "pride of authorship" and ownership in the team's activities.
- In addition, wikis are being used as e-portfolios, illustrating their utility as a tool for collection and reflection of their trainees and also for the educators.

- Teacher educators can use wikis to collaborate on projects, for editing a textbook, preparing a journal article, or assembling a syllabus or reading list. Wikis might also prove to be an ideal vehicle for soliciting ongoing input for research or projects where community input can help inform and direct subsequent investigation.

- ❖ Wiki educator is an evolving community intended for the collaborative:
- ❖ planning of education projects linked with the development of free content;
- ❖ development of free content on Wikieducator for e-learning;
- ❖ work on building open education resources (OERs) on how to create OERs.
- ❖ networking on funding proposals developed as free content.

3. Social Networks: A social network service focuses on building and reflecting of social networks or social relations among people, e.g., who share interests and/or activities. A social network service essentially consists of a representation of each user (often a profile), his/her social links, and a variety of additional services. Most social network services are web based and provide means for users to interact over the internet, such as e-mail and instant messaging. Although online

community services are sometimes considered as a social network service in a broader sense, social network service usually means an individual-centered service whereas online community services are group-centered. Social networking sites allow users share ideas, activities, events, and interests within their individual networks. Social networking systems allow users to describe themselves and their interests, and they generally implement notions of friends, ranking, and communities. The ability to record who one's friends are is a common feature that enables traversal and navigation of social networks via sequences of friends. Ranking and communities are more selectively implemented. Ranking of user contributions by community members allows for reputation to be built and for individuals to become members of good standing; this can be an important motivator for the individual contributions that make for a thriving community. The ability to create sub-communities allows for nurturing and growth of sub-community interests in an environment that provides a degree of insulation from the general hub-bub of system activity.

The main types of social networking services are those which contain category places (such as former school-year or classmates), means to connect with friends (usually with self-description pages) and a recommendation system linked to trust. Popular methods now combine many of these, with Facebook, Bebo and Twitter widely used worldwide; Orkut and Facebook are widely used in India.

Facebook and Twitter are two applications that have educational implications in India. Today's teacher educators have grown up with Facebook and Twitter. They are comfortable using them and are using them in their daily lives. Facebook and Twitter offer an opportunity to connect with students outside of the classroom in a way that is unprecedented. Facebook and Twitter allow for real-time collaboration and everyday teaching and learning. These social networking services will make the teacher educators to remain professionally active.

4. Media-sharing Services: These services store user-contributed media, and allow users to search for and display content. Besides being a showcase for creative endeavour, these services can form valuable educational resources.

Compelling examples include You Tube (movies), iTunes (podcasts and vidcasts), Flickr (photos), Slideshare (presentations), Deviant Art (art work) and Scribd (documents). The latter is particularly interesting as it provides the ability to upload documents in different formats and then, for accessibility, to choose different download formats, including computer-generated speech, which provides a breadth of affordances not found in traditional systems.

Podcasting is a way in which a listener may conveniently keep up-to-date with recent audio or video content. Behind the scenes podcasting is a combination of

audio or video content, RSS, and a program that deals with (a) RSS notifications of new content, and (b) playback or download of that new content to a personal audio/video player. Vidcasts are video versions of podcasts.

Educational uses:

- Podcasts can be used to provide introductory material before lectures, or, more commonly, to record lectures and allow students to listen to the lectures again, either because they were unable to attend, or to reinforce their learning.
- Vidcasts can be used to supply videos of experimental procedures in advance of lab sessions or micro teaching sessions for the teacher trainees.
- Distribution and sharing of educational media and resources. For example, an art history class could have access to a set of art works via a photo sharing system.
- The ability to comment on and critique each others work; including by people on other courses or at other institutions.
- Flickr allows for annotations to be associated with different areas of an image and for comments to be made on the image as a whole, thereby facilitating teacher explanations, class discussion,

and collaborative comment. It could be used for the example above.

- For Flickr, is a particularly useful ancillary service that allows users to find Creative Commons licensed images that are freely reusable as educational resources.
- Instructional videos and seminar records can be hosted on video sharing systems. Google Video allows for longer higher quality videos than YouTube, and contains a specific genre of educational videos19.

Conclusion: Internet has become an indispensable tool for every teacher educator for his/her personal development, social development and professional development. Now the interdependence among the people, communities and the countries are becoming inevitable, web 2.0 platforms bridge the digital divide. It exposes teacher educators to probably the biggest mine of information and knowledge. In today's fast moving world, every progressive domain uses Internet for breaking conventional barriers of distance, time and cost. Thus it becomes a good and cheaper medium for continuous professional development for the teacher educators. The collaborative and engaging Web 2.0 applications have started emerging as significant influences for students' and teaching communities. Education in the 21st century cannot afford to ignore these silent developments.

Realizing this change, a number of leading educational institutions in India have already started making their educational materials online for easy access for teacher educators' communities across the world. Certainly, this is a major milestone in modernization of education. In a country of diversities such as ours, online quality educational contents can go a long way in meeting the national challenges of education, poverty and equity. It helps in enabling academicians and educational institutions to inculcate Web 2.0 techniques and tools in teaching and learning process and also to enable them to establish their e-presence through self-managed e-Content portals.

11. Teacher Educator's Competence and Attitude towards ICT

Introduction: Education is a process of human enlightenment and empowerment for the achievement of a better and higher quality of life. Teaching is an ever changing profession. A teacher is the one who has and gives updated knowledge to the younger generation as per global standards. Computer technology is the engine of the modern civilization and the driving force of the information age. Teacher's computer attitude has a direct link with the tendency to understand and determine their technology adoption and integration capabilities in education system. As a matter of fact, the successful integration of computers in educational environments does not only depend on students' attitude towards them, but also that of their teachers. Attitudes are precursors of behaviours and behavioural intents. Positive deposition towards computers is a prerequisite as well as catalyst to acquiring a high level of computer literacy and successful pedagogical use of technology.

In order to facilitate professional development for teacher educators, it is necessary to examine teacher educators' competence & attitude towards ICT. This study is an attempt in that direction.

Objectives:

1. To study the attitude of teacher educators towards the use of ICT.
2. To study the competence level of teacher educators in the use of ICT.
3. To study the influence of gender and stream on teacher educators' competence and attitude towards ICT.

Research Question:

1. What is the attitude of teacher educators towards information and communication technology (ICT)?
2. What is the level of competence of teacher educators in the use of information & Communication technology (ICT)?
3. What is the level of competence of Arts & Science stream teacher educators in the use of information & communication technology (ICT)?
4. Will there be the differences in competence in the use of information & Communication technology (ICT) between male & female teacher educators?

Hypothesis: There is no significant association between the competence of male and female teacher educators in the use of Information and Communication Technology (ICT).

Methodology: The investigator has adopted the survey method for investigation of the problem which helped to know the real conditions prevailing in the training institutions. Stratified random sampling technique is used for selecting the sample. The sample consists of 24 male teacher-educators & 24 female teacher-educators covering two different streams such as arts & science.

Table (1): Distribution of the sample

Sr. no	Stream	Male teacher-educator	Female teacher-educators
1	Arts	12	12
2	Science	12	12
	Total	24	24

The survey instrument used for this research was developed by the investigator. It contained four sections. Section A included demographic information of teacher educators. Section B focused on Teacher Educators' Attitude towards ICT. It contained 15 items of Likert response mode of Strongly Agree (SA); Agree (A); N (Neutral); (D); Strongly Disagree (SD); were used. Section C of the questionnaire contained two items which addressed the issue of where teacher educators acquired their ICT knowledge & skills. While Section D was designed to know the level of competence of teacher educators in the use of ICT. This Section contained 35 items.

A test-retest method was used to ensure reliability. The reliability coefficient for different sections were 0.76, 0.86, 0.81, 0.80, & 0.76 for Attitude, Basic computer operation and issues, Use of application software, Use of the internet resources & Use of peripheral ICT equipment, respectively. With regard to validity the content validity was adopted. For this purpose, the questionnaire & scale was administrated to two expertise and four female & four male teacher-educators from different streams (Arts & Science). The questionnaire & scale was rewritten on the basis of these expertise & teacher educators' proposed suggestions & comments.

The data required for this study was gathered by questionnaires. The questionnaires were distributed to the teacher-educators & collected within a month. Out of 50 respondents, two respondents did not respond. So only 48 protocols were used for statistical analysis. A total of 48 (24 male teacher educators & 24 female teacher educators) respondents provided fully replied questionnaires. The item wise analysis was carried out to identify the attitude of teacher educators' towards information & communication technology (ICT). The data collected through questionnaire were analysed using percentage, means, and chi square statistics.

Results and discussions: The demographic information of respondents is given in Table (2). The table indicates that male & female teacher-educators were 50%. This shows that both male & female teacher educators had equal representation. With respect to stream representation, the table shows that Arts & Science streams have 50% respondents. This indicates that both streams were equally represented.

Table(2): Demographic information of respondents

Variable		N	%
Gender	Male teacher-educator	24	**50**
	Female teacher-educator	24	**50**
Stream	Art	24	**50**
	Science	24	**50**

The analysis related to research question (1) is as shown in Table (3).

Table (3-a): The attitude of respondents towards the use of ICT with respect to Gender

S/N	Gender	Low	Moderate	High
1	Male teacher-educator	0	6 (25%)	18 (75%)
2	Female teacher-educator	0	15 (62.5 %)	9 (37.5%)
	Total	0	21 (43.75%)	27 (56.25%)

It can be inferred from table (3-a) that 25% of male teacher educators have moderate level of attitude towards ICT, 75% of them have high level of attitude towards ICT & none of them has low level of attitude towards ICT.

Regarding female teacher-educators 62.5% have moderate level of attitude towards ICT & 37.5% have high level of attitude towards ICT. None of them has low level of attitude towards ICT.

In all 56.25% of the teacher educators have high level of attitude towards ICT and 43.75% of them have moderate level of attitude towards ICT.

Table (3-b): The attitude of respondents towards the use of ICT with respect to Stream.

S/N	Stream	Low	Moderate	High
1	Arts	**0**	7 (29.16%)	17 (70.83%)
2	Science	**0**	5 (20.83%)	19 (79.16%)

It can be inferred from table (3-b) that 29.16% of teacher educators from Arts stream have moderate level of attitude towards ICT. 70.83% of them have high level of attitude towards ICT & none of them has low level of attitude towards ICT. With respect to science stream teacher educators, 20.83% have moderate level of attitude towards ICT &79.16% have high level attitude towards ICT. None of them has low level of attitude towards ICT.

Table (4): Teacher-educators' competence in the use of ICT

S/N	ICT COMPETENCE	FC	RUC	OU	DU	NA
1	Basic computer operation	14 Art=7 Sci=7 (29.16%)	12 Art=6 Sci=6 (25%)	10 Art=5 Sci=5 (20.83%)	8 Art=4 Sci=4 (16.66%)	4 Art=2 Sci=2 (8.33%)
2	Use of Application software	9 Art=4 Sci=5 (18.75%)	10 Art=5 Sci=5 (20.83%)	13 Art=7 Sci=6 (27.08)	12 Art=6 Sci=6 (25%)	4 Art=2 Sci=2 (8.33%)
3	Use of the Internet Resources	15 Art=7 Sci=8 (31.25%)	11 Art=5 Sci=6 (22.91%)	10 Art=5 Sci=5 (20.83%)	8 Art=4 Sci=4 (16.66%)	4 Art=2 Sci=2 (8.33%)

4	Use of Peripheral ICT Equipment	10 Art=5 Sci=5 (20.83%)	9 Art=4 Sci=5 (18.75%)	10 Art=5 Sci=5 (20.83%)	14 Art=7 Sci=7 (29.16%)	5 Art=3 Sci=2 (10.41%)

From the table (4) it can be inferred that 29.16% teacher educators are fully competent & 25% are regular and confident users of basic computer operations, whereas 20.83% respondents are Occasional users. Also 16.16% of respondents were not using & 8.33% were not aware of basic computer operations.

It is also seen from table (4) that 18.75% respondents were fully competent & 20.83% were regular and confident users of application software, whereas 27.08% respondents are occasional users of application software. Also 25% respondents were not using & 8.33% were not aware of application software.

It can be again inferred from table (4) that fully competent regular and confident users of the Internet resources are 31.25% & 22.91% respectively. Occasional users of the internet resources that needed further training were 20.83%, whereas 16.66% respondents were not using & 8.33% were not aware of the use of internet resources at all. From the table (4) it is also evident that in the use of Peripheral ICT Equipment 20.83% respondents were fully competent & 18.75% were regular and confident users. 20.83% respondents were occasional users, whereas 29.16% respondents were not using it and 10.41% were not aware of the use of peripheral ICT Equipment at all.

On the whole, it is concluded that for most of the teacher educators, the level of competence in the use of ICT is fully competent but in case of application software, they need further training. From the above table, it can be concluded that teacher educators from both arts &science streams are equally competent in all respects. So their level of competence in the use of ICT is similar.

Table (5): Chi-Square analysis of male & female teacher-educators competence in the use of ICT

Mean Values					
S/N	Items	Male	Female	Chi-Square	df
1	Basic Computer Operation & issues	2.62	2.51	5.40	4
2	Use of Application Software	2.28	2.28	4.23	4
3	Use of Internet Resources	2.63	2.40	7.99	4
4	Use of Peripheral ICT Equipment	2.15	2.04	5.69	4

From the results in table (5), no significant association was established between the competence of male & female teacher-educators in the basic computer operation & issues.

When the hypothesis was tested on the use of generic software, the results in table (5) indicated that there is no

significant difference between the competence of male & female teacher educators. Therefore null hypothesis, which states that no association between the competence of male & female teacher educators in the use of ICT (Use of application software), was accepted.

From the results in the table (5), no significant association was established between the competence of male & that of female teacher educators in the use of ICT (Use of internet resources). Thus the null hypothesis was accepted.

It can be inferred from table (5) that no significant association was established between the competence of male & female teacher educators in the use of peripheral ICT equipment. Thus the null hypothesis was accepted.

Conclusion: This study revealed that teacher-educators have positive attitude. Also, it is concluded that no gender & stream difference exists in their attitude towards ICT. In general this study revealed that no significant difference exists between male & female teacher-educators in the use of ICT.

12. Professional Development of Teacher Educators using ICT: Challenges and Opportunities

Introduction: What are ICTs? Information technology (IT) is "a fancy name for data processing", according to Newton. IT means all equipment, processes, procedures and systems used to provide and support information systems (both computerized and manual) within an organization and those reaching out to customers and suppliers. The term information and communication technology (ICT) was coined to reflect the seamless convergence of digital processing and telecommunications.

Modern researches on ICT in education indicate that most of the faculties in education are not using the technologies to their full potential and that academics in these faculties often exhibit a lack of confidence about ways of using such technologies in appropriate and authentic ways. Many teacher educators are uncomfortable with the use of ICT in their subjects, either because they do not see any value in using ICT with their students, or because they, themselves, lack skills in the area (Cuban 1998). Further, it appears that beginning teachers and student teachers often do not see themselves as computer literates and, because of their belief that computers will remove opportunities for highly valued face-to-face interactions they are not motivated to use computers themselves in their teaching (Foley & Schuck 1998). It therefore becomes apparent that there are two areas in which support

for appropriate use of ICT is needed in teacher education institutions: Firstly to encourage teacher educators to start using ICT in ways that enhance their teaching and to support the development of required skills among students for using ICT effectively and Secondly, to show prospective teachers how to use ICT appropriately in their future teaching. A two-layered approach is therefore necessary in any professional development of teacher educators. Further, if the transformational potential of using ICT is to be recognized then, a lot of efforts must be put into professional development projects than merely teaching a few skills. New conceptualisations of ways of using ICT in teaching and learning need to be considered (Carroll 2000). New content can be covered in ways that could not be done previously. Therefore the "what" of learning can change as we have access to simulations, tools and techniques for understanding content differently (Cuban 1993, Pea 1998). However, Pea (1998) goes further in this discussion and adds that the technology will not be the panacea on its own. All such tools are mediated by human goals, beliefs and activities. Consequently, professional development in this area must consider the learning context and beliefs of the teacher educators and has to take these into account. The literature on professional development in general suggests that professional development must be sustained, ongoing and intensive and supported by collective problem solving around specific problems of practice (CERI 1998). Teacher's professional development is absolutely essential if

technology provided to schools is to be used effectively. Simply put, spending scarce resources on informational technology hardware and software without financing teacher professional development as well is a waste. That said, designing and implementing successful teacher professional development programmes in the application of technology is neither easy nor inexpensive. There are more cases of many inadequate and ineffective training programs than there are success stories. Moreover, success stories are not automatically transferable to other situations, and the total body of experience and knowledge in this field is in its infancy.

Even if students could learn independently how to use technology to enhance their learning and skills development, with little or no involvement from their teachers, they are highly unlikely to have those opportunities if teachers do not let them have access to technology. Teachers remain the gatekeepers for students' access to educational opportunities afforded by technology: Moreover, providing technical skills training to teachers in the use of technology is not enough. Teachers also need professional development in the pedagogical application of those skills to improve teaching and learning.

Context: Attempts to integrate technology in education provoke a variety of responses from teachers that range from enthusiasm and skepticism to fear and uncertainty. A long history of technology use in education reveals that the

first reaction is to use new technology in the same traditional ways as the old technology. Old curriculum and pedagogical approaches should be reformed, and if necessary replaced, to take advantage of the new media. Research has shown that computers are used less often in the classroom than in other organizations. In order for education innovations to succeed, systemic approaches and the collaboration of all stakeholders, including teachers, are required (Cuban, 2001; Vrasidas & Glass, 2004, 2005).

A major issue emanating from research on teacher preparation has to do with the provision of ongoing teacher support to continue integrating technology into their teaching. Several scholars have argued that existing professional development programmes are inadequate (Ball & Cohen, 2000; Borko, 2004). Ongoing professional development is essential for school improvement, and it can empower teachers to address the challenges they face in their everyday teaching. Professional development is a growing need as schools attempt to reform themselves and as new policies are established for teacher certification and school accountability. Teachers do not just need support in the form of workshops, instead they need to have access to support throughout their careers as they try to integrate technology into the curricula and seek to improve their teaching. One-time workshops and teacher preparation during the course of one semester are not sufficient. One of the key characteristics of successful professional development programmes is collaboration among all

stakeholders (Gross *et al.,* 2001; Manke, Ward, Lundeberg, & Tikoo, 2005; Vrasidas & Glass, 2005). Building partnerships for developing, implementing and evaluating programmes for teacher preparation in teaching with ICT has worked well in several instances. Radinsky, Smolin, and Lawless (2005) reported a case study in which the University of Illinois, Urbana-Champaign created a professional development program in which teacher education faculty, technology experts, and teachers collaborated to design modules integrating technology in the Curriculum.

Objectives of the Teacher Professional Development: Review trends and issues in Information and Communication Technology (ICT) and Teacher Professional Development (TPD)

- Challenge gaps and assumptions in relation to existing paradigms of provision
- Identify driving forces impacting on TPD and how ICT could be harnessed to develop professional development of teacher educators.
- Explore and analyse a realm of possible future TPD-ICT models initiated by the Government of India and develop scenarios for 'preferred' models.
- Develop outline parameters for a TPD-ICT framework for attaining preferred future scenario
- Increase organizational capabilities for future collaborative planning.

Education and ICT Scenario: Now let us look at the efforts put by Indian Government through the formulation of National Policy on ICT for secondary schools.

Legal Framework for ICT and Education:

Ministry	**Key Responsibilities**	Departments/divisions
Ministry of Human Resource Development	Providing policy framework, financial support and guidelines for the education sector	■ Department of School Education and Literacy ■ Department of Higher Education
Ministry of Communications and Information Technology	Formulating, implementing and reviewing national policies pertaining to ICT	■ Department of Information Technology ■ Department of Telecommunications

Policy Framework : The table below briefly outlines the objectives of relevant national level policy documents in India:

Document	Date	Relevant Objectives
National Policy on Education	1992	■ Exposure to computers and training to be part of professional education ■ Employing educational technology to spread information and train and re-train teachers
National Policy on ICT in School Education	2009 (Draft)	■ ICT literacy and competency enhancement ■ ICT enabled teaching-learning process ■ Capacity Building of teachers ■ ICT infrastructure in schools ■ ICT for open and distance learning

Sarva Shiksha Abhiyan (SSA): Sarva Shiksha Abhiyan (SSA) is a flagship programme of the Government of India to support the states in creating, developing and strengthening the formal primary and upper primary school systems to achieve the goal of Universal Elementary Education. It is a partnership programme between the central and the state governments, which seeks to improve the performance of the school system through a community-owned approach. SSA is time bound mission. It had the objectives of ensuring Universalization of Education and bridging gender and social gaps by 2010.

The SSA encourages states to use ICT and EDUSAT (Education Satellite) to provide distance education within states to supplement school education. Distance Education has been naturally chosen as a catalyst for expediting SSA. Further, the Educational management Information System (EMIS) tool under SSA is a significant part of the project as it facilitates monitoring of the physical and financial parameters of the scheme. The system has District Level, State Level and Ministry Level modules.

Namma Dhwani: VOICES and MYRADA, two NGOs working towards using media for social change, together with UNESCO have initiated 'Namma Dhwani', India's first cable audio initiative, in 1999, in Budikote village, Kolar district, Karnataka.

Gyan Darshan / ***Gyan Vani:*** An educational Television channel DD-Gyan Darshan has been set up by the national telecaster Doordarshan and Indira Gandhi National Open University (IGNOU) with assistance from the MHRD and many educational software makers. It has four round the clock channels offering interesting and informative programs for school-going children, college students and youth seeking career opportunities.

Gyan Vani is an educational FM radio channel with day to day programs contributed by various ministries, educational institutions, NGO's and national level institutions such as IGNOU, NCERT, UGC, IIT's and open universities. *Gyan Vani* serves as a medium for listeners and for addressing local educational, developmental and socio-cultural requirements.

Free and Open Source Software (FOSS) in Education: The Open Source community offers a database where educational institutions can tap the full potential of software available in the Open Source domain. This software which is available free of cost is developed, tested and upgraded by programmers and users on a regular basis. In April 2005, the Ministry of Communications and Information Technology, Government of India set up the National Resource Centre for Free and Open Source Software (NRCFOSS) in an effort to bridge the digital divide and strengthen the Indian software industry. NRCFOSS encompasses research and development,

human resource development, networking and entrepreneurship development and it serves as a reference point for all FOSS related activities in the country (http://nrcfoss.org.in/).

In India the adoption of open source solutions is primarily under the state governments. The IT@School project was initiated by the Government of Kerala in 2000 to provide ICT enabled education in the state and has achieved the status of the World's largest simultaneous deployment of FOSS based ICT education.

ICT Professional Development Challenges: Teachers need time to use ICT and gain the needed skills and competencies to integrate them successfully into their classroom. According to Donnelly and Colleagues (2002), studies have shown that teachers need 3–6 years of sustained practice to integrate ICT fully into the classroom. Adelman and Colleagues (2002) found that teachers identified time as the most significant barrier to integrating ICT in the classroom—time to learn how to use ICT, how to develop educational activities, and how to implement them in the classroom. One of the most vigorous discussions in teacher professional development focuses on the importance of the successful integration of ICT into current curricula (Mumbi & Mesut, 2004). Access to quality digital content is crucial, and trying to develop one's own digital curricula is a task that very few teachers can be expected to undertake. However, it is not simply a matter of aligning the curriculum to new technologies.

Technology has changed dramatically during the last few decades, but school curricula have not. Imposing innovative technologies on old curricula is a serious challenge. Computers were initially designed to serve the needs of businesses, not education. Yet what we know about pedagogy requires that technology integration efforts be driven by the needs of education rather than the business sector from which technological advancements typically arise. Trying to force the use of technology in the classroom, for which it was not designed, often presents inseparable difficulties. ICT is always used within a context (e.g., to teach Maths, Social Sciences, and the like); Integrating the technology seamlessly within the content area is not always successfully achieved. Current uses of ICT in the classroom are not always transparent; rather, ICT use is often "added on" to the curriculum.

Role of ICT in TPD (Teacher Professional Development) & Education

- Provide productivity tools to write reports, make presentations, communicate, design animations, build Websites, etc.
- Provide access to guided TPD resources and collaborative environments, and enable the creation of online communities for providing practice.
- Enable acquisition of basic computer skills Internet Computer Driver's License (ICDL), design skills (e.g., Web

pages), programming, and hardware maintenance and repair

- Provide tools (e.g., spreadsheets, databases) that promote higher-order Thinking

Strengths of the TPD

- Flexible and powerful—can be used to develop materials, access resources, and communicate
- Multiple media and platforms-combine text, audio, video, animation, and interactivity
- Centralized and decentralized communication-supports dissemination of resources and essential feedback from schools
- May enable learner-centred and active-learning pedagogies
- Enable communication with experts—including TPD mentors, master teachers, and help desks
- Improve subject mastery through Computer-Assisted Instruction (CAI), simulations, and other tools
- Provide support for collaboration—individuals, pairs, and groups of teachers or students can use computers to collaborate online and face-to-face
- Support assessment and recordkeeping—accredited ODL courses, electronic portfolios, etc.

- Potential for revision and new versions supports reflection, self-assessment, and other learning-related activities.

Limitations of TPD

- Complex tools require both time and TPD to be effective.
- Hardware, software, and operating-systems are fragile subject to damage by users, viruses, fluctuating electrical power, etc.
- Hardware and software lose value and utility as they age.
- Highly dependent on infrastructure-electrical, telecommunications, road (for repairs), and human (for maintenance and management)
- Without support from leadership and system-wide commitment to new modes of teaching and learning, impact is limited.

Conclusion: The Review on TPD using ICT had shown the importance of authentic and appropriate use of ICT in teacher education and demanded that more teacher educators should incorporate ICT into their teaching in useful and effective ways.

Professional development of teachers using ICT should be designed and implemented as part of a broader educational reform. Success in ensuring that teachers acquire the skills and knowledge they need to use technology effectively opens the door to all kinds of new educational opportunities for both

teachers and students, and downstream economic opportunities for graduating youth and their countries. It is the key to participation in the global knowledge-based economy. Accordingly, teacher professional development in the use and application of technology must be given priority and resources it deserves, while maintaining a constructively critical eye on its costs, methodologies, and impact.

13. Availability and Utilization of ICT among Teacher Educators

Introduction: "The destiny of a nation is shaped in the classroom". In olden days learning components were small and limited. Accordingly teacher expectations were also simples and unambiguous. ICT has opened new avenues for learning and digital technologies have changed the entire process of learning. Teacher preparation to meet the newer challenges of knowledge based society in the 21st century's ICT-world should be conceived with great urgency. The teacher and teacher educator have to face their new tasks in a more flexible way and prepare themselves for their new roles. The requirements for new teacher competencies and professional development are more and more important for the use of ICT in education. ICT enabled Pre-Service Teacher Education is one of the innovative ways of making classroom instructional Process effective. The potentials of Information and Communication Technology (ICT) to facilitate students' learning, improve teaching and enhance institutional administration have been established through research. (Kazu & Yavulzalp, 2008; Kirschner & Woperies, 2003). Currently vast sources of ICT such as Laptop, Desktop, Web Technologies, Internet and telephones are available. This study investigates availability and utilization of ICT among 400 Teacher Educators from Perambalur, Trichy, Madurai and Karur districts.

Objectives: (1) To find out the availability of ICT among B.Ed. Teacher educators. (2) To find out the utilization of ICT by B.Ed. Teacher educators in their classroom processes. (3) To identify the integration of ICT in classroom processes by B. Ed. Teacher educators. (4) To enlist the impact of ICT on Teacher educators' teaching.

Methodology: In the present study survey method was employed. In this study the investigator selected 400 B.Ed. teacher educators from 4 districts randomly. A questionnaire was constructed by investigator. The data was collected through a questionnaire of 400 B.Ed teacher educators in 4 districts (155 from Perambalur district, 165 from Trichy district 42 from Karur district and 38 from Madurai district). The respondents were selected randomly. The sample distribution was given in the table.

Table.1 Sample Distribution

S.No.	Category	Teacher Educators
01.	Male	264
	Female	136
02.	Above 25 years	138
	Below 25 years	262
03.	Urban	246
	Rural	154

A questionnaire to find out the availability of ICT in teacher education institution was used. It was a closed type questionnaire. It contained 30 questions. All the positive statements are given 1 and 0 for yes and no responses respectively. A questionnaire for utilization of ICT among B.Ed. trainees was used. It was a closed type questionnaire. It contained 30 questions. All the positive statements were given 1 and 0 for yes and no responses respectively. The negative statements got score 1 and 0 for no and yes response respectively. Both the questionnaires were validated by experts. The respondents were asked to fill it up to find out their utilization of ICT. They were asked to feel free while responding up and assured that it was only for research purpose. This enabled them to respond with out any bias. After collecting the data, the responses were scored and tabulated.

Results and Discussion

Table2: Availability of ICT resources in B.Ed colleges
Figures in %

S.No.	ICT resources	Urban	Rural
1	Internet	99	63
2	Email	90	65
3	E group	80	63
4	Cell phone	100	98
5	SMS	100	98
6	Chatting	90	65
7	LCD	100	96
8	OHP	100	95
9	DVD	100	98
10	Video	100	97
11	TV	100	96

The above table shows the availability of ICT resources in the B.Ed colleges of urban rural areas. It is observed that Internet facility in the urban area (99%) is more than that in rural (63%) areas. It is clear that cell phone availability cuts across the rural/urban barriers.

Table3: Utilization of ICT resources among the teacher educators

Figures in %

S.No.	Purpose of utilizing the ICT resources	male	female	urban	rural	Above 25 yrs teaching experience	Below 25 yrs teaching experience
1.	Provide academic solution	76	65	60	43	53	65
2.	Improve learning, knowledge and research process	78	64	86	54	54	75
3.	Facilitate important discussions	84	71	93	67	78	86

4.	Provide an opportunity to interact with friends and experts	93	95	98	65	96	98
5.	Exchange confidential or sensitive information and routine information	77	63	94	68	86	93
6.	Interest in Using Internet facilities	85	83	89	85	88	95

The helpfulness of these 6 variables were evaluated with the status of the responses elicited. It was found that the male urban respondents below 25 years teaching experiences utilised ICT more than their female counterparties. It was also found that rural respondents were more interested in using Internet facilities than the urban area respondents.

Recommendations of the study

1. Every College of Education must have the facility of a full fledged, Internet connected computer Lab for providing hands- on training and practice.
2. Efforts should be made to ensure that even rural colleges get ICT facilitation and the teacher educators are able to utilize ICT in their classrooms.
3. Theoretical as well as practical knowledge of teacher educators can be updated using technology.
4. Improve level of internal motivation to utilise ICT and to consider new and challenging teaching options.
5. Teacher educators have to be competent in the methodology to present the concepts effectively utilising ICT.

Conclusion: ICT has important implications for both improving teacher-training methods and more broadly, for ensuring that teacher educators are in a position to take up new roles suited to education in knowledge – based societies.

We are now sailing into a sea of change made possible by the rapid development s and availability of the Internet. These developments in the field of technology have already begun to influence the way in which we utilise ICT in our classrooms. What we now need to consider is that the access to the internet outside of formal classroom settings has opened up possibilities that were inconceivable ten years ago. For many students their home will be the principal place of access to the Internet and the word 'classroom' will assume a whole new meaning for them. The nature of the traditional classroom is going to change beyond recognition and we too may wonder why we didn't get it right from the beginning.

14. Opportunities and Challenges in the Professional Preparation and Development of Teacher Educators

Introduction: The 21st century can be earmarked for bringing revolutionary changes in almost every sphere of life. Under the shadow of globalization, post-modernization, the needs and aspirations of the society have been found to get changed in a revolutionary manner. The sharp and rapid changes at the economic and technical sphere of life may be taken as the basis for bringing ripples in the socio-cultural and personal milieu of life in an unexpected manner and field of education may be taken as a glaring example which is consistently involved in accommodating these changes in the form of several reforms. The prevailing current of globalization, induction of information technology, reshuffling of teaching approaches with changing philosophical thrust along with accommodation of contemporary issues of gender, environment, equality etc. have created a tremendous impetus on teacher education for restructuring its outlook and mode of transmission on a priority basis. The reactionary steps against the given scenario expects from the teaching community to reorient it self for developing new capacities and expertise while meeting the contemporary challenges.

During the last decade, a series of reforms have been brought in the field of education. The seed of those reforms can be traced back to National Curriculum Framework 2005, which perhaps for the first time, expected from the practitioners

and other stakeholders involved in the task of education to change their outlook about the whole transaction by evolving new pedagogies and structuring the interaction in such a manner that the educational endeavor should appear meaningful and constructive to the society. For example in it first chapter, it has been stated in NCF that 'this document seeks to enable teachers and administrators and other agencies involved in the design of syllabi and textbooks and examination reform make rational choices and decisions. It will also enable them to develop and implement innovative, locale–specific programmes. By contextualizing the challenges involved in curriculum renewal in contemporary social reality, this document draws attention to certain specific problems that demand an imaginative response. We expect that it will strengthen ongoing processes of reform, such as devolution of decision making to teachers and elected local level bodies, while it also identifies new areas for attention such as the need for plurality of textbooks and urgent improvement in the examination system.' Somewhere these expectations, reflected through various statements in NCF, carried intangibly the potential to achieve the target of Sarva Shiksha Abhiyaan as well as of Right to Education Act 2009 respectively when education was put as the fundamental right of the children ranging between the ages of 6-14 years of age.

The Sarva Shiksha Abhiyan followed by provision of Right to Education Act has brought intensive pressure on all the main stakeholders to rethink and revive the system

according to their laid down objectives. Prior proceeding for deliberation, it seems pertinent to have a quick glance over the provision of both the state sponsored acts.

The salient features of SSA are

- It is time frame bound programme for Universal Elementary Education
- It is a response to the demand for quality base education all across the country
- It aims to promote social justice through elementary education

In order to justify its stand for community owned quality base education, it is making active efforts to involve local bodies at different levels like Panchayati Raj Institutions, School Management Committees, Village and Urban Slum level Education Committees, Parents' Teachers' Associations, Mother Teacher Associations, Tribal Autonomous Councils and other grass root level structures to manage the elementary schools.

SSA is also an expression of political will for universal elementary education which is seeking partnership between Central, State and local government at different levels. Here the states are free to develop their own vision about elementary education.

In order to enhance its effectiveness ,SSA has formulated different Strategies like seeking institutional

Reforms, Sustainable Financing, Community Ownership, institutional Capacity building, Improving mainstream Educational Administration, community based monitoring with full transparency, habitation as a unit of planning priority to education of girls, Special groups and planning for District elementary education etc. The main concern comes when it specifies the role of teachers here as a part of strategy that 'SSA recognizes the critical and central role of teachers and advocates a focus on their development needs. Setting up of Block Resource Centers/ Cluster Resource Centres, recruitment of qualified teachers, opportunities for teacher development through participation in curriculum-related material development, focus on classroom process and exposure visits for teachers are all designed to develop the human resource among teachers.'

Right to Education Act 2009: Another historic step was taken by the state when in August 2009, Parliament Passed the Right of Children to Free and Compulsory Education Act 2009. This Act provides a justifiable legal framework which entitles the children between the ages of 6-14 years to an education of quality, based on principles of equity and non-discrimination.

The RTE Act Provides for

- Right of children to Free and compulsory education till completion of elementary education in a neighborhood school

- According to this act 'compulsory education' means obligation of the appropriate government to provide free elementary education and ensure compulsory admission, attendance and completion of elementary education to every child in the six to fourteen age group.
- It makes provisions for a non-admitted child to be admitted to an age appropriate class.
- It specifies the duties and responsibilities of appropriate Government, local authority and Parents in providing free and compulsory education, and sharing the financial and other responsibilities between the central and state government
- It lays down the norms and standards relating to pupil teacher Ratios (PTRs) building and infrastructure, school working days and teacher working hours

The enunciated objectives of these two significant documents of the state will be difficult to achieve with the ongoing practices at both the theoretical and practical levels in the teacher –training programmes. Here one has to begin with the teacher training programmes which keep tremendous opportunities to mould the attitude of the prospective teachers not only according to the desired objectives of the NCF2005 and RTE,but also to the contemporary needs of the society revolving around technical proficiency, professional competency and global viability without any hindrance.

But when one tries to juxtapose these aspirations with the current teacher- training programmes, their passivity and apparent immunity is quite baffling. The teacher –training programmes, meant to prepare both the teacher educators as well the teachers for the schools respectively are still running on the conventional basis with conventional offerings without considering the contemporary needs. Now after having a glance over the provisions of SSA and the RTE Act, if we just look at the nature of teacher preparation programmes, it is quite obvious that the message and expectations of the state are not reflected in practice. Even the statutory body for Teacher Training i.e. NCTE also has not been successful in laying down broader framework for teacher training programmes matching with the current aspirations of the society. NCTE since 1978 has brought several changes in its documents related with Teacher Education but still it is far away from the expectations. NCTE itself has admitted '*it is indeed a matter of concern that teacher education institutes continue to exist as insular organizations even within the university system where many are located.'* This expression in other words can be traced back from the Chattopadhya Commission (1983-85) which *envisioned the new teacher as one who communicates to pupils "… the importance of and feeling for a scientific attitude; a commitment to a concern for society."* In other observation the commission stated that '*if school teachers are expected to bring about a revolution in their approach to teaching…That same revolution must precede and find a place in the colleges*

of education.' The teacher training programmes are still running on age old practices of loading the trainees with theoretical inputs and with least concern for their practical implications. The current teacher preparation programmes are suffering from maladies like poor knowledge of the subject, lack of real world experience; focus more on 'soft' pedagogical knowledge at the expense of depth in subject matter.

National Policy of Education 1986/92 recognized '*teachers should have the freedom to innovate, to devise appropriate methods of communication and activities relevant to the needs of and capabilities of and the concerns of the community.'* It also stated that '*teacher education is a continuous process, and its preservice and in-service components are inseparable. As the first step, the system of teacher education will be overhauled.'*

Even Yashpal Committees Report (1993) observed '*inadequate programmes of teacher preparation lead to unsatisfactory quality of learning in schools. The content of the programme should be restructured to ensure its relevance to the changing needs of school education. The emphasis in these programmes should be on enabling the trainees to acquire the ability for self-learning and independent thinking.'*

In the background of the reflections of various committees and commissions, the current teacher –training programmes are found to be affected by the following maladies

2. The Prominent Maladies in Teacher –Education Programme

2.1 Discrepancy in deciding the criteria to become a teacher-educator – It has been seen that discipline of education can be termed as one of the highest porous discipline where anybody can enter even without having any degree in education.. Unlike the other disciplines where the degrees in the related field make the person eligible to teach that subject at the university level, the absence of this criterion act as main hurdle in deciding about professional competencies uniformly for all the teacher-educators. The facility to treat anybody with Post-graduate/doctorate degree (with UGC NET) as eligible to be teacher-educator has created a problem to construct a homogeneous perception about teacher-educators..

2.2 Increasing privatization in the field of teacher education - In the age of liberalization, the introduction by the private entrepreneurs has opened tremendous opportunities for the teacher educators to get jobs without any hassle. Due to the prevailing nepotism and red tapism, teacher educators had great difficulties in even getting the job in the B.Ed colleges run by the government. Many had to compromise by starting teaching at the school level. But after arrival of the private universities and colleges, this problem of getting a job no longer remained an issue. But over the years, it has been seen that private enterprises due to their commercial motives have played a very significant role in deteriorating the quality of teacher

education institutes all over the country. Low salary, instability, long working hours, passivity about the innovative approaches are some of the features existing in almost all the private Teacher- training colleges of the country. In this situation, it becomes very difficult for the teacher –educators to sustain their interest in research and publication.

2.3 Lack of Curriculum matched with the contemporary needs of the system- The curriculum related to the task of preparation of teacher educators is still reeling with conventional and traditional pattern. The provision of NCF and RTE expects from the teacher educators to prepare the prospective teachers with the new orientations. The idea of inclusive education, the concept of multi-grade, multi-cultural education can not be executed in the absence of its inclusion in the teacher training programme. Similarly use of technology in all sphere of life needs to be given due recognition in the teacher training programme. Merely having the provision of computer education in the curriculum is not sufficient to prepare the teacher –educators needed for the 21st century. Keeping in view the stated goals, it has been stated by the RTE that

'*…a teacher's training programme would have to be developed. SSA should facilitate a consultative process for developing the framework for this training programme with the inclusion of persons and institutions that have had experience of delivering such programmes. A module dealing with age-appropriate*

enrolment, cross cutting with gender and other social issues needs to be developed and used in the in-service programmes. '

2.4 Thrust on training of the teachers for the elementary level - After more than six decades of Independence, State for a long period of time has put its major thrust on Universalization of Elementary Education. Keeping in view this approach, the teacher training programmes also laid major emphasis on evolving and sustaining those pedagogies required for the elementary levels only. But after the acceptance of RMSA, it has become imperative for the teacher –training institutions to explore and practice pedagogies required for the secondary level. In order to do this, teacher-educators have to change their existing approaches with changing mindset.

2.5 Reluctant Attitude towards Research in the field of education- In order to resolve major issues related to both the theoretical and practical aspects of education, thrust on researches is very much necessary. But over the years, it has been seen that researches in education have only added quantity rather than bringing quality in the field. Repetitive work, lack of research orientation and passive attitude towards the major stakeholders related to the field of education (like State, schools, communities etc.) can be said to be responsible for deteriorating the quality of teacher-education.

2.6 Low self –esteem of the teacher-educators - Unlike in the other fields, no one can deny the poor perceptions carried by the society for the teachers as well as the teacher-educators. Latter, despite having double post-graduate and doctorate degree has normally failed to wield as much weightage as has been received by the other professionals in the field. In the private universities, teacher-training departments have always been soft victims of discrimination and partiality in comparison with other departmental courses, and often been closed on the pretext of commercial loss.

In the light of the above stated problems which may be taken as challenges also, it seems prudent to provide fresh outlook to the whole structure so that without loosing its traditional integrity, it could gain esteem and respect while keeping the market forces in its purview.

3. Measures for Developing Professional Competencies among the Teacher –Educators: In order to develop the professional competencies, the teacher – Education programme needs to take the following measures-

3.1 Setting Uniform criteria for teacher–educators - It should be compulsory for the teacher educators to have at least a masters degree in education in order to develop basic understanding of the issues related to education. Merely having degree/s in the pure disciplines should not be the criterion for becoming teacher-educators. Here it is also worthwhile to

point out that UGC(NET) in education should be given recognition rather than the same in any discipline.

3.2. Setting strict norms for the private set ups- Private enterprise is the need of the time and it is the basis of huge employment. But it is highly important to have a monitoring agency which can maintain complete control over their conduct. Attempts must be made to help the teacher-educators gain equal status in terms of salaries, promotion and recognition on par with teachers from the other fields.

3.3 Restructuring of Curriculum according to the contemporary needs of the Society: Contemporary needs in the field of education are revolving to consider the aims and goals of the Sarva Shiksha Abhiyan and the Right to Education Act followed by the general aspirations of the society which expect from its progeny to be technical savvy having global outlook. Keeping these aspects in mind, teacher educators should be capable enough to mould themselves according to the contemporary needs. The provision of multi-grade, multi-cultural and inclusive education as the part of the RTE lays down the onus upon the teacher-educators to explore the viability of all these aspects in practice. For this, there is a need to evolve the curriculum in the teacher-training institutes matched with the provision of NCF and RTE respectively.

In the current competitive world, it is very difficult to manage without having competency in the technical field. Therefore, it seems imperative that teacher –training courses

should also have a major thrust on providing experiences which can prepare the Teacher –Educators to emerge as technical- savvy and professionally competent.

3.4. Thrust on expansion of pedagogies suitable for the Secondary level: Keeping in view the universalization of secondary education in mind, it is also required to transcend the boundaries of elementary levels and to seek pedagogies related to the secondary and higher secondary level. Due to the thrust on universalization of elementary education, experts and all the other stakeholders like NGOs, Curriculum-planners etc. have highlighted the significance of child-centered approach providing concrete examples related to the surroundings if the children. But this same approach cannot be applied exactly at the secondary level where the needs and aspirations of the children are different due to physical, emotional and mental growth.

3.5. Encouragement to Researches – The field of education is replete with numerous challenges and all these can be met gradually by promoting researches on a priority basis. It should be made mandatory for the teacher-educators to engage in active research at different levels. In order to do that, provision for sufficient funding must be made. While giving recognition to the private set-up for starting the Teacher-training course/s, background information related to research and funding must be ensured so that teacher-educators can be involved actively in research without any hassle.

4. Conclusion: In the light of the above stated problems and solutions, it seems imperative to restructure the entire teacher –education programme according to the contemporary needs of the society. Without bringing changes in the teacher –education, one cannot expect to gain the benefits of the reforms launched at the school level. The provisions of SSA and RTE have made the task complex . Today it is expected from the teacher –educators to emerge competent enough to tackle all these challenges by equipping themselves with the desirable competencies and outlook.

15 Facilitating Professional Development of Teacher Educators through Web Based Programmes –The Karnataka Experience

Introduction: The roles and functions of DIET faculty have undergone a number of changes over a period of time. Two National Curriculum Frameworks and RTE 2009 have almost redefined the functioning of the entire Department of Education. At the outset it might appear that the functions remain the same. But changing perspectives of school education, socio-economic lifestyles, priorities of the government do influence the functioning of schools. DIETs which are meant for monitoring and supervising school education in the district have the ultimate responsibility of conceptualising the change, taking measures to implement the change and to monitor the same. This calls for constant updating of the knowledge and skill base of the faculty of DIETs so that they are able to cope with the changing demands. Professional development of teacher educators is as important as the development of teachers.

Background: There are very few programmes that target the professional development of teacher educators. This was found to be a lacuna as early as 1997 in Karnataka, which resulted in the preparation of a training package titled "Teacher Trainer". This 15 day face to face training proposed to equip the DIET faculty with knowledge and skills required for their effective functioning. But DSERT could organise only one

programme of this kind because it was found very difficult to keep the faculty of DIETs engaged in one spot for duration of 15 days. Their responsibilities back in DIET demanded their presence and they were not inclined to leave their workplaces for a long duration. The training module was subsequently reconsidered for a shorter duration. A few short one day or two day interactions on various issues were organised by the DSERT. But they were so focused on specific issues that they could not give any comprehensive understanding of DIETs. All these developments clearly pointed at two needs.

1. The need to have scope for pofessional development in DIETs
2. The need to organise such programmes with least disturbance to the regular functioning of DIET faculty

The recruitment and placement policy for DIET faculty in Karnataka also necessitates the establishment of a mechanism that allows them to access a support system as and when required. The faculty positions in the DIETs and CTEs of Karnataka are interchangeable with administrative posts like the secondary school HM, BRC, BEO, and the DDPI. There is no guarantee that a member of faculty who is found in DIET in the beginning of an academic year will continue there for the whole year. Every time some one enters the DIET fold afresh, he/she needs induction training. Without such initiation, they would not be able to function in DIETs as per their role expectations.

It was in this context that RIE, Mysore proposed setting up of a web portal for facilitating professional development of DIET faculty through the distant mode. A six month web-based induction programme was proposed. The areas were identified, literature was developed. The web space was given by WIKI EDUCATOR.

Assumptions: The web based induction programme made several assumptions about functions of DIET faculty and getting them involved in a professional development programme.

1. The participation and involvement of DIET faculty will be better if they can be offered opportunities for professional development right at their working places.
2. The media could be fully exploited for distant mode facilitation.
3. Use of web would also result in incidental learning of English language.
4. The distant mode employed would provide a hands-on experience in using the media for communication.
5. A course spread over a period of time would create opportunities for trying out newly learnt knowledge and skills and to reflect over their effectiveness thus leading on to experiential learning.

Aims and Objectives: The aim of the programme was to create an ICT platform to help the DIET faculty to evolve into more resourceful professionals.

The Objectives of the Programme are

- to understand DIET as an academic institution and the challenges before it
- to develop an appreciation for the role of the DIET faculty as a trainer
- to locate and use ICT for enrichment and effective functioning as a DIET faculty
- to enhance functional capabilities as a DIET faculty

The Programme: Induction Programme for Elementary Teacher Educators, as it is called, consists of six major areas.

1. e-Media
2. DIET Roles and Functions
3. Trainer Skills
4. Research(Initially called Action Research)
5. Planning
6. General Issues that are of concern to DIET faculty

Each area consists of sub-chapters. The contents were written by an expert committee and uploaded to the site. The

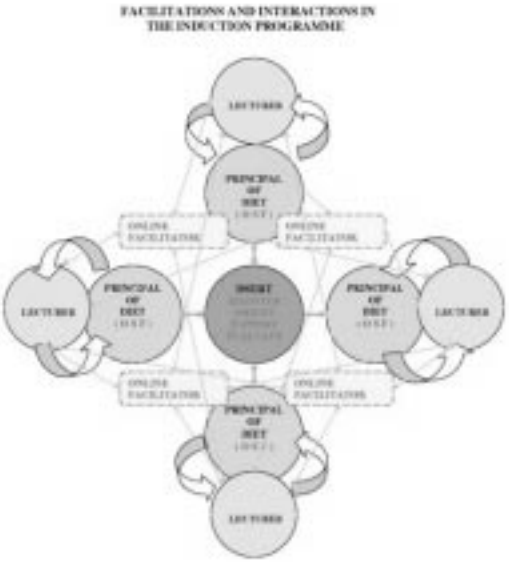
assignments to be submitted were also designed and uploaded. The six areas were spread over a period of six months. The course also offered reading of books as a related assignment. A separate book shelf was also created for the use of participants. Different links were given in appropriate places. The links included audios and videos. Different sites of educational interest and departmental sites were also linked.

Some Features: The programme inputs of this web based induction programme consist of the following:

1. Primary texts, pdf file attachments and AV clippings developed by the online facilitators.
2. Pages from relevant Internet sites under different sections.
3. Video clippings on different topics and for different training objectives.
4. All assignments are also provided under 'Self- check and Evaluation' on the main page.
5. The book shelf has a collection of relevant materials and also consists of four activities to be accomplished by the participants during the training.
6. Web Resources provide with connections to Internet sites which could help a participant as a DIET faculty.
7. The participants can get to know about the online facilitators and their e-mail ID by opening online facilitators on the main page.

8. At the end of every page is a navigation help that allows participants to go to any section of the package without having to go to the main page. They would need this help when they want to parallely refer to more than one section of the package.

For the purpose of providing support online, onsite facilitators were identified. The following diagram represents the support structure created for the implementation of this programme.



The Onsite Facilitators would provide systemic support at the institutional level and undertake monitoring. The Online Facilitators would provide continuous support on learning and monitor progress of the enrolled.

The course interactions happen in three major phases.

1. Phase I - To initiate participants in the course, the use of web, creation of email, training in the use of Office tools for two or three days.
2. Phase II - Teleconferences to provide on going support - twice during the course - for a day or two depending on the need.
3. Phase III - Face to face interaction for assessment and certification.

Assignments are to be submitted every month as scheduled to which online facilitators would respond.

Assessment: Three types of assessment mechanisms are used:

1. The assignments and their timely submission
2. Summative test at the end of the programme
3. Practicals

There is a major stress on the timely submission of assignments. The dates on which the assignments are submitted are noted. In doing so this programmes expects the participants to be on some professional development tasks on a regular basis. This can also be viewed as a habit formation exercise. The quality of the assignments is also considered. The summative test spreads across all the areas and basically

aims at assessing how comprehensive the learning is. The practicals include the use of Office tools, creation of files, ppts, internet browsing and the use of email.

Based on all the three assessments, grades are awarded as follows.

A+ - Timely submission of assignments, quality work, deep commitment

A - Timely submission of assignments, acceptable quality, interested

B+ - Submission of assignments done around the date fixed, acceptable after some correction or revision, interested

B - Submission of assignments done around the date fixed, ideas projected debatable, needs more practice in using media, externally motivated

C+ - Assessment on only those submitted assignments, externallymotivated,no good insight, no command over the use of media

C - No involvement, assignments not submitted, no command over media

Those participants scoring A+ and exhibiting a high level of commitment are considered to be online facilitators in the coming courses. Thus the resource group keeps getting strengthened, course after course. Those who get less than B are expected to reappear for the course or complete the work and submit them for consideration. Depending on the quality

of work submitted, they are awarded certificates or allowed to take the final test and practicals as the case may be. However, such candidates have preferred not to attend the subsequent workshops and dropped out of the course. It has also been observed that a few of them drop out due to work pressure from the institute. A few of the participants dropped out after they were transferred to administrative posts.

Outcomes: The following table describes the performance of participants in the last three courses. The total numbers of participants who have completed the course so far are 157.

A+	-	27
A	-	59
B+	-	51
B	-	10
C+	-	nil
C	-	nil

The incidental outcomes which are observed by the online facilitators are worth a mention here.

1. The participants have learnt to check their mail box regularly. The information sent to them by email gets response immediately.
2. They have begun to use mobile message service to send bulk messages to teachers and others especially for training purposes.

3. The mobile numbers of the participants of Teacher Empowerment Programme conducted in collaboration with the British Council were extensively used by DIET nodal officers for contacting them, giving instructions and so on.

4. Many of the participants have begun to browse the net regularly, read and forward worthwhile articles to their friends all over the state.

5. DIET faculties enter this web page for information on departmental matters, reading books linked, including 'Shikshana Varthe', the newsletter of the department.

The sustainability of the effects of this training is basically due to the fact that the participants are able to relate all the inputs to their duties in DIETs. What the participants really pick up is an attitude towards the use of media and a work culture using computers and the Internet. Since they find it useful, they continue to use the skills and knowledge learnt.

Challenges: The programme faces a number of problems. A few of them are listed here. These are observed by the online facilitators during the course of training.

1. In some of the DIETs, the availability of computers and Internet connectivity are not up to the mark. This leads to delay in submission of assignments. The delay sometimes results in loss of interest.

2. Those who are not good at typing face the problem of sending assignments as they have to get it typed by someone else.

3. Reading serious literature in English seems to affect the performance of the participants. They prefer reading material in Kannada as they are quite well versed in Kannada.

4. The Tele-interactions could not be held in the last two years as there were technical problems. This resulted in more face to face trainings which was not in the original design of the programme.

However, these problems have been considered and different strategies have been worked out to overcome them.

1. The participants were permitted to use the nearest browsing centre and the expenses incurred could be reimbursed to them using the contingency grants of DIETs.

2. A typing tutor was linked in the site. A few exercises were designed to help them develop typing speed. However, with more familiarity speed never became a problem.

3. Key issues have been translated in to Kannada and uploaded where appropriate for the benefit of the participants.

4. Satellite interactions have been planned for the year 2011-12. The studio and the network have been restored.

16. Strategies for integrating ICT in the Professional Preparation and Development of Teacher Educators

Introduction: The advent of globalization, rapid technological advancements, and information explosion has brought about major educational reforms around the world. This has resulted in greater emphasis on use of Information and Communication Technology (ICT) in school curriculum for teaching and learning. India has also been affected by the paradigm shift of using ICT in education to equip students with requisite skills and knowledge needed in the 21st century. In this regard, the National Curriculum Framework (NCF 2005), India states "Integration of Information and Communication Technologies (ICT) into schooling needs serious consideration. Teachers, educators, curriculum developers, evaluators and others will have to redefine their roles to tackle ICT rich environment and harness its full potential for the benefit of learners".

In last few decades, the Indian Government and private institutions have taken up several ICT initiatives for training and professional development of teachers (Panigrahi et. al., 2009 & Rout et. al., 2009). Undoubtedly, teachers play an instrumental role in bringing about the educational reform by the introduction of ICT in the school curriculum. Thus, the onus lies on the training institutions for skilling and re-skilling teachers for tapping the potential offered by ICT. The teacher training institutes are responsible for adopting a leadership

role in providing training to pre-service and in-service teachers, and for enabling them to effectively use new ICT tools in the teaching learning process. This task, in turn requires the teacher educators and master trainers to adapt themselves for keeping pace with the rapidly changing educational scenario. The teacher educators are required to modify their roles and upgrade their skills for integrating ICT in their profession. This time taking endeavour of modifying old teaching techniques can be accomplished through well designed ICT training programmes. The sustained ICT training programmes will allow the teacher educators to learn new ICT technologies, build confidence in handing ICT tools through trainings and cultivate positive beliefs about potential of ICT.

Challenges and limitations in the use of ICT by teacher educators: In the current scenario, ICT is perceived as a subject or a utility tool rather than an application tool. Though the educators learn to use the technology, they are unsure about the purpose of ICT for pedagogy. The use of ICT by teacher educators is commonly limited to doing basic computer related activities such as use of Microsoft office (power point, word document, etc), mathematical calculators and display technologies such as overhead projectors. Limited view point of teacher trainers in the knowledge and use of ICT has resulted in restricted utility of World Wide Web, EduSat, telephones, video, audio, online collaborative tools and other kinds of ICT tools. The latest ICT technologies like e-portfolio and hand-held devices (mobile,

smart phones), which can be utilized for classrooms management, school attendance, academic record and lesson planning, are seldom used. Due to the lack of awareness and skills, the potential of ICT for personal enrichment is also not fully tapped by the educators.

There are plenty of challenges confronting the application of ICT in teacher education and training in India in spite of several policies and initiatives introduced by NCERT and National Council of Teacher Education (NCTE). In this regard, the multiple reasons for the unimpressive use of technology by the teacher educators are discussed below.

Firstly, the teacher education programmes and workshops do not acknowledge the new age technological environment that exists in the classrooms. There is a considerable gap in the teacher education curriculum and the expectations from the teachers after they complete their training. In most of the in-service teacher education programmes, a single semester course is introduced in the name of training ICT. It is unrealistic to expect sudden transformation in the teachers who are technically trained using traditional methods into technological wizards in the classrooms. Such an inadequate ICT education is not sufficient to equip teachers for harnessing the benefits of ICT, both professionally and personally. In addition to the above, the dearth of ICT trained teacher educators in the country has resulted in poor quality of ICT education being imparted to the prospective teachers.

Unless the teacher educators and master trainers are confident and competent with ICT usage, the technological revamping of the Indian education system will remain a distant dream. Therefore, there is a need for a well thought out continuous plan of action for skilling and re-skilling of the teacher educators as well as the teachers across the country.

Few other prevalent issues include limited ICT infrastructure (both facilities and competent staff), lack of information in teachers, teacher trainers' technophobia, poor or non-existent Internet connectivity, inadequate online learning resources (related educational tools, course curriculum and other learning materials), software license, highly prohibitive costs associated with the technical support and poor power supply in most part of the country (Panigrahi and Ranjan, M., 2009 & Rout and Kumar, S., 2009). The attitudes of teacher trainees and teacher trainers reflecting contentment in the traditional 'chalk and talk' method, gross lacking in independent learning skills and reluctance to take responsibility for their own learning further amplifies the existing issues. The resource support is being provided by the NCTE, other government and private organizations, but the transformation of outlook is desired to break out of the comfort zone in order to experiment, explore and learn new skills. The lack of motivation to renounce the age old practice of blackboard based lesson plan and make attempt to adapt oneself to newer technologies is more commonly observed in long serving teacher educators (Hammond et al., 2008a & Conole et al., 2008) than the new

entrants to the profession. However, it is incorrect to assume that all the new teachers and trainers are open and confident in the use of ICT. ICT is generally considered as "add on" to the curriculum rather than a powerful tool for learning. The perspective can be changed when the benefits of ICT are experienced first hand by the teacher educators. It is only then; the trainers can convincingly impart ICT training to the prospective and in-service teachers for effective teaching and learning.

In my opinion, infusing ICT by revamping the teacher education and professional development programmes can revolutionize the ICT landscape in Indian education. This can be achieved by capacity building of the teacher educators skilled in ICT training. This brings us to some of the pertinent questions for thought like

a) What are the methods for equipping the teacher educators so that they adapt to the rapidly changing face of technology?

b) How can the teacher educators be guided on efficient use of the technology and empower teachers to become active facilitators for learning activities?

c) How can motivation and morale of the teacher educators be uplifted and sustained so that they can pioneer the technological advancement in education?

The answers to the above questions can be obtained by assessing the 'system' which produces teachers, as they

play an instrumental role in building ICT rich teaching and learning environment. The impetus to this 'system' is provided by the teacher educators through a supposedly well designed teacher education and professional development programmes. There is a pressing need to transform the attitude of teacher educators along with the components and methods of teacher training and professional development programme for infusing ICT in the mainstream education.

Strategies for integrating ICT in professional preparation and Training programmes for teacher educators: This section suggests strategies for merging ICT in training and professional development for the educators (and teachers). The suggestions are based on readings from literature, informal interviews and personal interaction with the teachers, educators, visits to teacher training colleges and professional development workshops.

The proposed strategies are categorized under seven themes. These ideas proposed in each of these themes should be adopted while designing an ICT oriented training programme for educators and teachers.

ICT as a tool for personal and professional development: There are general ICT competencies common to all the users in education, regardless of the subject area. There are also specific competencies and skills which find expression more in specific subject areas and specialization

of educators and trainee teachers. The general ICT competencies include the general understanding of the basic building blocks of the ICT tools and literacy in operating them. The specific ICT competencies refer to the special skills one acquires in order to enhance the quality of teaching and learning that takes place in the school. The special skills cannot be acquired without the general abilities, and the general abilities are not of much benefit if the educators/teachers do not possess specific skills for applying ICT in their teaching activities.

The ICT based training for educators should focus on equipping them with technical functions, components, and general uses of ICT, especially for education and training. Once the educators are confident in using ICT tools, the emphasis should be laid on application of ICT to their respective subject areas. At later stages, educators must be trained to use ICT in all the aspect of their professional lives such as classroom management, assignments, and evaluation.

The short spanned ICT training should be replaced with sustained ICT oriented professional development programmes. Promoting ICT as a tool for both personal and professional development in the training and professional development programmes will aid educators in quick and efficient adoption of ICT tools. The training programmes of the educators should lay emphasis on stimulating the pedagogical use of ICT (Hammond, M. et al., 2008a) to

improve current teaching practices and contribute to ICT based new innovative teaching initiatives. Importance should be paid to diverse role of ICT in teaching and learning. Through the development programme, the educators should be able to use computers deftly for professional (e.g. engaging in professional circles, e-learning), managerial (e.g. field visit records) and personal enrichment (e.g. searching for educational content on the web, lesson planning). Personal ICT competencies of educators may include using ICT as a work tool (examples are submitting and posting assignments in electronic format, using office applications, and use of e-portfolios), as a communication tool (such as email, chats, discussion forums) and as a resource tool (examples include cd-roms, Internet, web portals, search engines). The training and development should follow 'learning by doing' approach to help the educators and teachers adapt ICT into education and not adapt their education to ICT. The self-learning acquired by doing during the professional development programmes will be deep rooted and go a long way in successful integration of ICT in education in India.

Diversity of ICT tools and its applicability in various contexts: The teacher education and professional development programmes should provide exposure to and practice teaching and learning with diverse ICT resources. This will enable educators to facilitate teacher training using wide range of resources in different media formats. Workshop strategies should include lectures, demonstration, hands-on,

individual assignments, group work, and online communication using different ICT tools. The flexibility of educators in using multiple ICT tool is beneficial in Indian context as the availability of ICT resources is subjected to multiple factors such as place, electricity, cost and so on. Using diverse ICT resources will inculcate interest in resource based learning, which aims at achieving both subject and information literacy objectives through hands-on, practice.

Selecting appropriate ICT resources for training and development: Selection of suitable ICT tool for professional development programmes is as important as making use of diverse ICT resources. ICT environments can take many forms. It can be situated in different software frameworks which can challenge the learner to investigate the same processes but may have totally different representations. The tools used during the training programmes should not replace or hinder the thinking skills of the trainees. The manner in which the technology is used, and not what technology is used, makes a difference to the learner and his/her learning. The various tasks can be designed for the educators to help them develop the art of choosing the apt resource for transacting teaching learning. Additionally, the culture and contexts should also be taken into consideration during resource selection. No technology is culture neutral nor are the soft wares using multimedia and linguistics. For standardization purpose, the agency for training and professional development of educators can adopt guidelines for selection of proper ICT

resources. Sharing these guidelines with educators and teachers may assist them in adopting proper ICT tools for pedagogy.

Transforming belief about ICT: The training and professional development programmes should play an instrumental role in transforming the attitude and beliefs of the educators towards the use of ICT in pedagogy. Both educators (and teachers) face extreme conflict when their role in the training session (in classroom) is questioned by the use of ICT. This results in fostering negative beliefs regarding ICT. The negative beliefs can be attributed to the unfamiliarity of educators with proper use of ICT in pedagogy (Hammond et al., 2008a), its implication in meaningful educational context, lack of self efficacy and profound faith in the existing pedagogy style which seems to be working effectively. Further, due to the inadequate integration of ICT in pre-service teacher training programmes, the educators are unsure about the need of ICT in their day- to- day activities related to teaching, learning, assessment, evaluation, and classroom management.

The ICT belief of the educators, their prior experiences, and their openness to embrace the new technology should be considered and worked upon in the training and professional development programmes. It can be attained by exposing the potential of ICT to the educators through case studies, hands on practice and demonstrations. ICT orientation of the existing pre-service curriculum may motivate educators to acquire ICT skills and leverage it for teacher preparation.

Community building of educators: The educators and teacher trainers play a significant role in revolutionizing the teacher professional development programmes. The educators are expected to provide a role model of good ICT practice, learning, sharing and building knowledge. Many educators for in-service and pre-service teacher professional development are not comfortable with the use of technology as ICT was not in practice during their time. Due to this reason, many lack faith in the potential of ICT to bring about positive change in content delivery, cognitive development, and classroom management. They are indeed subject matter experts with immense experience and expertise in the education field. But subject matter experts with expertise in pedagogical application of ICT are lacking. Therefore, there is an urgent need to address the capacity of the educators and trainers for using ICT as a pedagogical tool. Building the community of educators will help in facilitating discussions amongst the educators with respect to using ICT for teacher training and development. The integration of ICT in teacher training programmes has not yet reached its pinnacle. It is therefore required that the educators are flexible in their approach of using ICT while training, free to experiment with novice ICT tools or techniques and share the successful and the failed attempts within their community. The collaboration amongst the educators will not only result in evolution of ICT in teacher training but also motivate their community of educators to adopt ICT approach for enhanced teaching and learning.

The online portals and discussion forums are suitable ICT tools to connect with the global and local community of educators for sharing and discussions. Other forms of online media such as blogs, wiki and video conferencing are also useful collaborative tools. However, there is a widespread reluctance to use these tools. The educators participating in online forums are disappointed because the discussions are limited to small number of posting by the community members. Frequent late or no response causes the participants to lose interest in collaborative communities. Improper expression of thoughts in online forums results in misunderstandings due to which the community members disengage from the forums. Often, the educators too are unaware of the benefits from collaboration and therefore claim lack of time for such activities.

Reconstruction of faith in the use of collaborative tools is required for encouraging the educators to make use of them. The tools will allow educators to connect with educationists around the world exposing then to local and global practices. The professional development programmes provide a platform for the educators to interact with each other and share experiences. These interactions can be sustained by the use of collaborative ICT tools. The training programmes can provide introduction and provision for such tools to be used by educators for maintaining ties amongst themselves. Such practices will open up the avenues for educators to work collectively on issues. Once the educators experience the benefits of collaborative learning and acquire efficiency in using

these tools, they can follow the same practice in the teacher training sessions. An agenda of in-service teacher training programmes is strengthening of the teacher community and this can be achieved by making use of ICT tools in ways as discussed above.

Follow up support for educators: It is unrealistic to expect teacher educators to use ICT at the end of their professional training and development programme. Providing step by step confidence building measures and feedback to the educators will boost the morale of the educators in the use of new technologies. Several follow up sessions are required to address the difficulties faced while integrating ICT in the teacher training programmes conducted by educators. It is essential to have sustained planning, preparation and follow up after professional development session for educators using ICT.

The follow up support may be provided by face to face meetings, video conferencing, phone, and use of collaborative tools and other means of communication. The educators can be introduced to different follow up ICT tools during the professional training programmes and also be encouraged to use it on a regular basis for positive outcomes. The educator trainers should vow to provide regular feedback and support to the educators to sustain their interests.

Technology has the power to eradicate the issue of follow up – a critical unresolved issue in training and

professional development programmes. It is imperative that the educators experience and use the follow up methods aided by technology for influential impact of teacher training initiatives.

Training for Distance learning programmes :

The distance learning programme is commonly used for pre-service and in-service teacher training. However, there is an implicit apprehension about the quality of distance mode of learning. The inadequate infrastructure support, negative belief in the effectiveness of self-learning without a teacher, fraud in examination, poor content design for self learning, lack of effective learning material production and presentation (less use of visuals, simple language, proper guideline, clarity and communication), poor communication and interaction are some of the key challenges faced by the teachers in distance learning mode.

The educators can play a significant role in addressing some of the problems of distance learning programmes through special training programmes for distance education. It should be understood that there is a vast difference in distance mode of teaching as compared to face to face delivery of lessons. The professional development and training programmes for educators should provide specialized training to the educators involved in distance training initiatives. The educators should be trained on skills required for ICT based teaching and learning such as clarity in articulation and expression using distance

media, group discussion control and communication etiquette using ICT tools, assessment and evaluation. Integrating the training needs for educators engaged in distance learning programmes using ICT will improve the quality of teaching through distance learning mode and result in producing well qualified teachers in the country.

Discussions & Conclusions: Teacher educators have a critical role to play in acquainting the pre-service and in-service teachers with ICT and helping them to use the same in context of the need, culture and demand of the current society. They should not only support the teachers in right and appropriate uses of ICT tools but also challenge them in changing their beliefs for fostering constructiveness. They must provide guidelines on how to teach the subject and how specific resources can change the way students learn. It is therefore essential that the training and professional development programme for educators (and also for the teachers) include new instructional strategies for judiciously integrating ICT in classroom teaching, new forms of knowledge representations and curriculum planning based on available ICT resources. The training and professional development programmes should provide support to the educators while using ICT resources for self-learning, assessment, evaluation, classroom management, and collaboration with fellow colleagues. Besides, there is also a need to build the community of educators and teachers for sustained professional development through ICT.

The motivation of the educators and teachers is of paramount importance for integrating ICT in education. The training and professional development programmes should allow space and flexibility for the educators to explore the possibilities of infusing ICT in education. An open ended approach can be adopted in the training programmes to encourage innovative outcomes. This will ensure ownership of educators in integrating ICT in education. The training and performance may be linked with incentives like promotions, awards, etc. This will enhance the morale of the educators and ensure their ownership in the change process.

The above objectives cannot be achieved instantly. It is too ambitious to think of implementing successful and sustainable programmes to enhance education through the use of new technologies in a very short term. An effective scaling mechanism and effort is required for creating a pool of educators who can reach out to a million teachers across the country for integrating ICT in education by developing models based on case studies, experience sharing and group discussions. This endeavour will require indispensable support from the educational stakeholders in terms of providing infrastructure and accessibility to technology and other resources. There is also need for mandating special educational bodies with the task of developing separate ICT course curriculum and e-content at different levels of school education. Minimum standards for instructional design competence, standards for deployment of ICT in teaching, student evaluation

and for maintenance and management of ICT systems are required. These standards will serve as a framework for designing the professional development programmes for the educators and the teachers. The standards will also guide the educators on effective and innovative use of the new technology tool that focus on learning activities rather than on content delivery and general learner management.

The training and professional development programme is one of the domains within our educational arena in need of technology transformation. There is a need for regular monitoring to be clear on aspects which need to be incorporated as changes in our educational system. Exhaustive research in Indian context is imperative for the profound understanding of the readiness of the nation to incorporate ICT in the curricula, existing ICT resources, its impact and benefit on teacher pedagogy and student learning. In this regard, there is a need to undertake longitudinal studies, to experiment and explore means of delivering quality ICT based training to our educators and teachers.

Section III

Curricular Concerns

Curricular Concerns

Teacher preparation programmes need to be sensitive and sensible to the requirements of performing a responsible task of a reflective practitioner in schools. Therefore, ability to contextualize as well as capable of having professional qualities, skills and dispositions become non negotiable elements. Preparing such teachers and strengthening them continuously becomes a very huge task. Designing a curriculum indeed is an important task in such a context. Hitherto, education has been understood as an amalgamation of different foundations including sociological foundations, philosophical foundations and psychological foundations. A lot of thinking and research studies have been carried out resulting in developments in education as well as a move to treat education as an independent discipline. Education should evolve as an autonomous discipline with its significant features centred on problems and issues unique to education.

Since, teacher preparation programmes focus on preparing teachers who have to be relevant to schools; classroom contexts should be suited as seat of tasks to provide better insights into classroom learning. The basis for determining the challenges of curriculum has to be the vision of a state in planning how it is going to make changes in school education as well the existing system. Since teachers have to be prepared to be relevant to learners schools, the curriculum should match the needs of the system. For instance, in

Karnataka *Nali Kali* is followed and in Tamil Nadu it is ABL system is followed. If the curriculum is not equipped to position them in such contexts, then it becomes irrelevant.

The clients of Teacher Preparation Programmes are either late adolescents or young adults; there is a need to imbibe andragogic principles and methods, with an emphasis and placing learners on self learning gear. This is a big challenge indeed, but it must be attempted to. Throughout, the trainees are to be handled as autonomous and self directed learners. This calls for development of matching curriculum for them. It needs serious attention. At the same time, they also need to be enabled to quickly grasp, understand and react to situations which call for contextualizing abilities. To develop this, development of meta- cognitive abilities become a must. Teacher preparation programmes needs to develop abilities among trainees capable of helping themselves. This is yet another dimension which deserves a serious attention.

Ideally, teacher education curriculum must be futuristic and must be capable of informing and influencing the changes in school education curriculum. If not, at least, teacher preparation programme must be capable of suitably incorporating all the changes that the school education aspires to incorporate. For instance, if issues like Constructivism, Critical pedagogy, Professional autonomy of teachers, Reflective practices, ICT etc are going to be a part of school education, commensurate with that, teacher education programmes must

also change. So, curriculum, frontline curriculum and curriculum renewal make a continuum and it has to go on periodically as when needed. This autonomy must exist with academic community and it cannot remain a prerogative of the bureaucracy.

Developing nuances of teacher sensibilities in teacher preparation programme is also a very challenging task. Interestingly, one of the papers on this theme was on implicit curriculum. Indeed implicit curriculum should be given importance to encourage pedagogic decisions and to develop sensitivity to classroom voices and to select appropriate aims that guide the process of teaching. A teacher preparation programme must be sensitive to all the concerns expressed.

In the present seminar different concerns on which papers were presented covered; Using classroom based tasks as contexts for reflective and situating teacher learning, Learning to learn: Preparing teacher educators for self directed learning, ICT integration in the education of teacher educators, Understanding critical pedagogy and assessment in teacher education, Teaching and learning in multigrade classrooms and their implications for teacher education, Impact of ICT on teacher educators' professional development and Training of teachers to make pedagogic decisions based on implicit curriculum.

Editors

17. Using Classroom-based Tasks as Contexts for Reflection and Situating Teacher Learning

Introduction: National Curriculum Framework (2005) places the role of a teacher at the centre stage of educational processes in which education is envisaged to bring about social transformation. A teacher needs to be prepared in relation to the needs and demands arising from the school context, to engage with questions of school knowledge, the learner and the learning process (NCTE 2009). Besides acknowledging the need for informed and reflective teachers, it is important to recognise the value of teachers who have developed in themselves an attitude of learning through teaching. The larger aim of 'teacher learning' can be achieved through teacher education programs, which engage teachers in intense academic deliberations with the teacher educators. Ironically, the vision among teacher educators on how effective learning opportunities can be created for teachers through pre-service and in-service teacher education programs seem to be quite hazy. The field thus encounters a paradoxical situation. On one hand, there is an absence of a curricular space that encourages teacher educators to critically analyse concerns in teaching practices and in designing purposeful engagements for teachers to learn from. On the other, freedom to designing teaching experiences is loaded with hidden agendas, socio-political shades of context that seep in and quite often perturb the motivated teacher.

Although NCTE (2009) makes an attempt to specify the domains that teachers should be exposed to in teacher education programs, it remains silent on (a) how could teacher educators design such learning experiences, and (b) what are the sources that teacher educators can rely on to plan these experiences. This paper proposes to address these important issues and illustrates through the example of a case the value of such an outlook. A task-based approach to organise learning experiences for teachers by the teacher educators is being proposed in this paper. For teacher educators, tasks play a dual purpose – they serve as an important medium for engaging teachers to think about crucial issues in teacher learning, and provide the content and means by which learning (of teachers) is facilitated through a reflective process of designing, implementing, and modifying tasks. In doing so, tasks evolve into authentic means for mediating teacher educators' learning. The design and implementation of tasks for teacher preparation, not just orient teachers to a way of thinking but also decides the nature of classroom processes that a teacher would like to initiate in their classroom. To gain a comprehensive understanding of tasks and its value for teacher development, it may be useful for us to study similar efforts by teacher educators in the past, in India and elsewhere to operationalise the goal of teacher learning.

Defining tasks: One of the common aims of teacher development programs is to help teachers gain the necessary content and pedagogical knowledge required for teaching as

well as the epistemological knowledge of students' learning. Teacher education strives to make prospective and practicing teachers more knowledgeable, reflective, adaptive, insightful, resourceful, and competent in handling difficult classroom situations (Zaslavsky & Sullivan, 2011). Teacher educators are expected to create opportunities for learning where teachers are encouraged to challenge their existing orientations (beliefs, ideas, views, etc.), appreciate teaching as learning, learn content and skills required for effective communication of the knowledge, and develop sensitivity to issues concerning the social context of students' learning in a diverse classroom. The aims can be achieved though designing effective tasks (as different from activities) where teachers gain knowledge and reflect on their learning.

A *task* is defined as a planned engagement with a pre-decided goal and definite purpose(s). It is designed keeping in mind the nature of learning that we aim to elicit and ways in which it can be achieved or attempted for. A task has the power of ability, purpose, meaning, concept, and the necessary challenge to evoke a response. There is substantial literature that has established the critical role that tasks play in creating opportunities for teacher learning, especially in the domain of mathematics education. The paper draws on the literature and empirical work to build conceptual arguments for the significant value in harnessing tasks for teacher learning. It may be worthy to state that a task-based approach has its implications for other disciplines as well. Implicit in our stance for a task-based

approach is the premise that 'teachers and teacher educators are to be considered as constant learners who continuously reflect on their work and make sense of their histories, their practices, and other experiences' (Zaslavsky & Peled, 2007). Thus it is important that the selection, design, and implementation of a task chosen is determined by the contextual variables like the social setting of the school, classroom culture, students' backgrounds and foregrounds, etc.

Potentials of tasks in mediating teacher learning: Tasks can be used with teachers in multiple ways. Teachers can be prompted and encouraged to cogitate on their personal experience of doing tasks individually or in groups. A general framework for designing tasks for teachers can be classified based on the mathematical, pedagogical, and curricular aspects. Each of the three aspects has an established legitimacy as factors which are necessarily a part of teacher education programmes. Zaslavsky and Sullivan (2011) have developed a conceptual framework with eight unifying themes considered to be the goals of designing tasks for teachers by teacher educators. There are two mutually significant ways of considering these themes. *First*, these are qualities that teacher educators must exhibit when they work with teachers and *second*, these are set of goals that teachers may be expected to develop through the task-based approach. Each of the themes is briefly elaborated along with a few suggestive practices which address the specific goal.

1. Development of Adaptability – Teachers need to be flexible in their approach towards teaching and learning in classroom. This kind of an orientation would mean considering variations to questions, strategies, curriculum, time spent, resources, and unpredictable classroom events. Everything in teaching cannot be planned. Teaching needs to be tailored to suit the cognitive level of students and should be done in a manner which is adaptive to the learners' needs. Spontaneity to respond to situations arising in the classroom is related to teacher's in-the-moment decision making. Openness to alternatives and different mathematical ideas and procedures, ways of thinking and problem solving would help teachers to utilise mathematically rich opportunities arising in the classroom. Practices which exemplify adaptability are – changing a problem for different levels of cognitive challenge, deciding on the difficulty level of questions, identifying and calling upon connections across the curriculum, etc.

2. Fostering awareness to similarities and differences – A fundamental aspect of mathematical thinking is to look for commonalities and contrasts in mathematical objects. Classification is based on the ability of connectedness. Considering links between concepts, methodologies, solutions, procedures, strategies, and contexts helps in making learning meaningful. Teachers should be equipped to classify classroom situations as those which serve as learning opportunities for students from others. Learning to distinguish between the

surface and deeper features of a problem is another example where the teacher is expected to analyse the problem (through compare and contrast) and decisively sort different textbook problems on the criteria chosen. Apart from sorting, different kinds of mathematical problems/ situations where mathematical objects can be categorised in more than one way are challenging and attention grasping.

3. Coping with conflicts and dilemmas – The dilemmas or conflicts that arise in the routine teaching are beyond the control of teachers. However, teachers can be prepared to address such unanticipated problems by reflecting on situations where an unplanned event occurs. Teachers' responses and shared knowledge of such situations would prepare them for reflection-in-action and encourage them to re-examine their and each others' personal response. Discussions and creating a shared response to such situations in teaching is a valuable task in itself. Literature with psychological studies looks at conflicts as an important landmark in learning. It also suggests that conflicts need to be addressed through counter explanations and by creating opportunities where confrontation for inconsistencies can be made possible through social interactions.

4. Designing and solving problems for use in mathematics classrooms – Teachers need to be exposed to different kinds of problems that relate to a particular mathematical concept. Engaging teachers in solving a variety

of problems creates familiarity and awareness to different problem structures and helps them to become more fluent and confident while handling them in classroom. Also, needed is an exposure to different ways of approaching the problem and different solutions that the same problem may offer. Solving and framing problems with multiple solutions is a stimulating, and insightful task. Problems that offer different representations or which make use of knowledge from different domains other than mathematics are other such examples.

5. Learning from the study of practice – The closer resource for learning, available to all teachers, is their own practice. Most often, it is argued that the teacher education curricula are theoretical in nature. This means that the complexities of practice are not entertained in such a framework. Bringing in the field experiences of immersion into school and classroom practices are not only useful in giving a real picture of the context of teaching, but will also prepare teachers to work in the setting and reflect on it. Various theoretical stances can be appreciated and assessed vis-a-vis their practical implementation, so that the commonly stated problem of the gap between the theory and practice can be utilised to gain insights for teaching and learning (Takker, 2011). It is important to acquaint teachers with tasks where they reflect on their own as well as others' teaching, through video-analysis of exemplary lessons. Classroom situations can be posed as situations for teachers to ponder upon.

6. Selecting and using appropriate tools and resources for teaching – Examples of tools used in teaching are textbooks, manipulatives, reference material, technology, graphs, etc. An appropriate selection of tools and communicating the mathematical idea through its use is an important skill that teachers need to possess. It is important for teachers to make educative choices about tools used and how to use them in accordance with the purpose. The cultural and contextually available tools like language, objects, etc. can also be utilised to supplement teaching. The knowledge of tools should be accompanied with an awareness of the strengths and limitations of these tools for various purposes and contexts, along with building the confidence in using them.

7. Identifying and overcoming barriers to students' learning – There are certain social, epistemological, and political factors that operate in the environment of schooling where teaching and learning takes place. It is important for teachers to know about the effect of each of these factors on students' learning. The gaps in students' learning arising from prior knowledge or lack of connections established, biases in learning from home or society (like gender, class, caste) or physical differential abilities should be sensitively addressed. Teachers need to learn to handle a variety of such factors and their combinations in their classroom. Building communities of learners, carefully choosing examples while explaining, and being open and sensitive to students' thinking could be ways in which teachers can make their classrooms more inclusive.

8. Sharing and revealing self, peer, and student dispositions – Teachers and students come with their own baggage of beliefs, attitudes and behaviours towards the subject, setting, and others in the group. It is worthwhile for teachers to be aware of their own dispositions with respect to the discipline, teaching and students' learning. Situational tasks need to be designed for teachers to articulate and understand different kinds of orientations (that they might have) and their impact on learning in classroom. Openness and flexibility in a classroom where students have different kinds of preferences, attitudes and beliefs can be achieved by designing differential learning experiences for students and observing students' actions and interactions with self and others.

Teacher educators can utilise from a synthesis of resource materials as well as draw from the experiences of teaching which prospective and practicing teachers bring to their classroom. Some of the significant resources for teacher educators are research papers (on teaching and learning), books, visits to academic institutions, field experiences of teaching, observing classroom of their peers, and most importantly reflecting on the experience aimed towards learning about and through teaching.

Design of tasks by teacher educators: The socio-cultural perspective on professional learning discussed above is promising. It gives scope for continuous learning to those involved while being a part of the process. It also emphasises

that sources of our learning lie in the people around us who scaffold our learning at different levels and mediate it through the use of appropriate tools. Teacher educators can mediate teachers' learning through planning and orienting actions to pre-planned goals. A task-based approach is grounded on the belief that teachers learn not only from the tasks posed to them but also by observing ways in which they are executed by teacher educators. For designing and implementing tasks, teacher educators need a strong knowledge base of mathematics as well as knowledge of mathematics for teaching. Teacher educators need to be receptive to teachers' questions, flexible and adaptive to different situations arising through discussions, and explicate their reflections. These serve as sources for teachers to learn from and prepares them to respond to situations arising in-the-moment in classroom. Such ways of dealing by teacher educators serve as examples for teachers to learn from and also help them develop a rapport and comfort for addressing the complexities in different settings.

Teacher educators can use tasks as cognitively coherent entities, which provide context for discussions on mathematical knowledge, pedagogical aspects, and for understanding the dynamics of classroom teaching and learning. Tasks are designed by teacher educators in ways which benefit their interactions with teachers by focussing on central issues that concern the process of teaching and learning. In this process, teacher educators use tasks to pose

challenge to teachers' intuitive notions about mathematical concepts and pedagogy, resolve conflicts arising from the dissonance between intuitive and analytical thinking. A variety of tasks should help teachers to think mathematically; build an informed framework to ground their arguments, practices, and ideas; and learn ways in which these ideas could be communicated effectively to students for learning to take place. Reflections through carefully crafted tasks will open avenues for the community of teachers and teacher educators to learn from each other.

Taking tasks to practice – case study of a mathematics teacher: Keeping these theoretical ideas in the background, an attempt was made in the direction of designing and implementing a task for teacher *learning from practice*. The development of task evolved with increased interactions with the teacher and familiarity with the settings. The study reported here is a case study of a practicing mathematics teacher of Grade VII, working in a private school in Mumbai. An important consideration for the task developed was that the attempt was made to use teacher's own classroom teaching as a resource for discussions among the teacher and researcher. Since the task was conducted *in situ*, the focus of discussions was classroom teaching processes and students' responses to mathematical tasks posed by the teacher. The objectives of the study were to understand and develop teacher's knowledge and responses to students' mathematical thinking in classroom. An assumption underlying such an

attempt was that teacher's *knowledge of practice* is a significant source for teacher *learning from practice*.

Knowledge about students' thinking was operationalised as knowing the details of how one's students are making sense of a particular mathematical concept as well as, knowing in general, how students learn different mathematical concepts (Franke et al, 2007). It is argued here that discussions about students' mathematical thinking offers an appropriate context for engagement and reflection with the teacher, thus leading to teacher learning about her students as well as her own teaching. Teacher's awareness and/or openness to students' strategies or ways of solving problems and channels through which these can be utilized for building on students' mathematical learning constitutes this part of teacher's knowledge. Many researches inform our understanding that, teachers who understand their students' thinking can support the development of mathematical proficiency. It is said that preparing teachers to teach in new ways requires that they be provided opportunities to reason in and about practice and to learn to listen to, hear, and watch students (Sowder, 2007). It is well known that teachers are engaged in different kinds of academic and non-academic work apart from teaching. An expectation from them to think about their students' thinking and articulate that knowledge is a task in itself, which requires a different orientation towards teaching. For a teacher to be able to talk about her students and their mathematics it requires a closer observation of an

individual or groups of children, along with a general understanding of how students of a grade respond to the mathematical ideas being discussed. In the study elaborated below, teacher's knowle dge about her students' learning of mathematical ideas and how she responds to it in classroom was the major focus of discussion, reflection and therefore learning of teacher and researcher.

A different methodological framework was employed to collect data about teacher's knowledge and students' responses, details of which can be found from the main work. The classroom observations were complemented with interactions with students and the teacher, prior to and post teaching. The data from each classroom segment (before, while and after teaching) was used for discussion with the teacher. After completion of a cycle of observations for one of the mathematical concepts (proportion), teacher was requested to anticipate students' responses on different proportion word problems (with reference from research literature) posed by the researcher. Mixed ability students were selected by the teacher to solve these problems. These students were interviewed as they solved these problems to understand their thinking while they were working on these problems. The written and oral responses from students were used as contexts for taking the discussions further with the teacher.

Insights from classroom observations and interactions with the teacher and students were useful to get an overview of the classroom processes – nature of discussions, routines and

norms of classroom, expectations from students, etc. It was also helpful in getting to know how students, teacher, and the researcher viewed the same classroom in different ways. The data obtained from the two sources – observations and interactions-was analysed for patterns in (a) students' thinking through the questions raised by them and strategies used to solve problems posed by the teacher and researcher, and (b) teacher's responses to students and in-the-moment decisions in the classroom.

The findings of the study illustrate that teacher's conceptions about students and their learning are restricted to students' performance and articulation in classroom. There is less awareness and sensitivity to students' errors and difficulties in learning the particular concept. Also, although there are attempts to know about students' responses to mathematical problems, what is implicitly encouraged is the algorithmic way of solving these problems. On probing the teacher, it was found that she justified her classroom practices in two ways – *first* through her goals of teaching mathematics understood as preparation for the board examinations and *second* by distinguishing between the informal from formal mathematics learnt at school. Lack of awareness about students' mathematical knowledge and ways of thinking led the teacher to classify students' sophisticated strategies as 'common-sensical' and informal, and therefore indicating no learning of the concept taught by her. Teacher's belief in the algorithmic way of solving mathematical problems and in emphasising the method proposed by her as 'the method of working' was

evident in thinking aloud about students' responses. Understanding that teacher has an orientation towards teaching and learning mathematics algorithmically and conceptualisation of her role in preparing students for performing in the standard examination, was insightful. The discussion on students and their classroom responses created a discussion where teacher's beliefs, goals, and ideas were explicated and were available as 'content' for reflection and learning. However, as the teacher moved on, anticipating her students' responses to some of the mathematical problems (similar to what she had done with the students), there was an explication of the expectation that students would use the method taught and concepts which are not taught will be left unanswered by the students. The cognitive conflict was created in the teacher's mind when she saw that students solved all those problems which involved concepts which were not taught and for which the teacher expected a response that "*it is out of our syllabus"*. Reflections with the teacher, in reference to examples from her classroom and the (correct) strategies used by students on the 'not-taught' set of problems, were sources which were utilised for challenging teacher's orientation about students and their learning of mathematics. It can be said that this juncture of the study marked the beginning of a shift observed in teacher's thinking about students' knowledge of mathematics. There was rethinking and conscious reflection on what the teacher believed were ways of teaching and learning mathematics.

This study points towards a need for teacher educators to begin making themselves and teachers aware of their dispositions towards teaching and learning of mathematics. Like students, teachers' experiences are varied in nature. It is important for teacher educators to take into account what teachers have learnt from their practice. An acknowledgement of the nature of knowledge possessed by teachers will provide a direction for a focused interaction between teacher and teacher educators. Also, such an environment where teachers get to share their experiences will help teachers reflect on their practices as well as serve as a potential source of learning for other colleagues. An important insight from the study is the need to sensitise teachers to students' thinking and ways of learning as important sources for planning and conducting their lessons. Discourses centred around students' thinking and learning have to be tied with discussions about the conceptual understanding in mathematics and in choosing appropriate pedagogies for transacting the content. Understanding and appreciating students' prior knowledge and content-related learning difficulties would initiate teachers in designing tasks which stimulate their thinking and are cognitively appropriate for them. Thus, the knowledge of children's thinking and responses to it served as significant sources of learning from the classroom context, for the teacher as well as teacher educators.

Implications of tasks for teacher educators: The development and trials of tasks can be aligned with the sub-goals of teacher education in many ways. Tasks can be

used by teacher educators to facilitate teachers' learning as well as their own. In order to develop tasks for teachers, teacher educators need to possess a sound knowledge base and personal traits like flexibility, openness, involvement, confidence, etc.; all of which they would like the teachers to possess. The general aim of designing tasks for teachers would be to foster an attitude towards learning while teaching and equipping them to identify sources from their contexts to facilitate learning in students. In general, tasks for teachers focus on three main elements: (a) doing mathematics which involves solving problems, identifying patterns and connections, and classifying mathematical objects; (b) dealing with actual tasks for students, for instance analysing, comparing, solving, extending, generating through lesson planning and explaining; and (c) examining students' thinking by analysing students' responses to a mathematical task or classroom events that reflect students' thinking (Zaslavsky, 2007). The third way has been exemplified in the task developed in the case mentioned above. A step further would be to design tasks that engage teachers to articulate, discuss, and evaluate the curricular propositions vis-a-vis their practices, and related classroom processes (Takker, 2011). However, the decisions on the modes of implementing tasks and the settings (where teachers will be exposed to such tasks) is an open question for the teacher educators.

Carefully designed tasks can be used with teachers to help them learn important mathematical ideas, critically

evaluate their own dispositions, and articulate their assumptions about the curriculum, subject-matter, learning and teaching. A reflective attitude gets nurtured in teachers through the use of tasks which encourage them to explore their settings, argue and discuss the ideas learnt or thought, solve a variety of problems, and get involved in the process of learning the subject and its intricacies. The strength of mathematical tasks lies in tracing mathematical contexts, appreciating the linkages between concepts, providing mathematical reasoning, and creating a shared knowledge base. All these provide as means through which the curricular goals can be meaningfully transacted, through effective pedagogies after undergoing critical reflection and planning.

A task-based approach to teaching and learning would involve addressing issues related to content, pedagogy, and resources available by connecting them with teacher's existing knowledge. It is critical to highlight the connections and a relationship between mathematical ideas, concepts, etc. such that learning about teaching is a meaningful whole and does not remain constrained to the departments of distinct content, pedagogy or psychology sessions in a teacher education program. Since all of these operate simultaneously and often in a complex manner in classroom settings, preparedness for situations erupting in the classroom should be used to weave teacher's learning into a coherent whole.

Vision for Teacher Educators: Teacher educators have the task of organising learning spaces and contexts for

teachers. The role of teacher educators is crucial for teacher preparation and education. They bring in a broader perspective to education as they are working at the two planes of specific practical engagements of teaching as well as broad theoretical ideas which are envisioned and proposed with the aim of their critical evaluation in practice. Tasks help teacher educators to organise the learning experiences of teachers in ways aligned with the objectives of the larger goal of teacher development and learning. As discussed, teacher education can be conceptualised around three themes: equipping teachers with the content, pedagogy, and epistemology as preparation for teaching. This paper argues that tasks provide meaningful contexts for teacher educators to create rich opportunities for teacher learning as well as their own learning in the process. Teacher educators can engage teachers in task which are purposeful and have direct implications for practice. For this teacher educators need to prepare themselves with tools and qualities which they expect their teachers to acquire.

The design and implementation of tasks for teacher education for enhancing teacher learning is different from taking the tasks from research literature and applying them in practice. The process of making and choosing between different tasks that have different constraints and purposes addressed, teacher educators can plan their engagement with teachers. Teacher educators can create a community where they make a shared understanding of the necessary knowledge and skills that the teacher education programs should provide to prepare

teachers for teaching in classrooms. The planning, implementation, and reflection on tasks done with teachers can be shared and discussed. The ideas from research and practice of other educators and researchers in the field can be collated and discussed in a forum like this (RIE conference). The learning of teacher educators from each other and personal trials of tasks would provide enriching experience not only in contributing to developing a practice based literature on tasks but also in knowing more about ways in which diverse teacher communities respond to them. The mutual learning environment created from the use of tasks would enhance the teachers' understanding and knowledge and develop insights into use of tasks by teacher educators with a flavour of concrete reality.

Success in designing effective tasks for teacher education relies on drawing from the synergy between immediate experiences of teachers, classroom practices, and the informed enthusiasm of the teacher educators. Such a confluence will help in sequencing and structuring learning through carefully designed interconnected tasks and is also a way of ensuring collaborative participation towards making the process of teaching and learning effective and grounded. The larger aim for teacher educators remains to guide teachers and scaffold their transition from active participation in exemplar tasks to encouraging them in harnessing their classroom experiences to construct novel tasks and contribute to the field of teacher learning and development.

18. Learning to Learn: Preparing teacher educators for Self-Directed Learning

Introduction: Radical changes are sweeping the Indian educational scene with a shift in focus from teacher centred to learner centred education. Implementation of CCE in schools and the credit system in higher education underlines the importance of learner needs and education for development of individual potential. These changes also necessitate that learners are empowered to take responsibility for their own learning. The framework for understanding the psychological basis of learning has gradually shifted from behaviorism to cognitivism (Anderson, Reder, & Simon, 1995; & Bredo, 1997.)

The role of the teacher educator is now to model strategies which place emphasis on learner responsibility in learning, as well as facilitating the would be teachers to organize environments conducive to this in their classroom.

Since teacher educators are themselves adults and preparation of teacher educators is also to prepare them to deal with adults, an understanding and implementation of conditions for effective adult learning becomes crucial.

This paper discusses the roles of educators to facilitate self directed learning. It also discusses models of self directed learning and their implementation in the preparation of teacher educators.

In the pre-service teacher training classroom, student teachers come from conventional-educational backgrounds. The group is heterogeneous, with respect to educational background, age, as well as SES. It is the experience of the author that though the learners are themselves adult learners the mindset towards learning is more teacher and content dependant, rather than self directed learning. There is also a very strong orientation towards studying the subject for the sake of academic performance in the examination, rather than using the theory as grounding for practice. Self reflection, which is the back bone of continuous self evaluation and improvement, is a difficult activity for these learners and requires focused training, oriented towards the practice as well as attitudinal change. When these learners join their profession as secondary school teachers they are expected to implement learner centred methods, and encourage self-directed learning in their school students. If they are not adequately trained as self-directed learners themselves and also in the strategies to promote self-directed learning, they find it difficult to transact the curriculum to achieve the desired objectives, thus resulting in the failure of effective implementation, and more importantly in stress in the student, parent and the teacher himself/herself.

Therefore teacher educators need to be trained to implement and model self-directed learning for their student teachers, considering that the task also involves developing an attitudinal change towards the need and the process of learning itself. And this can be possible only if the teacher

educators who are adults themselves being prepared to teach adults are self-directed learners, trained by using the principles and strategies of andragogy, which they can model and practice as teacher educators.

In an attempt to formulate a comprehensive adult learning theory, Malcolm Knowles, in 1973, published the book The Adult Learner: A Neglected Species. Building on the earlier work of Lindeman, Knowles asserted that adults require certain conditions to learn. He borrowed the term andragogy (and-rè-go´jê) to define and explain the conditions.

Andragogy, initially defined as "the art and science of helping adults learn," has taken on a broader meaning since Knowles' first edition. The term currently defines an alternative to pedagogy and refers to '*learner-focused education for people of all ages*'.

The andragogic model asserts that five issues be considered and addressed in formal learning. They include (1) letting learners know why something is important to learn, (2) showing learners how to direct themselves through information, and (3) relating the topic to the learners' experiences. In addition, (4) people will not learn until they are ready and motivated to learn. Often this (5) requires helping them overcome inhibitions, behaviors, and beliefs about learning.

Speck (1996) notes that the following important points of adult learning theory should be considered when professional development activities are designed for educators:

■ Adults will commit to learning when the goals and objectives are considered realistic and important to them. Application in the 'real world' is important and relevant to the adult learners' personal and professional needs. Adult learners need to see that the professional development learning and their day-to-day activities are related and relevant. Hence the very objectives of the course for preparing teacher educators must be set keeping in mind the goals and objectives of the learner. Initial clarification of personal goals for doing the course at the beginning, frequent review and also final reflection on the achievement of learner's goals could provide valuable insights for course improvement. Making strong connections between theory and practice as well as providing more opportunities for application in the real world context would make learning meaningful.

■ Adults want to be the origin of their own learning and will resist learning activities they believe are an attack on their competence. Thus, professional development needs to give participants some control over the what, who, how, why, when, and where of their learning. Ensuring a democratic learning environment, sensitivity to learner needs, as well as an awareness of the responsibilities that the learners have in other roles is crucial for making the learners feel comfortable. A focus on using constructivist strategies, with adequate scaffolds as well as opportunities for self learning can be rewarding.

■ Adult learners need direct, concrete experiences in which they apply the learning in real work. A more prolonged

experience of internship in colleges of education where the learners actually apply their learning is much needed. Also making conscious connections between the theory taught and its application to practice needs to be stressed.

■ Adult learning has ego involved. Professional development must be structured to provide support from peers and to reduce the fear of judgment during learning. A stress on self evaluation through use of learning portfolios and self evaluation rubrics could motivate the learners to evaluate themselves, instead of only external evaluation, which may be perceived as an attack on the ego. Peer tutoring as well as focus on constructive peer feedback could be carried out.

■ Adults need to receive feedback on how they are doing and the results of their efforts. Opportunities must be built into professional development activities that allow the learner to practice what has been learnt and to receive structured, helpful feedback. Teacher educators also need preparation in the mechanism of objective observation and giving constructive feed back to their students.

■ Adults need to participate in small-group activities during the learning to move them beyond understanding to application, analysis, synthesis, and evaluation. Small-group activities provide an opportunity to share, reflect, and generalize their learning experiences. Apart from planning for small group activities; adequate flexibility must be provided in the time

table, as well the necessary infrastructure e.g. flexible seating. Reflections must become a part of everyday learning.

An important assumption of the andragogic model (Knowles, 1984) is that adults tend to be self-directed learners. Hence, preparation of teacher educators needs to involve strategies for self-directed learning.

Self-directed learning: An estimated 70% of adult learning is self-directed learning (Cross, 1981). Self-directed learning has been described as "a process in which individuals take the initiative, with or without the help of others," to diagnose their learning needs, formulate learning goals, identify resources for learning, select and implement learning strategies, and evaluate learning outcomes (Knowles, 1975).

Whether or not learning is self-directed depends not on the subject matter to be learned or on the instructional methods used, instead, self-directedness depends on who is in charge—who decides what should be learned, who should learn it, what methods and resources should be used, and how the success of the effort should be measured. To the extent the learner makes those decisions, the learning is generally considered to be self-directed.

Self-directed learning takes place in association with various kinds of helpers such as teachers, tutors, mentors, resource persons and peers. There is a lot of mutuality among self-directed learners.

According to Knowles (1975), the self-concept of self-directed learners moves from dependence on teachers to independence or self directness. The literature on self-directed learning asserts that Self-Directed Learners demonstrate a greater awareness of responsibility in making learning meaningful and monitoring themselves (Garrison, 1997). They are curious and willing to try new things, view problems as challenges, desire change and enjoy learning (Taylor, 1995).Taylor also found these learners to be motivated and persistent, independent, self disciplined, self confident and goal oriented. 'Self-directed' learning allows learners to be more effective learners as well as social beings. *'Guthrie, et al. (1996)*' noted that the self-directed learners demonstrated the ability to search for information, employ different strategies to achieve goals and to represent ideas in various forms. These abilities are crucial to teacher educators. *Morrow et al. (1993)* observed that with proper planning and implementation, self-directed learning can encourage students to build their own rules and leadership patterns.

The new developments in the field of education, with an emphasis on lifelong learning, the need to keep abreast with the rapid developments in the field, and the focus on research demands that teacher educators are self-directed learners, who can in turn nurture these capacities in the would be school teachers.

Garrison's three dimensional model for self-directed learning (SDL): Garrison (1997) suggested that SDL is accomplished as a personal attribute as well as a learning process. He observed that SDL is accomplished by three dimensions interacting with each other: self-management, self monitoring and motivation. In educational settings, self-management involves how learners use learning resources within their contexts in such a way that they can attain their learning objectives. He further explained that learner control did not mean independence, but rather collaboration with other people within the context.

Roles of educators to facilitate self directed learning: The following list summarizes points made by several writers (Ash 1985; Bauer 1985; Brockett and Hiemstra 1985; Brookfield 1985; Cross 1978; Hiemstra 1982, 1985; and Reisser 1973) regarding how adult educators can best facilitate self-directed learning:

- Help the learner identify the starting point for a learning project and discern relevant modes of examination and reporting.
- Encourage adult learners to view knowledge and truth as contextual, to see value frameworks as cultural constructs, and to appreciate that they can act on their world individually or collectively to transform it.
- Create a partnership with the learner by negotiating a learning contract for goals, strategies, and evaluation criteria.

- Be a manager of the learning experience rather than an information provider.
- Help learners acquire the needs assessment techniques necessary to discover what objectives they should set.
- Encourage the setting of objectives that can be met in several ways and offer a variety of options for evidence of successful performance.
- Provide examples of previously acceptable work.
- Make sure that learners are aware of the objectives, learning strategies, resources, and evaluation criteria once they are decided upon.
- Teach inquiry skills, decision making, personal development, and self-evaluation of work.
- Help match resources to the needs of learners.
- Help learners locate resources.
- Help learners develop positive attitudes and feelings of independence relative to learning.
- Recognize learner personality types and learning styles.
- Use techniques such as field experience and problem solving that take advantage of adults' rich experience base.
- Develop high-quality learning guides, including programmed learning kits.

- Encourage critical thinking skills by incorporating such activities as seminars.
- Create an atmosphere of openness and trust to promote better performance.
- Help protect learners against manipulation by promoting a code of ethics.
- Behave ethically, which includes not recommending a self-directed learning approach if it is not congruent with the learners' needs.

For educational institutions and employers engaged in providing self-directed learning experiences, Hiemstra (1982, 1985) and Brockett and Hiemstra (1985) recommend the following:

- Have the faculty meet regularly with panels of experts who can suggest curricula and evaluation criteria.
- Conduct research on trends and learners' interests.
- Obtain the necessary tools to assess learners' current performance and to evaluate their expected performance.
- Provide opportunities for self-directed learners to reflect on what they are learning.
- Recognize and reward learners when they have met their learning objectives.
- Promote learning networks, study circles, and learning exchanges.

- Provide staff training on self-directed learning and broaden the opportunities for its implementation.

Adult educators have found that some adults are incapable of engaging in self-directed learning because they lack independence, confidence, or resources. This point needs to be kept in mind, especially in the Indian situation and such learners need to be provided with inputs that enhance their confidence and self efficacy. They must also be provided with the resources and the training to obtain resources to further their own learning.

Evaluation of Self Directed Learning: In self directed learning, the focus is on self evaluation by the learner. Self evaluation involves the learner judging the quality of their work based on objective criteria and evidence. The purpose of self evaluation is to better future performance. Self evaluation is a powerful technique because of its impact on learner performance through increased self efficacy and increased intrinsic motivation.

Maintaining a learning portfolio is one of the ways for self evaluation. The learning portfolio consists of the learners work over a period of time, along with the faculty comments. The learning portfolio helps learners to track their development over a period of time, to identify strengths and weaknesses and to set personal learning goals, as well as evaluate whether these goals have been achieved. The learner may select the

artifacts to be showcased in the portfolio, under following three categories, depending on the source of the item:

- Materials from oneself (e.g., reflective statements, term papers, graded assignments and homework, quizzes and examinations);
- Materials from others (e.g., student comments, evaluations made by student teaching supervisor); and
- Products of field experiences activities (e.g., student work samples that may include essays and creative work, a record of students' grades).

Selection of artifacts requires reflection about how the particular artifact has helped the learner learn.

Reflective journals are also used in the preparation of adult educators. Cognitive activities stimulated by this type of journal include observation, speculation, doubt, questioning, self-awareness, problem stating, problem solving, emoting, and ideation (Holt 1994). The reflective dialog journal becomes a professional conversation between the mentoring teacher educator and the pre-service teacher trainee (McAlpine 1992). Journals are tools for growth through critical reflection, for it is not enough to observe and record experiences, but "equally important is the ability to make meaning out of what is expressed" (Clark 1994, p. 355). Writing is a critical ingredient in meaning making, enabling learners to articulate connections between new information and what they already know. The

journal becomes another text on which to reflect, but it is a text written in the learner's authentic voice, and this personal engagement adds a necessary affective element to the learning process.

Conclusion: The dynamics of the current educational reform movement have led to renewed emphasis on teacher quality and preparation. Implementation of Continuous Comprehensive Evaluation (CCE) at the school level, and the credit system in higher education focuses on learner oriented methods, as well as highlighting learning as a shared responsibility between teachers and the taught. Teachers need to be prepared to take on new roles in this system and teacher educators need to be trained to facilitate teachers to do so.

Using the andragogic model for preparation of teacher educators, will ensure their training as self-directed learners. The reflective practices used therein will also empower them to assay the roles of facilitators in their future careers, as well as helping them remain lifelong learners.

19. ICT integration in the Education of Teacher Educators

Introduction: Information and Communication Technology usually called ICT, is often used as an extended synonym for information technology (IT), but is usually a more general term that stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals), intelligent building management systems and audio-visual systems in modern information technology. ICT consists of all technical means used to handle information and aid communication, including computer and network hardware, communication middleware, as well as necessary software. In other words, ICT consists of IT as well as telephony, broadcast media, all types of audio and video processing and transmission and network based control and monitoring functions. The expression was first used in 1997 in a report by Dennis Stevenson to the UK government and promoted by the new National Curriculum documents for the UK in 2000. Definitions of ICT vary widely depending on contexts and conditions of use. According to United Nations Development Programme (UNDP):

ICTs are basically information handling tools — a varied set of goods, applications, and services that are used to produce, store, process, distribute and exchange information. They include the "old" ICTS of radio, television and telephone, and the "new" ICTs of computers, satellites and wireless technology and the Internet. These different tools are now able

to work together, and combine to form our "networked world", a massive infrastructure of interconnected telephone services, standardized computer hardware, the Internet, radio and television, which reaches into every corner of the globe. (UNDP 2011)

There is a research-based knowledge about planning and implementing of ICT strategies and difficulties in this implementation (Lavonen, Lattu, Juuti, & Meisalo, 2006). Consequently, it is challenging to help teacher educators or practicing teachers to adopt use of ICT in education.

Changing role of teacher educators: Under the changing scenario, there is a need to redefine the role of teacher-education. For the successful integration of ICT for in to teacher education, a teacher educator must shoulder additional, rather survival responsibilities outlined below:

- Act as a role model for pre-service trainees and in-service teachers, demonstrating the use of technology across the curriculum.
- Encourage technology integration among the trainees, colleagues, teachers and parents.
- Be involved in planning and implementing ICT professional development training.
- Be up-to-date with the latest technological developments and advise the institutions concerning technology advancements and up gradation.

- Interact through e-mail/forum/communities/blogging with trainees, participating schools, and parents.
- Aid in the implementation of technology plans of the institutions.
- Plan, design, and demonstrate the use of multimedia applications for instructional use through multimedia projects.
- Examine a variety of evaluation and assessment tools including electronic portfolio assessment.
- Become active, competent online users of telecommunication services and act as model in the use of internet as an instructional tool.
- Direct trainees and teachers to digital resources that will be able to answer their questions.
- Address issues related to acceptable user policies, student safety, ethics, security, copyright, etc.
- Be involved in marketing the best practices of technology integration.
- Manage the available resources more productively to face the ever increasing financial crunch.
- Use information literacy to access, evaluate, and use information from a variety of sources.
- Have the competencies in software evaluations and advise the institutions in making the right choices.

There are three areas in which teacher educators need capacity building whether for pre service, induction, or in service. One is IT competency and the second is an understanding, application, and integration of ICT in the classroom; and the third is the development of "learner generated materials."

ICT for Teacher Educators: The ICT in studies and learning of teacher educators can be divided into three different uses for directly supported learning: (i) Computer-assisted learning (CAL) is any interaction between a student and a computer system designed to help the student learn. CAL includes, for example, simulations and virtual-reality environments. (ii) Computer-assisted research is the use of ICT as an aid in collecting information and data from various information sources with the emphasis on the use of ICT in data analysis supporting scientific reasoning.. (iii) Computer-assisted interaction: This has evolved in a natural way from using only regular mail to using all available IT services adjusted to fully facilitate student learning. New social media offer here many possibilities not yet fully activated in learning.

Challenges in ICT for Teacher Educators: There are various other dimensions like attitude, motivation, computer anxiety, and computer self-efficacy which play an important role in developing skills and competencies among prospective teacher educators. Many studies have been conducted on teacher educators' attitude and their use of ICT skills. It has

been found that teacher educators' attitudes play an important role in the teaching learning process. It has generally been found that pre-service teachers have demonstrated their ability for integrating technology into their teaching, but do not have clarity about how far technology can be beneficial for students. They will probably avoid teaching with technology once the requirement for the demonstration lesson is over. A negative attitude about teaching with and about technology in a subject matter area could work against well-planned instruction in teacher preparation programs. While, on the other hand, those teacher educators who believe in the potential and utility of technology in the classroom and continue to face many challenges successfully become the models for student teachers to emulate. Many studies conducted with regard to the attitude of teacher educators towards use of technology have revealed the importance of attitudes for learning to use technologies (Cox, Rhodes & Hall, 1988; Davidson & Ritchie, 1994; Hannaford, 1988, Kay,1990). These findings were further supported by Bandalos & Benson, 1990; Dupagne & Krendl, 1992; Francis-Pelton & Pelton, 1996; Loyd & Gressard, 1984a; Mowrer-Popiel, Pollard, & Pollard, 1994; Office of Technology Assessment, 1995.) Several studies have found that individuals' attitudes toward computers may improve as a result of well-planned instruction (Kluever, Lam, Hoffman, Green & Swearingen, 1994; Madsen & Sebastiani, 1987; Woodrow, 1992). Like other individual characteristics that are hypothesized to play a role in the continued growth of

technology proficiency, attitudes and beliefs cannot be easily taught and must be developed by an individual over a period of time. Another factor that is noted to have a profound effect on the teacher educators' learning technology and its integration is computer anxiety. Computer anxiety, as defined by Rohmer and Simonson (1981), is "the mixture of fear, apprehension, and hope that people feel while planning to interact or while actually interacting with a computer". Research has shown that there is often a negative relationship between the amount of prior computing experience and the level of computer anxiety exhibited by individuals. Reed and Overbought (1993) and Hackney (1994) found significantly reduced levels of computer anxiety following instruction whereas Chu and Spires (1991) observed a significant reduction in computer anxiety for only the most anxious quartile of subjects. McKiernan *et al.* (1994) reported that some teacher educators experienced reduced levels of computer anxiety at the end of a computer training class while other students experienced continuing anxiety. The level of anxiety could be reduced with increased experience in using and working with computers and thereby succeeding in reaching goals. Over and above the attitude of teacher educators, self-efficacy is also an important aspect to consider. Researchers have indicated that although teacher educators may have positive attitudes toward technology (Duane & Kernel, 1992; Office of Technology Assessment, 1995), they may still not consider themselves qualified to teach with it or comfortable

using it. If teacher educators are to integrate technology into their teaching, they must feel self-efficacious about using it (Decorum & Kingie, 1993; Remer et. al., 1993; Office of Technology Assessment, 1995). Research has shown a high correlation between efficacy judgments and subsequent performance (Bandura & Adams, 1977; Bandura, Adams & Beyer, 1977; Schunk, 1981). This particular link between self-efficacy and subsequent actions is significant in developing an idea for a teacher educator who continues to learn to teach with technology apart from instruction (Ashton, 1985).

Integration of ICT for Pre Service Training of Teacher Educators (M.Ed.): ICT is used in education for supporting pre-service teacher educators' learning or for development of competences, in other words for helping to reach the goals of education. Learning represents each individual learner's own personal knowledge construction process which presupposes each learner's active, goal-oriented and feedback-seeking role. The following are the constituents of meaningful learning activity, intention, contextualization, construction, collaboration, interaction, reflection, and transfer. These serve as development and selection criteria when choosing teaching and learning activities emphasizing ICT use. Activity and intention mean that pre service teacher educators take responsibility over their own learning. Thus they set, together with a teacher, their learning goals and proceed according to the plan to reach the goals they set. This process may be facilitated, for example, by guiding the pre service

teacher educators to plan by themselves in small co-operative groups. These teacher educators neither master the logical structure of the subject nor recognize their own biased preconceptions, and therefore their goal setting needs to be supported and guided by the teachers. Thus, activities that support co-operative planning and evaluating learning are important for learning. Learning could also be enhanced by self-evaluating activities. Bransford and Donovan (2005) emphasise the role of self-evaluation in learning. They suggest that a teacher should provide support for these pre-service teacher educators. Self-evaluating, for example, by giving them opportunities to test their ideas by building things or making investigations and then seeing whether their preliminary ideas were working. Feedback is important for learning. Reflection means that students examine their own learning and develop meta-cognitive skills to guide and regulate their learning. Meta-cognitive skills are necessary for planning and evaluating one's own work. These skills also make learning a self-regulatory process in which the pre service teacher educator becomes less dependent on the teacher. For example, self-evaluating or evaluating in a small group, taking multiple-choice tests, doing exercises and consulting answer keys support developing reflective and, moreover, meta-cognitive skills. Collaboration and interaction mean that students actively take part in group activities and support each other by discussing and sharing knowledge. Learning new concepts presupposes a dialogue both between the teacher and the pre service teacher educators

and amongst the pre service trainees (explaining, debating, questioning).In addition to face-to-face interaction ICT offers several possibilities to share ideas through newsgroups, e-mail, or through social media like Facebook. Pre service teacher educators need to be helped to constrict their knowledge by relating the new knowledge with their earlier knowledge. Therefore, the faculty of teacher education institutions should encourage the pre service teacher educators to bring their previous views and beliefs, share them with others and construct their new understanding based on their shared information. Contextualization means that learning takes place in real life situations or in situations simulating real-life instances. This in turn presupposes that the learning setting allows for authentic and real-life learning experiences. For example, when using a search machine (Google), pre service teacher educators should be encouraged to look for information in different sources. This enables them to treat the concepts in various contexts and thereby deepen the meanings these concepts acquire. Learning is cumulative and, therefore, students are aided in noticing how a new concept or skill is related to other already familiar concepts or the network of concepts or skills.. Consequently, pre service teacher educators should be supported in learning new skills and in internalizing the new concepts and in building conceptual networks in the given field. The previous characteristics of learning activity may be realized through the use of ICT. For example, by using the Internet in the inquiry-based learning, the pre service

teacher educators can access meaningful information of the topic. When looking up information from varied sources, these teacher educators at the same time actively structure the flow of information they encounter into meaningful entities in order to be able to complete tasks. Similarly, this exploration of information from varied sources forces the pre service teacher educators to evaluate the reliability of both the information and the sources they use. Within an activity they could be encouraged to work together and also to systematically evaluate their activities.

Approaches to ICT Integration for In Service Teacher Educators: Use of ICT within teacher-training programmes around the world is being approached in a number of ways with varying degrees of success. These approaches were subsequently described, refined and merged into four primary approaches as follows:

ICT skills development approach: Here importance is given to providing training in use of ICT in general. The in-service teacher educators are expected to be skilled users of ICT in their day-to-day activities. They should have knowledge about various software, hardware and their use in educational process.

ICT pedagogy approach: This approach emphasizes on integrating ICT skills in respective subjects, drawing on the principle of constructivism. In-service teachers

design lessons and activities that centre on the use of ICT tools that will foster the attainment of learning outcomes. This approach is useful to the extent that the skills enhance ICT literacy and the pedagogy allows teacher educators to further develop and maintain these skills in the context of designing classroom-based resources. Teacher educators who have undergone this type of training may have significant changes in their understandings associated with effective implementation strategies, as well as their self-efficacy as to their ICT competencies.

Subject- specified approach: Here ICT is embedded into one's own subject area. By this method the in service teacher educators not only expose students to new and innovative ways of learning, but also provide them with a practical understanding of what learning and teaching with ICT looks and feels like. In this way, ICT is not an 'add on', but an integral tool that is accessed by teachers and students across a wide range of the curricula.

Practice-driven approach: Here the emphasis is on providing exposure to use of ICT in practical aspects of teacher-training also. Emphasizing on developing lessons, assignments etc. using ICT and implementing these in their practical work experience at various levels, the in service teacher educators are provided with an opportunity to assess the facilities available at workplace and effectively use their own skills to manipulate these facilities. Based on the concept

that the in-service teacher educator is a learner, manager, designer and researcher, he is expected to research their practicum school's ICT facilities, design ICT activities, manage those activities in the classroom, and evaluate their effectiveness in terms of student learning.

The Use of ICT in Teacher Educator's Professional Development: The integration of ICT in teachers' professional development, according to Perraton *et al.* (2001, cited in Anderson and Glen 2003) involves two sets of activities or roles:

One is training teachers to *learn about ICT* and its use in teaching as computers are introduced to schools.... The other role of ICT is as a means of providing teacher education, either as a *core* or main component of a programme, or playing a *supplementary* role within it.

Even if teacher educators learn mainly basic computer skills and some principles of computer operations resources are inadequate for practical experiences. Instructional models in both the teacher colleges and the universities are excessively academic, teacher-centric and remote from the real challenges of classroom practice. Teacher educators who specialize in ICT tend to leave the teaching field behind for business and industry jobs. The focus of ICT as a means to enhance educational quality is often very vague. . According to Farrell and Isaacs (2007:20) many of the programmes often involve

'one-off, topic-led, short-term training programmes that aim to develop specific skills of teachers, but which do not necessarily comply with professional standards of competency development'.

Some key principles of good practice emerging for the use of ICT include:

- The need to shift from 'Education for ICT' to the use of 'ICT for Education' – a fundamental shift in focus from training teacher educators for ICT technical skills to supporting teacher educators in the use ICT for educational enhancement;
- The need to focus on sustainable, resource adequate and on-going professional development in order to ensure effective deployment of ICT;
- Teacher educators should genuinely 'own' the process of ICT integration – to enable them to be creative in adapting ICT to their own classroom circumstances;
- The need to combine pre-service and in-service initiatives balancing support to both environments;
- The need for ICTs to be integrated across the curriculum in a blended way;
- The need for locally produced content that is relevant to teachers and learners;
- Most -if not all- schemes should be scaleable;

- The need for real partnerships;
- Communications between schools, teacher training institutions within and across boundaries should be facilitated;

Conclusion: ICT integration in institutions is being perceived as a necessity and is growing exponentially. The pervasive use of technology in all spheres of life, the knowledge economy and the paradigm shift together, generate demands on the institutions to adopt ways that help inculcate 21st century skills amongst teacher educators. Thus, management of change in teacher education is a complex and demanding task involving comprehension, concern, caution, and contemplation. Planners and administrators of teacher education have to provide academic leadership to prepare reflective teacher educators who can manage the educational system efficiently.

20. Understanding of Critical Pedagogy and Assessment of Teacher Educators

Introduction: The education of teachers is subject to perennial attention and critique and the practices associated with assessment of student teachers to determine their readiness to be 'qualified' are complex and varied. Teacher educators, who aspire to the inclusion of aspects of critical pedagogy in their own teaching and assessment, will benefit from a detailed examination of the critical pedagogy literature and an analysis of its value in teaching and in classrooms. The literature of critical pedagogy is incredibly broad and the content often dense and perplexing.

It is attempted to track the historical development of critical pedagogy and examine some of the critiques inherent within it and directed towards it. The intention is to identify the central issues that potentially impact on teacher education and the related philosophies and practices of assessment of qualified teachers which can have significant potential for ongoing social change.

Before investigating the premises and practices of critical pedagogy, it is useful to examine the meanings inherent in the words themselves. Watkins and Mortimore suggest that "a suitably complex model is in sight which specifies relations between its elements; the teacher, the classroom or other context, content, the view of learning and learning about

learning". In this model, pedagogy appears as a relatively technical concept that reflects a fixed inter-relationship between various components of an academic setting.

Despite the potential differences in approach and utilization, pedagogy may be described as a deliberate attempt to influence how and what knowledge and identities are produced within and among particular sets of social relations. In any learning context there is an expectation that some kind of exchange will occur, so the practice of pedagogy relates to the production of knowledge. Therefore, in examining pedagogy, questions must be asked about the goals of education and the practices of the classroom or other learning contexts. If knowledge is to be produced, the pedagogue must systematically reflect on the role of the teacher in relation to the learners and must also examine such critical aspects as the social milieu that influences and is subsequently influenced by the learning experience.

Teacher Preparation and Professional Development: Teachers make a difference. The success of any plan for improving educational outcomes depends on the teachers who carry it out and thus on the abilities of those attracted to the field and their preparation. There are many questions about how teachers are being prepared and how they ought to be prepared. Yet, teacher preparation is often treated as an afterthought in discussions of improving the public education system.

Preparing teachers addresses the issue of teacher preparation with specific attention to reading, mathematics, and science. Teachers, like other professionals, need to stay informed about new knowledge and technologies. Yet many express dissatisfaction with the professional development opportunities made available in the college & institute observing that the most effective development programs they have experienced have been self-initiated. 'Enhancing Professional Development for Teachers', explores how the provision of professional development through online media has had a significant influence on the professional lives of an increasing number of teachers.

Growing numbers of educators contend that Online Teacher Professional Development (OTPD) has the potential to enhance and even transform teachers' effectiveness in their classrooms and over the course of their careers. They also acknowledge that it raises many challenging questions regarding costs, equity, access to technology, quality of materials, and other issues. Enhancing Professional Development for Teachers suggests that teachers be active participants in planning and implementation of any new technologies that enhance professional development. The book recommends that federal and state policy makers take on the responsibility of promoting equal access to technology while the federal government and foundations play an important role by supporting the development, evaluation, and revision of OTPD.

What is good undergraduate teaching? Why has it been difficult for colleges and universities to address the question of teaching effectiveness? The committee explores the implications of differences between the research and teaching cultures-and how practices in rewarding researchers could be transferred to the teaching enterprise.

How should administrators approach the evaluation of individual faculty members? And how should evaluation results be used? The committee discusses methodologies, offers practical guidelines, and points out pitfalls.

Today's teachers are facing many problems, especially for teaching reading in the primary grades. They must understand as much as possible about how children develop and learn, what they know, and what they can do. They must be able to apply a variety of teaching techniques to meet the individual needs of students. Equally important, teachers must identify students strengths and weaknesses and plan instructional programs that help students make progress. But a recent study reveals that fewer than half of American teachers report feeling very well prepared to meet such challenges.

Preparing our teachers seeks to improve that statistic by extracting practical information from the groundbreaking report issued by the National Curriculum Framework 2005. This new NCF 2005 carefully outlines what classroom teachers need to know and what they need to be able to do to give

children in preschool through grade 4 the essential opportunities to become good readers. It discusses what teacher education programs need to do to make their students good readers and looks at what schools and school districts need to do to keep their teachers up to date for teaching reading.

Students at risk for educational failure represent the fastest growing segment of our school population. Preparing Our Teachers demonstrates to educators, parents, and policy makers alike that the first and most enduring way to meet children's literacy needs is to support their teachers and teachers-to-be.

Critical Ways of Being (Critical Pedagogy and Critical Theory- a study) : Although Critical Pedagogy shares some considerable historical and contextual territory with critical theory; critical pedagogy and critical thinking do not define criticality in the same manner. Critical theory concerns itself with issues related to the socialization of people for existence in society, usually a society defined by dominant discourses, and this is also the starting point for critical pedagogy. Critical pedagogy is more interested in collective action so "individual criticality is intimately linked to social criticality".

Critical pedagogy encompasses understanding curriculum as political text. This political view of curriculum generates "the most voluminous body of scholarship in the curriculum field today" and "no serious curriculum scholar

would advance the argument that schools in general and curriculum in particular are politically neutral". However, it is a complex issue, given that critical pedagogy " is not physically housed in any one school or university department, nor does it constitute a homogeneous set of ideas. Ultimately, the intention is to identify aspects of critical pedagogy that are relevant to the issues of teacher education and the assessment of qualified teachers".

Critical pedagogy is, however, distinct from critical theory in that it is primarily an educational response to oppressive power relations and inequalities existing in educational institutions. It focuses on issues related to opportunity, voice and dominant discourses of education and seeks more equitable and liberating educational experiences. In short, "in the language of critical pedagogy, the critical person is one who is empowered to seek justice, to seek emancipation".

While this may seem to be an honorable and achievable goal, the realities of critical pedagogy are complex and fraught with challenges. The aims of critical pedagogy potentially contest a wide range of educational practices and philosophies. Mc. Laren suggests that critical pedagogy involves a way of thinking about, negotiating, and transforming the relationship among classroom teaching, the production of knowledge, the institutional structures of the school, and the social and material relations of the wider community, society, and nation-state.

Herein lies an enormous task for the critical pedagogue, for this calls into question not only practices related to racism and sexism, but also the whole range of societal and educational contextual issues. It also provides reference points from which to examine the goals and practices of teacher education.

The Relationship between Critical Pedagogy and Assessment: In the literature and in practice, there are strong relationships between approaches to learning and the practices of assessment. Although critical pedagogy shares much in practice with other orientations to learning, it is the goals of social justice and emancipation that separate it from other approaches. Critical pedagogues would never compromise opportunities for social reconstruction by simply relying on currently accepted models of education. It is important to acknowledge, however, that the processes utilized in the learning context of critical classrooms may be familiar to excellent educators who do not necessarily advocate or practice critical pedagogy. Perhaps it is propitious to suggest that critical pedagogy may in fact be allied with general excellence in teaching.

In trying to summarize a critical pedagogical approach to assessment, there a number of themes that must be incorporated. A critical pedagogy of assessment involves an entirely new orientation - one that embraces a number of principles that may not be familiar in the generic assessment

literature. To achieve a critical approach to assessment, it must be centered on dialogic interactions so that the roles of teacher and learner are shared and all voices are validated. It must foster an integrated approach to theory and practice, or preferably termed as praxis - theory in action. It must value and validate the experience students bring to the classroom and importantly, situate this experience at the centre of the classroom content and process in ways that problematize it and make overt links with oppression and dominant discourses. It must reinterpret the complex ecology of relationships in the classroom to avoid oppressive power relations and create a negotiated curriculum, including assessment, equally owned by teachers and students. Such an approach no doubt creates challenges and discomfort but opens up creative possibilities for the reinvention of assessment. It also accommodates some of the aspects of post-modernism that are seen to address the supposed 'deficits' in critical pedagogy, as discussed earlier in this paper. This is particularly evident in relation to the ecology of the classroom and dynamics of power relationships that Gore and Ellsworth identify.

Having established these general themes; it is desirable to look at the overt links between the literature of critical pedagogy and orientations to assessment, and, in particular, self-assessment. In doing so, it needs to be acknowledged that there are multiple approaches to critical pedagogy and also elements of other disciplines that are easily accommodated in this literature and debate. Consequently, this not intended to

be a comprehensive analysis of the issue but rather a brief examination of some influences on assessment and critical pedagogy that is found to be valuable.

Critical Consciousness and Authentic dialogue: Primary focus of attention was adult education and libratory educational practices, defined as those that secure emancipation and reject oppression and domestication. Learning is an act of knowing and requires the presence of two interrelated contexts.

Authentic dialogue requires a relationship between teacher and learner where one "knowing subject is face to face with other knowing subjects". Education thus becomes "pedagogy of knowing" rather than an exercise in "narration sickness". Students, in engaging in self-assessment, enhance their opportunities to become knowing subjects. It must be recognized, however, that students are in the process of becoming, so assessment must be constructed in ways that are not dehumanizing as this would defeat the purpose of libratory education. The reality of such dehumanizing practice can be seen through deconstructing real situations.

Critical consciousness represents "things and facts as they exist empirically, in their causal and circumstantial correlations". To assist students in engaging in critical consciousness, the educator's role is to empower students to reflect on their own worlds, to self-assess in fact. In doing so,

teachers will need to employ processes that help the students in building their ability to 'become'. It will not be automatic.

Student Generated Assessment Criteria: This was our first foray into returning some assessment ownership and power into the hands of the students. This process involves students collectively and/or individually being involved in the generation of assessment criteria. The initial focus was the practicum where students were easily able to identify the behaviors, dispositions and skills of competent teachers, even though they may not yet have all been capable of achieving these themselves. The outcome here has been students who are more prepared for practicum visits by lecturers, who own the assessment criteria because they have been responsible for generating them, and who are more likely to implement these practices in their everyday work. Students have also been able to identify which particular criteria are most relevant to their own work and contexts and which are areas they are personally focusing on in their practice. This idea can be extended to assessments including the traditional essays, projects (individual and group), reports and the construction of resources. This helps in better understanding and getting student's side of experience about the teaching.

Student Generated Assessment Tasks: This practice is just an extension of the previous one. Once students become more competent at generating assessment standards for their assignments, and once they become more self-directed

in their study and more sure in their estimation of excellent teachers, we introduce them to the notion of generating their own assessment tasks. This process takes longer and requires more personal development than the earlier one on two counts.

For this type of task defining a student may require –

Firstly, confidence and competence in the whole tertiary assessment environment. Moreover, there are ways in which the process can be adapted to offer some alternatives where the students are much more active and increase their ownership.

So, before we even address the issues of critical pedagogy, there are the issues of student self-efficacy within the teaching and learning context and the assessment environment to tackle, and this takes time.

And secondly, in terms of being capable of engaging in critical pedagogy, the students require support in their ability to confront their own realities and identify the factors that potentially oppress them. Many students find it hard to identify and engage in assessment tasks that challenge dominant discourses. On the credit side, however, many do create tasks that are more consistent with their own values or areas of interest or that resonate with the goals and ideals of their particular contexts. As with the previous strategy, this is not necessarily something that could be considered a specific move towards a critical pedagogy but it does put power back into the hands of the learners to some extent.

Removal of Learning Outcomes: The assessment against established learning outcomes is entirely consistent with current approaches to assessment, particularly within the standards-based environment that dominates educational assessment discourse. The goal is to assess every student against a prescribed standard that is clear and appropriate for all students. In order for this to happen, learning outcomes are defined and the assessment tasks match the learning outcomes. This not only ensures that the students are well informed about the assessment requirements, but it also assures that all aspects of the learning are being assessed.

There are many positive aspects of this approach to assessment and it is certainly better than the previous environment which was based on norm-referencing and which matched students against each other instead of against a standard. However, the more I have used this style of assessment, the more convinced I am that it dictates what students learn and how they learn it, it focuses students' attention on assessment rather than on learning, and it creates a degree of conformity.

To get the best out of students with their assignments I would suggest removing all the learning outcomes from the courses, and being more thorough in detailing the content of the courses.

These changes have led to altered approaches to assessment. In this approach, students are now assessed

against the aim of the course rather than against each of the particular learning outcomes. For each course, more broadly-prescribed assessment tasks focus on the overall aim which, in turn, is linked to the aims of the program. In their assignments, students should be asked to consider the themes that have been encountered throughout the course, so each student is able to pick up those themes that are most meaningful and most relevant to their own lives and the contexts in which they work. This means a much more integrated approach to assessment can be achieved and students are able to take much more ownership of the assignments and, more importantly, their own learning. It demands greater student autonomy and it also requires support of the students who have become quite institutionalized in their approaches to assessment.

Peer Review and Self-Assessment: These processes, like some of the others, are introduced incrementally into the program. From the beginning of their study, we initially encourage students to engage in self-reflection and then we build it in as an expectation and part of the assessment environment. We use strategies such as Smyth's reflection model (1989) from early in the program and we structure activities that consistently ask students to reflect both on their own practice and the practices they participate in. As the program develops and their confidence and competence progress, so the expectations increase to the point where they contribute to the assessment of their own and others' work

but this issue requires careful handling and there are barriers to overcome.

Conclusion: It would be fair to say that these initiatives on their own do not necessarily reflect the goals of critical pedagogy. To a certain extent, assessment tasks established in teacher education programs will never be able to avoid institutional and regulatory constraints and therefore truly achieve critical outcomes. What they can do is to contribute to the development of critical teachers if they are used in partnership with other pedagogical strategies. If, as Ramsden (1992) suggests, that our approaches to assessment are an effective indicator of what we value as an institution, then it is my belief that I must be at the forefront of promoting assessment reconstruction alongside pedagogical reconstruction to achieve the goals of critical pedagogy. I cannot claim that our processes are entirely consistent with these goals. In fact, I know we are only in our infancy in terms of what needs to be achieved and I have become supremely aware of the difficulties of achieving critical pedagogy in teacher education. However, though we work within the same institutional constraints experienced by most teacher educators, our goal is to envision the possible, not just be controlled by the current.

We have choices as teacher educators. We can continue to do what we have always done or we can commit

to change. I do not suggest that the strategies suggested here should be universally implemented. That would be inconsistent with the whole notion of critical pedagogy. But I do challenge others to address the issues raised here and to look at the particularities of their own contexts. The intention is to generate a dialogic approach to assessment in teacher education, to validate student perspectives, to embed assessment in meaningful curriculum and contexts, and to promote critical reflection and action. In such an environment, students will be better placed to examine their own contexts and behaviors and to make progress in developing their own critical pedagogy.

21. Teaching and Learning in Multi-grade Classrooms: Implications for Teacher Education

Introduction: Education is the right of all children and obligation of all Governments. National Policy on Education (NPE) 1986 laid emphasis on not only in achieving Universalisation of elementary education in a time bound manner but also achieving the reasonable level of its quality. In 2002, through the 86th Amendment Act, Article 21(A) was incorporated in the Indian Constitution which made education a fundamental right. Accordingly the Right of children to Free and Compulsory Education Act (RTE) has come into force from April 1, 2010. Every child in the age group of 6-14 years will be provided 8 years of elementary education in an age appropriate classroom in the vicinity of his/her neighborhood. RTE act 2009 specially states that curriculum methods text books and assessment procedures should be designed so that quality of education is ensured. The Sarva Siksha Abhiyan (SSA) a centrally sponsored Scheme in close collaboration with states and UTs implementing may programmes and innovative practices with an aim to fulfill the twin objectives of universalisation and quality of education. In the wake of the tremendous expansion of education it has become imperative to talk about the realization of its aims and objectives in real classroom situation particularly when number of teachers is limited to one or two and the work is heavy.

India is a rural country with 68% of its population living in villages. Small schools are a significant feature of the educational landscape in India because of its geographical diversity. Many of these government primary schools have been established since the 1990s, and represent a concerted effort on the part of the central and state governments to increase access to primary education. Approximately 78% of primary schools in India had three or fewer teachers to attend to all grade levels, and more than 55% and 100 or fewer students (DISE, 2006). This gave rise to multi grade teaching situation India.

Teaching two grades or more than two grades at the same time by teacher in a classroom, is known as multi grade teaching. The Multi grade teaching is not a new concept in our system of education. This system was followed in our traditional 'Gurukul' method. Even today, multi-grade teaching is being practised in many schools not only in India but also in different parts of the world.

Defining Multi-Grade Teaching: The dictionary of Primary Education (Ashraf 1999) defines multi-grade teaching as technique of simultaneously teaching more than one grade by a single teacher. On the other hand Gupta, Jain and Bala (1996) define multi grade teaching as a school condition wherein a teacher has to develop classroom activities for learners comprising of different grades in a single setting simultaneously.

According to Deoles Angles – Bautisa (1994) the multi grade schools are those which have classes that combine students of different ages and different abilities in one class room. While Lungwangwa (1989) says that multi grade teaching is a system of teaching which involves two or more grades that are taught by one teacher in one room at the same time.

Multi-grade teaching refers to the teaching in which one teacher instructs pupils of different ages, grades and abilities at the same time. It is referred to variously in the literature as 'multi-level', 'multiple classes', (Commonwealth Secretariat, 1999 ;).

According To Bray (1987) in a multi grade – class pupils of two or more grades are grouped together in the same class room and are taught by a single teacher. The other names of multi grade classes are multi level composite, multiple, unitary or family classes. When a school has more than one teacher classes are combined in different ways depending on the areas of specialization of the teachers and their competence.

Necessity to adopt multi-grade teaching: Frequently multi-grade teaching is adopted not by choice but due to circumstances. Multi-grade teaching has been commonly understood as a teaching condition arising as a result of shortage of teachers. Multi-grade teaching may be the only

option available for children who live in low population areas and other marginal conditions where there is no provision of one teacher for each class. The following are some of the reasons for adopting multi-grade and multi-class teaching in the schools:

- Less number of teachers in the school than the grades
- Less number of classrooms than the number of grades
- Teachers' absenteeism
- Head teacher's involvement in administrative work
- Teachers' participation in training

In India 54% primary schools have only one or two teachers. Also, 31% of primary schools in the country have enrolments less than sixty. These schools would have actual student attendance of 40-50 students only, spread over five classes. The achievement levels of the students also differ in each standard. Students do not attain the same level of skills in the contents. Some may be in the third standard level and very few may possess the second standard level. These skill variations pose a great problem for the teacher in a classroom situation. In this context, the multi grade teaching is a necessity for the teachers. In some schools even if all the five teachers are posted there are other factors which disturb the normal functioning of the school. Due to administrative problems, the transferred posts remain unfilled. When the teacher proceeds on Medical leave or Casual leave or Study leave or Maternity

leave or Deputation these posts cannot be filled immediately. If five teachers avail their casual leave and restricted holidays, there is a loss of seventy five working days in an academic year. During this period, the classes become a place of multi-grade teaching. Therefore we often witness schools only with two or three teachers in a primary school. Due to population explosion, the Government had to provide educational services even in the remotest places. Normally, these schools have less number of students and multi-grade teaching becomes inevitable.

Prevalence of multi-grade teaching in the world: In most of the world's education systems, formal education is expected to be imparted in a mono grade teaching environment, where one teacher is responsible for a single curriculum grade within a fixed period. Although this is the general norm, in many countries in the world there are schools in which the classes function as multi-grade classes. Most of these education systems do not publish statistics on prevalence of multi-grade teaching. The following statistics are cited by Little in the book *Education for All and Multi-grade Teaching: Challenges and Opportunities* (2006: 5-6).

- In England in 2000, 25.4% of all classes in primary education
- In France in 2000, 34% of primary schools
- In Ireland in 2001, 42% in primary school classes

- In Norway in 2000, 34% of all primary schools
- In Nepal in 1998, almost all primary schools
- In Peru in 1998 78% of all public primary schools
- In Sri Lanka in 1999 63% of all public schools
- In Australia in 1988 40% of schools
- In India in 1986, 84% of primary schools had three teachers or less

Different types of approaches are adopted in different countries for multi-grade teaching. Approaches vary according to natural, social, economic environment, status of the society, culture, educational background of the society, educational background of the parents, annual educational expenditure of a student and educational management.

Learning and teaching strategies for multi-grade classrooms: Multi-grade teaching offers several challenges, in terms of teaching and organizing learning experiences for students. Because of the number of students, and the differences in their attainment levels, a variety of teaching/learning strategies are needed to be the multi-grade classroom can be more of a challenge than the single-grade classroom. Skills and behavior required of the teacher may be different, and coordinating activities can be more difficult. Six key instructional dimensions affecting successful multi-grade teaching have been identified from multi-grade classroom

research (Miller, 1991). It is important to cultivate among students the habits of responsibility for their own learning, but also their willingness to help one another learn.

1. Classroom organization: Instructional resources and the physical environment to facilitate learning.

2. Classroom management and discipline: Classroom schedules and routines that promote clear, predictable instructional patterns, especially those that enhance student responsibility for their own learning.

3. Instructional organization and curriculum: Instructional strategies and routines for a maximum of cooperative and self-directed student learning based on diagnosed student needs. Also includes the effective use of time.

4. Instructional delivery and grouping: Methods that improve the quality of instruction, including strategies for organizing group learning activities across and within grade levels.

5. Self-directed learning: Students' skill and strategies for a high level of independence and efficiency in learning individually or in collaboration with other students.

6. Peer tutoring: Classroom routines and students' skill in serving as "teachers" to other students within and across differing grade levels.

In the multi-grade classroom, more time must be spent in organizing and planning for instruction. Extra materials and strategies must be developed so that students will be meaningfully engaged. The teacher emphasizes the similarities among the different grades and teaches to them, thus conserving valuable teacher time. Cooperation is a necessary condition of life in the multi-grade classroom. All ages become classmates, and this closeness extends beyond the walls of the school to include the community.

Seating arrangement of the students: In the multi-grade teaching classroom, the students are seated in a circle/ in small groups. Direct attention or observation of the teacher is available in this type of seating arrangements. The students get the opportunity to look at the teacher directly.

Planning of Teaching Activities: Proper planning makes the multi-grade teaching easy and successful. The learning activities can be implemented to make multi-grade teaching easy and effective. They are (I) Learning Activities between Teacher and Student. (II) Learning Activities between the peers (Group learning). Instructional grouping practices also play an important role in a good multi-grade classroom. Direct teaching does not take place all the time. In these situations group learning may be implemented. Group learning is useful for the students to continue their learning from their known knowledge. Group learning is beneficial to the students if they are involved in reinforcement activities. In Multi-grade

teaching, the role of the group leader is also very important. He will assist the other learners as well as in maintaining discipline in the class room.

In multi-grade teaching, the teacher can follow different approaches like direct observation, guidance of peer group students, lesson oriented teaching, group learning, supervision method, Activity based participatory approach, and Expository/Guided Discovery approach.

Multi-grade Teaching: Positive Outcomes and Drawbacks: Multi-grade teaching can have the following positive outcomes:

- It can enhance independent learning
- It encourages teachers to adopt pupil-centred approaches to teaching
- It facilitates revision of materials covered in earlier grades
- It increases pupil interaction
- It provides opportunity to slow learners to make progress in his/her learning in his/her own pace of growth
- It utilizes the concept of monitoring and peer tutoring to assist the teachers
- It also promotes group learning

In spite of the above positive outcomes and pedagogical benefits, some drawbacks are also observed such as the following:

- There is the possibility of low student achievement in multi-grade schools if multi-grade teaching programmes are not supported with required resources and properly trained teachers.
- These programmes demand teachers' more time and organizational capabilities.
- Teachers need intensive training with special focus on instructional materials.
- Students may receive less individual attention, and must often work independently.

Multi-Grade Teaching and Teacher Education: Teaching is a profession and teacher education is a process of professional preparation of teachers. Multi-grade teaching is considered more challenging than mono grade teaching. In most teacher education programmes all teachers are provided with the same courses without specific support for multi grade teaching. Miller (1989) argues that teachers teaching in multi-grade contexts have specific needs and that their training must be linked to these needs. In his handbook the multi-grade classroom: a resource handbook for small rural schools, he reviewed current research on multi-grade instruction, identified key issues faced by teachers in multi-grade classroom. They are (I) The effect of multi-grade instruction on student performance; (II) the training needed to teach in a multi-grade classroom; (III) classroom organization;(IV)classroom management and discipline; (V) Instructional organization and

curriculum.(VI) Instructional delivery (VII) Grouping techniques (VIII) Self-directed learning (IX) Peer tutoring.; and (X) Planning of Activities.

Thomas and Shaw (1992) suggest that teacher education programmes for multi-grade teaching need to focus on effective teaching practices including peer tutoring, self directed learning, (planning organization and delivery methods), maintenance of an orderly environment and assessment and feedback skills. Teachers need to be helped to use classroom materials effectively, to layout their class room and group their pupils appropriately. A study by Marland (2004) identified the following areas as those for which multi-grade teacher needs training and support. The promotion of students independence in work habits, the use of instructional resources, curriculum planning, individualization of instruction timetabling and time management, teaching strategies and student assessment.

Multi-grade teaching is a viable alternative for the provision of quality education in a range of contexts in a developing country like India. Quality teacher education and support is needed to ensure that the potential of multi-grade teaching is realized. Without teacher training, effective teaching in Multi-grade situation becomes difficult. The existing system of teacher preparation for Elementary school teachers does not lay adequate emphasis on Multi-grade teaching. There is a need to investigate the impact of the quality of teacher provision for monograde classes, and contrast this with the

quality of teacher provision needed for multi-grade contexts. Pre-service and in-service training for teachers on the needs of the multi-grade class is vital. In some countries (e.g. Finland) multi-grade teaching is embedded in teacher education curricula. Many in-service training programmes in multi-grade teaching adopted a cascade model of dissemination. In India Sarva Siksha Abiyan (SSA) and District Institutes of Education and Training (DIETs) conduct in-service training programmes for the capacity building of teachers teaching in multi-grade contexts. Teacher education courses of Secondary and Elementary level have introduced the concept of multi-grade teaching in the curriculum only at a preliminary level that does not develop the required competency in teaching multi-grade classes. More emphasis should be laid on practicum approach. The following areas are offered as a tentative list of topics that while comprising elements of general teacher education programmes could be added to or extended to include direct applications to multi grade teaching.

- Curriculum development and planning
- Classroom organization and layout
- Selection and use of appropriate materials and resources
- Selection and use of a variety of appropriate teaching strategies
- Effective time management

- Instructional delivery and grouping
- Using peer tutoring
- Classroom management and discipline
- Assessment and Evaluation
- Parent and Community relationship

Teacher Education in India should be reformed for Professional development of teachers and teacher educators in Multi-grade teaching. We need research to examine the value of professional development in terms of its significant impact on teacher preparation for Multi-grade contexts. There is a need to understand the impact of the ways teacher education curricula are being developed and offered. The impact of teacher educator's capacity on teaching practices in Multi-grade classes also needs to be understood. Teacher educator is the basic provider of education to the new generation and building personalities of the teacher trainees. Hence there is a need to develop the professional competencies of the teacher educators in relation to teaching in multi-grade contexts.

Multi-grade Teaching and Role Expectations of Teacher Educators: It is obvious that the education and training of a prospective teacher will be effective to the extent that it has been delivered by teacher educators who are competent and professionally equipped for the job. The quality of pedagogical inputs in teacher education programmes and

the manner in which they are transacted to realize their intended objectives depend largely on the roles of teacher educators. In India there are more than 11861 elementary teacher education institutions, Colleges of Education and University Departments of Education (NCFTE-2009). Nearly 50,000 teacher educators are engaged in the preparation of teachers. The teacher educators would not only be training pre-service and in-service trainees but would also be associating themselves with several other activities. New strategies and techniques of material development, the changing approach to evaluation, creating an activity-based environment in the training institutions, acquiring skills for resource mobilization and several other such competencies at mastery level would be essential for professionals to function as teacher educators. In the context of Multi-grade teaching teacher educators will be expected to display a deeper understanding of the issues pertaining to Activity based teaching, peer tutoring, Classroom organization grouping techniques and time and space management. They need adequate professional competence to conduct, both pre-service as well as in-service training programmes on multi-grade teaching. The following are some of the expected roles of the teacher educators for effective implementation teacher education programmes on multi-grade teaching.

- The teacher educators at elementary level should equip themselves with various strategies and techniques of teaching in multi-grade classrooms.

- Most of the teacher education programmes are prepared to teach in mono grade contexts. Therefore the teacher educators should provide professional competencies and skills needed for the teacher trainees to teach effectively in multi-grade contexts.
- While the demonstration lessons are given the student teachers should be given opportunity to observe, compare and contrast the lessons taught in single grade and multi-grade contexts.
- When the student teachers sent for the teaching practice/ internship some of the lessons should be taught by them in multi-grade contexts. The teacher educators should observe the lessons and provide necessary feed back.
- The necessary skills to handle the multi-grade classes may be imparted among the teacher trainees through micro teaching practice in small groups.
- The teacher educators may utilize the web resources for latest developments for effective planning and teaching in multi-grade contexts.
- In service training programmes on Multi-grade teaching are to be conducted by the teacher educators for the continuous professional development of teachers teaching in multi grade classrooms.
- The teacher educators should understand the needs and problems of the teachers teaching in multi-grade

classrooms and provide necessary professional support and guidance.

- The teacher educators should participate in curriculum design development and preparation of learning materials for effective multi grade training.
- They should use of ICT for effective teaching in multi grade classrooms.
- They should undertake and coordinate action research on instructional practices and educational problems in teaching multi-grade classrooms.
- Teacher educators may undertake evaluative research studies to find out the effectiveness of multi grade teaching.
- Teacher educators will act as resource persons in providing support and guidance for the teachers working at field level thus bridging the gaps between the methods and techniques followed in training and the actual class room practices.
- Conducting experimentation and innovations in the field of Multi-grade teaching.

Multi-grade teaching and Professional Development of teacher educators: The teacher is the most important determinant of quality of learning in the class room. If such a high degree of responsibility is to be given to teachers and such high expectations of them are held, it is

important that they are treated in a professional way both in the context of their education and in the context of their support in the context of their work. The pre-service and in-service teacher education programmes should be designed to develop the competencies of the elementary teachers enabling them to teach in multi-grade contexts. The teacher training institutions will need to retrain teachers educators is necessary. There is a need to create positive attitude among teacher educators that will create an understanding of the value of multi-grade teaching as a pedagogy that promotes quality in teaching. The following are some of the suggestions for continuous professional development of the pre-service and in-service teacher educators with regard to multi-grade teaching.

- The NCERT/SCERT should organize in-service training programmes in Multi- grade teaching for the professional development of teacher educators.
- Multi-grade teaching is considered more challenging than mono grade teaching. The professional knowledge and skills for Teaching in multi-grade contexts differ from mono grade teaching. It is observed that many of the teacher educators have no sufficient pedagogical skills to teach in multi-grade contexts. Therefore professional needs of the teacher educators should be identified while planning for orientation programmes for teacher educators.
- Training needs of Teacher educators: Based on the various research studies in India and abroad training

needs of teacher educators in multi-grade teaching may be categorized as follows:

- Curriculum adaptation;
- Developing learning materials to suit diverse student needs, especially in multi-grade classes;
- Preparing teachers for multi-grade school teaching
- Methodological and didactical issues
- Students' grouping issues
- Training programme issues
- The role of ICT in multi-grade teaching
- Innovative pedagogical practices, linked to multi-grade teaching
- Preparing teachers to cope with assessment in multi-grade contexts;
- Instructional delivery and peer tutoring
- Classroom management techniques:
- Time and space management
- Social and cultural issues

- NCERT/SCERT should organize seminars workshops conferences on multi-grade teaching involving all the teacher educators
- Academic guidance and support for the teacher educators to involve Multi-grade teaching both at pre-service and in-service teacher programmes.

- Teacher educators are encouraged to undertake small-scale research studies action research and surveys relating to the multi-grade teaching.
- Periodic academic enrichment activities-public lectures, need-based issues, short-term orientation courses on, pedagogical aspects related to multi-grade teaching are to be organized by the NCERT/SCERT/University Departments.

Conclusion: Many educational policymakers, planners, Teacher Educators and the public at large, are unaware of the extent and the nature of the needs of multi-grade Teaching. Since curriculum, educational materials, teacher preparation and assessment systems are predicated on mono graded schools and classes, it is hardly surprising that many teachers and teacher educators hold negative attitudes towards multi-grade teaching. Policymakers need to be aware of the multi-grade reality and develop resources, planning, curriculum, materials, teacher preparation and assessment strategies in collaboration with teacher educators, and Educational Administrators, at national level, policy decisions will be required to incorporate multi-grade teaching in pre-and in-service teacher education programmes. There is a need to enhance the professional knowledge and skills of teacher educators in multi-grade teaching so that it results in quality teacher education which ultimately leads to quality in education.

22. Impact of Information & Communication Technology (ICT) on Teacher Educator's Professional Development (TPD)

Introduction: It is commonly accepted that education system needs to effect changes in the preparation of its citizens for lifelong learning in a 21st Century Knowledge-based system or Information Society. The growing demands in knowledge specialization requires both a change in the traditional view of the learning process and an understanding of how new technologies can be used to facilitate new learning environments in which students are engaged in the kind of team and project work that can enable them to take greater responsibility for their own learning and construction of their own knowledge. Many teacher educators believe that creating a paradigm shift in views of learning, coupled with applications of new Information & Communication Technologies (ICT) can play a key role in renewing educational systems to bring them into alignment with the needs of a Knowledge-base system. The nature of this ICT goes beyond using information communication technology to improve education administration, to large-scale adoption of digital technologies that is impacting curricular and pedagogical structures / standards for ICT integration in teacher professional development. The Development Path approach was explored at the *Teacher Educator's Professional Development (TEPD) for Tomorrow,* that ICT be recognized as a primary tool for

socio-economic growth. On-going professional development in ICT skills will ensure a solid base of human resource development. The requirement is to strengthen ICT in a more structured way to improved environment as a collective and coordinated effort carried out by all stakeholders. We considered that the TEPD on ICT Planning task should focus on assessing the current status of ICT integration, identifying challenges and proposing ways and means for further development of ICT perspectives among Teacher Educators (TEPD). This paper focuses on the needs to strengthen Teacher Educators' programmes in RIE, Mysore, with respect to TEPD and ICT covering all aspects of programmes/courses outline and implementation.

Teacher Educators' Professional Development (TEPD): Teacher Educators' Professional Development (TEPD) as 'a systematized, initial and continuous, coherent and modular process of professional development of educators in accordance with professional competency standards and frameworks'. Teacher professional development would also include training in the adaptation to the evolution of change in the profession of teachers and managers of education systems (2006).

Ongoing teacher training and support is critical to the successful utilization of ICT in education. Teacher training and professional development is seen as the key driver for the successful usage of ICT in education. Professional development of teachers is a process and not an event. Traditional one-

time teacher training workshops have not been seen as effective in helping teachers to feel comfortable using ICT. Effective ICT use in education increases teachers' training and professional development needs.

Successful Teacher Educators' Professional Development (TEPD) models can be Divided in to Three phases:

1. Pre-service, focusing the initial preparation on pedagogy.
2. The in-service model, face-to-face and directly relevant to teacher educators' needs.
3. On-going formal and informal pedagogical and technical support, enabled by ICT skills for teacher educators', targeting daily needs and challenges. Effective teacher educators' professional development should essentially have the classroom environment as much as possible. "Hands-on" instructional experience on ICT is necessary, where ICT is deemed to be the vital components of the teaching and learning process. The professional development activities should mould effective practices and behaviours. Ongoing professional development at the college level, using available ICT facilities, is seen as a key tool for success, especially when focused on the resources and skills directly relevant to teacher educators' everyday needs and practices.

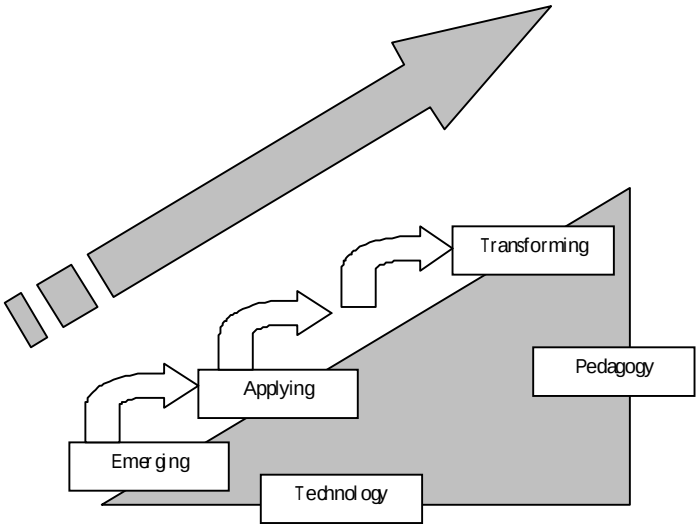
Effective professional development requires substantial planning and regular monitoring. Evaluating the activities, and feedback loops should be establishment to bring in Quality improvement.

On-going, regular support for teacher educators is crucial for teachers' professional development and it can be facilitated through the use of ICT in the from of web Technologies sites, discussion groups, Face book, e-mail communicates, web/ video conferencing, mobile phones, radio or television broadcasts.

Capacity-building in ICT integration for teacher educators

ICT integration in education is a complex and protracted process that consists of four stages. These four stages refer to the use of ICT in educational systems.

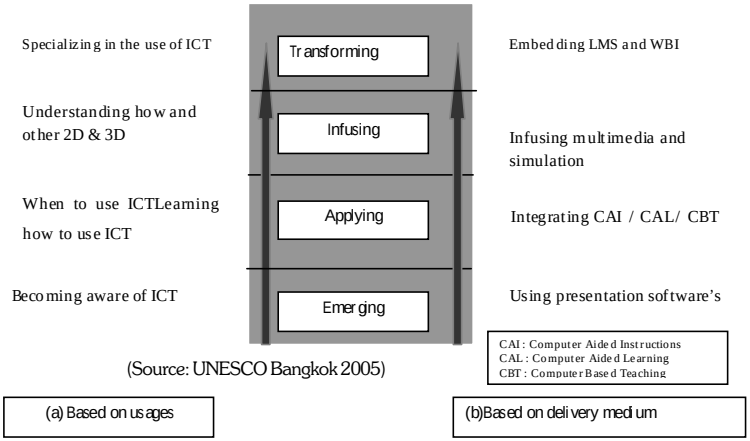
Stages in ICT Integration (figure: 1)



(Source: UNESCO Bangkok 2005)

Fig 2 shows how to use ICT in Teacher educators' Professional Development (TEPD). At the first stage, teacher educators/ learners are exploring new ICT tools and their general functions. The emphasis is usually on ICT literacy and basic skills. Discovering ICT tools is linked with the emerging stage in ICT development. The second stage involves learning to use ICT tools, and effectively making use of them in different disciplines. This involves the use of general as well as particular applications of ICT.

Mapping teaching and learning to the stages of ICT integration (figure: 2)



(Source: UNESCO Bangkok 2005)

In the third stage, infusing we learn how and when to use ICT tools to achieve a particular goal. This stage implies the ability to recognize situations where ICT will be helpful, choosing the most appropriate tools for a particular task, and using these tools in combination to solve real life problems.

The fourth stage is a Transforming stage where the learning situation is transformed through the use of ICT tools. Progression through the stages takes time. The transformation of pedagogical practice requires more than ICT skills' training for teachers educators, to integrate ICT in their day-to-day activities and master the use of ICT as an effective tool for teaching and learning. A school-based and classroom-focused approach to teacher training in ICT use takes into account the fact that teacher educators need to 'learn about technology in the context of their subject matter and pedagogy' (Hughes 2004, p. 347). Teachers learn how to use ICT more effectively when they see the technologies not as generic and decontextualized tools but as tools for teaching, that is, for motivating, managing, facilitating, enhancing, and evaluating learning. Teachers also need 'to see a direct link between technology and the curriculum for which they are responsible, study the inputs into it, 'When teachers perceive ICT as a tool to meet curricular goals, they are more likely to integrate ICT in their lessons.' ICT integration experiences across countries with respect to approaches to teacher training in ICT integration, training teacher educators on ICT-related skills within the context of classroom objectives and activities ensure the development of skills in the integrated use of ICT in teaching. School-based training of teachers by their more experienced peers from other schools or ensuring that teachers are trained in the context of their workplace are good strategies. Needs-based learning and peer coaching ensure further development

of teachers ICT abilities and pedagogical skills. Thus, teacher educators' training in ICT integration needs to be hands on, involving the application of skills learned (through formal training) in the classroom over an extended period of time. This in turn means that the teachers need access to technology resources (computers, training materials, educational software), support from technology managers (i.e. the computer lab manager or ICT coordinator), and support from colleagues and other staff members. The latter play a pivotal role in ICT integration in schools, as they are in a position to inspire a shared vision for comprehensive technology integration and 'foster an environment and culture conducive to the realization of that vision.

Some of the Tools for Teacher Educators' Professional Development (TEPD)

Free Open Source Software: (FOSS) softwares that liberally grant the license to study, change, and improve their design through the availability of the source code. Interest in FOSS is growing globally. Governments are considering policies to promote the use of FOSS in education. The use of FOSS is a question of conviction in sharing knowledge and not monopolizing. Also, educational institutions are often faced with financial constraints to purchase the licensed softwares. FOSS has the potential to help cost barrier by reducing cost of the softwares, which are important components of ICT facilities. Besides the cost benefits, there are numerous other advantages

in using FOSS in education, including pedagogical benefits. In this context there is a necessity to help teacher and other decision makers in understanding the potential of FOSS in education, where and how it can be used, why it should be used and develop their competencies in using ICT mediated lessons.

Some of the open source softwares available in the public

■ Exe	■ Wiki in Education
■ Moodle	■ Web quest
■ Social Book marking	■ Educational podcasts
■ Internet	■ E-Portfolio
■ E-Learning	■ Streaming Media
■ M-Learning	■ Web 3 Tools
■ Chart and Forum	■ Interactive whiteboard
■ Social Networking	
■ Social Book Marking	
■ Linux Libri office	

Role of the teacher educators: A shift in the role of a teacher educator utilizing ICT resources to that of a facilitator does not obviate the need for teachers to serve as leaders in the classroom; traditional teacher leadership skill and practices are still important especially those related to lesson planning. Lesson planning is vital & important when using ICT resources.

Pedagogy

Introducing technology alone will not change the teaching and learning process: The existence of ICT resources alone does not transform teacher educators' practices. However, ICT can enable teacher educators to transform their classroom processes. Teacher educators' pedagogical practices and reasoning influence achievement.

The use ICT as presentation tools (through overhead and LCD projectors, television, electronic whiteboards, guided "Web-tours", where students simultaneously view the same resources on computer screens) is seen to be of mixed effectiveness. The uses of ICT can reinforce traditional pedagogical practices. Teacher educators' technical mastery of ICT skills is a not a sufficient precondition for successful integration of ICT in teaching. Teachers require extensive ongoing exposure to the use and evaluation of the appropriate ICT resources in their classroom processes.

Teacher Educators usage of ICT- Some Issues: Teacher educators most often use ICT for 'routine tasks' like record keeping, lesson plan development, and information presentation, basic information search on the internet. ICT correlate with teacher pedagogical philosophies. Teachers with a traditional bent of mind who use ICT the most are likely to use traditional 'transmission-method' pedagogies. Teachers who use different types will be providing a variety of opportunities for their students to construct their knowledge.

Teacher Educators subject knowledge influences how ICT can be used: The way ICT used in lessons is influenced by teacher educators' mastery of their subjects, and knowledge of how ICT resources can be utilized and related to them.

A variety of changes must be implemented to optimize teacher Educators' use of ICT: Shifting pedagogies, redesigning the curriculum and assessment, and providing more autonomy to the institution will help optimize the use of ICT. With sufficient resource support, teachers can utilize ICT in a 'constructivist' manner as their pedagogical philosophies would permit. Teacher educators must have adequate access to functioning computers, and sufficient technical support, if they are to use ICT effectively in class room transaction and management.

- Adequate time must be allowed for teachers to develop new skills, explore their integration into their existing teaching practices and curriculum, and undertake necessary additional lesson planning, if ICT are to be used effectively.
- Support from school administration and the community can be important: Support of school administrators and, in some cases, the surrounding community, for teachers use of ICT is seen as critical if ICT are to be used at all, let alone effectively. For this reason, targeted outreach to both the groups is often necessary if investments in ICT to support education are to be optimized.
- Communities of practice can be important tools to support teachers' professional development: The existence of formal and informal communities of practice and peer networks can be important tools to support ICT in education initiatives and activities. Such support mechanisms can be facilitated through the use of ICT.
- Lessons learnt from introducing ICT in education need to be shared: As the introduction of ICT to aid education is often part of a larger change or reform process, it is vital that successful uses of ICT are promoted and disseminated.
- RIE Initiative: RIE, Mysore organises workshops on ICT for teacher educators. The workshops are organised with the following objectives.

(i) Review trends and issues in ICT and the professional development of teachers.

(ii) Familiarize teacher educators with various ICT tools and their application.

(iii) Develop conviction among teacher educators about the need to have ongoing practice in the use of ICT.

(iv) Though the workshop is of a limited duration, the participants are expected to engage in the use of

ICT regularly. For this the status are advised to create follow up structures so that the use of ICT gets institutionalised.

Finally, models for ICT in Teacher Professional Development that have emerged from various studies and the role of benchmarking as a mechanism for institutional reflection were examined. Development and improvement is its mission for incorporating ICT into programmes that will contribute to the national vision for a knowledge-based society.

23. Training Secondary Teachers to Make Pedagogical Decisions Based on Implicit Curriculum

Rationale: Teaching is usually seen as a form of professional work, that is, a type of complex work requiring a great deal of specialized knowledge. To become good teacher one needs a positive attitude. A country's nation building lies in the hands of its teachers. No matter how good the curriculum, infrastructure or teaching aids are at the end of the day it is the teachers who make a difference. Teachers are valuable human resources that a nation can count upon to mould and nurture its young minds.

Teaching, like any other profession, has its own unique set of challenges. Many of these challenges exist because teaching and learning is rooted in the human dimension. This means we do not always act rationally, even when it might be in our best interest to do so. In addition, there are so many challenges we face such as, the lack of resources, overcrowded classes, and unmotivated students, uninvolved or over involved parents, unsupportive colleagues and insensitive administrators. Therefore the task of Teacher Educators preparing quality teachers in very complex.

Teacher education has always been a crucial and symbolically significant field of education development. High quality programmes on preparation of teacher educators are very important in order to provide the right kind of direction towards school education.

To understand clearly the area of professional development of teacher educators it becomes necessary to visualize real setting of classroom situations in schools. It can as well start with the curriculum. Whenever we inquire about information regarding secondary school curriculum, in all likelihood we would receive information about *scheduling and a listing* of the subjects offered. This prevalent view of curriculum is defined by many as the explicit curriculum in scope and sequence charts, school handbooks, curriculum guides and teachers' plan books. Teachers are aware of this curriculum. Their awareness becomes evident as teachers talk about what they need to cover before the test or which science experiment they will try. Teachers frame their curricular aims based on the explicit curriculum and make pedagogical choices accordingly. This is the routine for which they are trained during their training in the Teacher Education Programme. But is such a training fault proof in providing quality teachers? We need to analyse this. Of course we are familiar with the nature of our current Teacher Education (TE) programme. Teacher Education Institutions are *Teacher Training institutions*. But the irony is that these '*focused training*' have remained ritualistic. The Practice of Teaching is the heart of any TE program. NCF for TE towards preparing professional and humane teacher-2009 (NCTE document December 2009/10) identifies Practice of teaching both as 1) a tool of evaluation; & also as a 2) critical quality indicator, for effective TE.

Current TE Programme focuses only on enabling the '*would-be*' teachers with the essential theoretical inputs with the assumption that it can go a long way in helping them face the real class settings confidently. An effective teacher has to make the right instructional decisions such as selection of the right approach for successful management of class rooms; selection of relevant learning experiences; etc. for teaching successfully. Are we (TE) equipping them with those essential skills, desirable attitudes and relevant knowledge, which help them make such decisions? The answer to this complex question is a simple 'No'! We (TE Programme) indeed equip them superficially with those cheap tricks that help them 'somehow' manage with a safe performance in classrooms. A teacher has to be both *cautious and conscious* regarding the decisions to be made all through his/her instruction. Such decisions cannot be made without thinking about the classroom atmosphere you need to create.

What the teacher transacts everyday in the class is explicit. If it is possible for us to supervise a class during the transaction of such an explicit curriculum and be sensitive enough to record subtle changes in the behaviour of students, we may notice very subtle learning by the students, which the teacher did not intend them to teach! All those who are teachers can cite their own experiences as illustrations to strengthen this. This hints that there exists another curriculum that is not explicit, which is hidden. This curriculum is termed as implicit curriculum.

The present paper makes an effort to throw light on the merit of considering implicit curriculum while making pedagogical decisions and also the need for professional development of teacher educators in accordance with it.

Curriculum is the base to frame any instructional objectives. We formulate learning experiences that help us achieve these objectives. Do our learning experience and the learning atmosphere we create result in unintended learning by the students?

We are convinced that our definition of curriculum (which is confined to explicit) should be broadened to include both intended and unintended learning. We all are aware of the fact that all pedagogical choices PPT (i.e., choices of teaching methods appropriate for selected aims) reflect underlying assumptions about what and whom we value, about social issues, and about the basic purpose of schooling. Consider the following instances:

❖ Suppose a teacher chooses to group of students according to their achievement level. That choice, and the resulting modifications of the curriculum, suggest that children's educational experiences should differ. What does that choice say about a commitment to educational equity? There are a few secondary schools in this city where there are sections from A to D/E for each of the secondary classes. Section A will have students whose achievement scores are above 95%;

whereas D/E will have students with 70%. This reflects the purpose and culture of the school. At the same time it may have the danger of leaving behind long-term consequences on society by shaping the curriculum according to the previous achievement of the students.

❖ Suppose a teacher chooses (pedagogical) to provide 'individual attention' to his/her class of 30 'eighth grade' students. This 'choice' makes him/her modify the curriculum for the class and the resulting consequence could be one of these: a) Develop interest in the learning material b) Students may get used to such attention and may expect the same at every stage of their education. In case of option 'b', what are the potential long term consequences of such a pedagogical choice on a society which is expecting original thinkers as its citizens?

Such questions illustrate the moral dilemma teachers' face in selecting aims. This throws light on the fact that there prevails another curriculum which is not explicit but hidden. This is the implicit curriculum. The implicit curriculum includes the curriculum experienced by children, the leanings they develop as part of the process of being educated. Consider, for example, two teachers intending to decide on the marks to be allotted for various types of questions (subjective and objective) just after announcing the dates for the test. What might the children learn in each case?

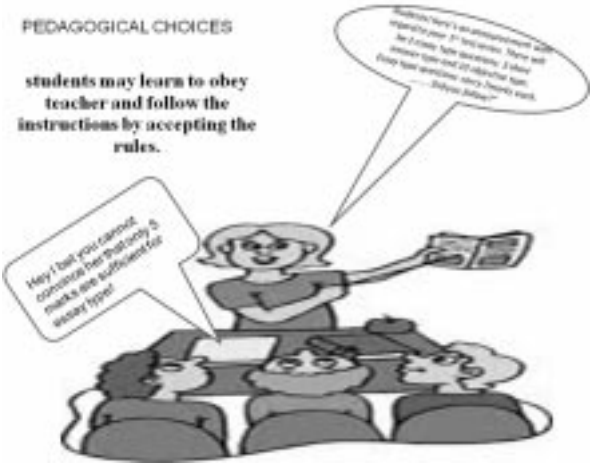


Fig.1

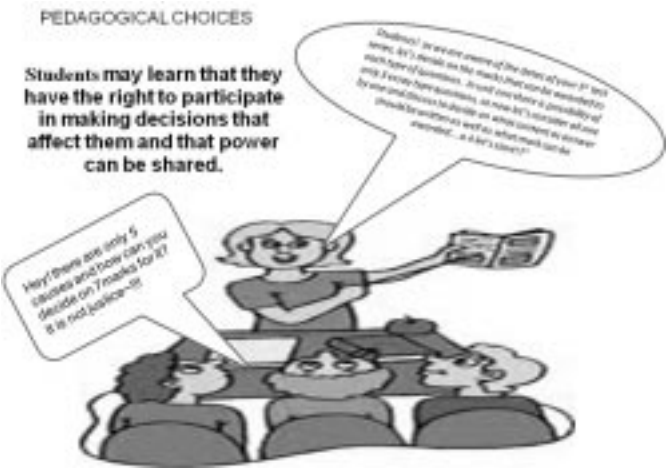


Fig.2

In the first case (fig.1) students obey the teacher and follow the instructions by accepting the rules. At the same time there is a possibility of the students learning that their

own views/ideas are not very important here or their responsibility is to meet other's expectations.

In the second case (fig.2) they may learn that they have the right to participate in making decisions that affect them and that power can be shared.

Such learning might have a long-term effect on their perceptions as adults and their expectations that they might participate fully in making decisions that concern them or affect them.

Despite the efforts to prepare teachers professionally during the Teacher Education Programme, the institutions have failed to yield quality teachers. There could be many reasons for this. One such significant reason is the lack of awareness of the existence and impact of the implicit curriculum. This naturally poses a threat to the teachers while framing relevant pedagogical choices.

One of the major challenges in the implementation is the teacher's ability to understand the impact of implicit curriculum. The teachers usually have varying levels of competency in this regard. Their self efficacy plays an important role. The awareness of the existence of the implicit curriculum and its impact on the learning, direct the teachers to frame instructional objectives and accordingly help make pedagogical choices. Who should equip them with such an awareness and abilities other than Teacher Educators?

Thus Professional preparation of teacher educators encompasses strategies to equip teacher educators to empower the '*would-be'* secondary teachers' with the awareness so that they develop the ability to sense implicit curriculum & its probable impact on the class learning. In addition, it also encompasses the strategies for teacher educators to help the *student trainees* to use implicit curriculum to frame the curricular aims as well as to make relevant pedagogical choices.

The main objective of this paper is to throw light on not only the existence of implicit curriculum and its impact on learning but also the need to equip teacher educators with the knowledge, ability, & attitude towards the implicit curriculum. This should certainly find a place in the professional preparation and development of Teacher Educators. Only such teacher educators identify the significance and need to empower the 'would-be' teachers to frame worthy achievable instructional aims based on not only explicit but also implicit curriculum in order to make relevant pedagogical choices. The quality of school education is a function of quality teacher education program and the kind of teachers it produces. That means right kind of direction towards school education is possible only by providing high quality programmes in preparation of teacher educators.

With this as the background we can now discuss the worthiness of professional development of Teacher Educators

in the area of training '*would-be*' teachers to make pedagogical decisions based on implicit curriculum:

1. Commensurate (Proportionate) with the changing contexts and needs, changes in curricular concerns in professional preparation and professional development of teacher educators becomes an important issue. Each pedagogical choice creates an atmosphere in the classroom. Any learning that takes place in the formal setting of a classroom is a function of the classroom atmosphere created by the teacher. If a teacher errs in making relevant pedagogical choices then the atmosphere that teacher creates may result in undesirable learning by the students. Only a professionally qualified Teacher Educator alone can cater to such needs of secondary teachers. Therefore, Teacher education cannot continue to remain rigid and non-responsive to the changes and challenges. Thus, it is an important concern which needs to be addressed with all seriousness.

2. The teacher education programme should provide ample opportunities for the trainees to experience and plan so that they cover explicit curriculum supplemented by implicit curriculum. For this the teacher educators should be first convinced with the existence of such implicit curriculum and its impact on effective classroom learning. Only then they take up the task of training the would-be teachers in this regard seriously

3. Teacher educators should know the nature and significance of implicit curriculum. In-spite of dealing with the same explicit curriculum, it is possible to have different implicit curriculum for teachers and for students. There is a need for the teacher educators to guard the *would-be* teachers off this.

4. Teacher educators should exhibit their responsibility by developing among *would-be* teachers, a clear sense of 'what aims are possible'. In some cases the school culture does not make the curriculum aims feasible. For instance; if the school considers intervention by students in any classroom during teaching, for clarification, as indiscipline, then the teacher's objective of 'enhancing the skill of questioning/probing' will not be feasible in-spite of being philosophically sound.
They must understand and be able to visualize the potential results of selecting some aims and the day-to-day decisions made in the classroom.

5. There is a need for the teachers to recognize that all aims are not of equal worth. For instance, solving many problems facing the world today will call for people skilled in sustaining interpersonal relationship. Recognizing this, a teacher could argue that aims that include interpersonal relationship have greater worth than those that focus solely on competition or individual work. Such teachers need sound training by teacher educators.

6. A secondary teacher is expected to develop insight into such implicit curriculum in order to frame aims and formulate learning experiences accordingly. One way of beginning is to answer this question, 'what is most important for children to learn in school within a democratic society? For this, one can argue and respond in several different ways. Teachers and experts may differ in their potentials. And those differences influence their ideas about the nature of the secondary curriculum and their decisions about what takes place in the classroom.

7. The fact is that teaching results not only in intended but also unintended learning by students. If we recall, this is our experience too! However there are ample chances that intended goals may not be learned as well by students! For instance, a school might list "self-directed learners" as a goal. But provide few if any opportunities for students to make choices. This is because teachers may select an instructional activity for any number of reasons- habit, convenience, and time of year-without being able to articulate how they plan to connect it with any intended purpose. This ability among secondary teachers of-course can be developed only by the scholarly guidance of professionally qualified Teacher Educators.

8. In any classroom, the children are always learning; they just may not be learning what the teacher intends to teach. Learning developed as a part of the process play a significant

role in forming an individual's personality. These learning too, might have a long-term effect on their perceptions as adults, and their expectations that they might participate fully in making decisions that affect their lives. If for instance an individual is very systematic in his/her approach to a problem it may be due to the implicit curriculum taught by his/her teachers!

9. While explicit curriculum might speak of a lesson or more, the implicit curriculum refers to more than a single lesson. It is conveyed by the pervasive patterns existing in a classroom or school; that is, leanings resulting from the cumulative experience of being a learner. However, many call this the hidden curriculum (Dreeben 1968 '*On what is learned in schools*'; Jackson, 1968 '*Life in Classrooms*'; Martin, 1976 '*Curriculum Inquiry*'; Sarason, 1971 Culture *of the School and the problem of change*'). According to Doerre Ross; Elizabeth Bondy; Biane Wells Kyle (1993), the word hidden implies that this curriculum is unknowable and therefore cannot become a part of what teachers consider in making instructional decisions. Instead, they suggest that teachers become aware of what can be taught implicitly and use that knowledge to make informed pedagogical choices.

Therefore Teacher Education programme should make the Teaching Practice package little more flexible at the same time mandatory to plan the pedagogical choices for lessons considering implicit curriculum. This may help the would-be

teachers to make the best use of the situation to formulate informed instructional choices.

Teacher Educators should keep in mind some general information about the implicit curriculum. Some of them are:

a. We all have learned from the implicit curriculum.

b. Individual children will interpret the implicit curriculum differently due to differences in their backgrounds, experiences, and personalities. An artist's child for instance, probably will develop positive attitudes to the value of art, regardless of whether the school communicates a similar message or not.

c. It is difficult to say with certainty what the implicit curriculum teaches, because the effects are subtle, cumulative, and long-term. Years later we might be able to determine that an attitude we hold has evolved as a result of what we experienced in school. And it is important to note that attitude might be either positive or negative.

This information about implicit curriculum should not divert us form transacting implicit curriculum. Implicit curriculum may or may not teach, but surely students benefit out of this.

Here are a few benefits of implicit curriculum to children:

1. ***Implicit Curriculum teaches what's important to learn*** : Below are a few examples to strengthen this:

- The implicit curriculum may tell students to concentrate on reading and mathematics, but not to worry about art. What instructional pattern might this teach? The class schedule; the amount of time devoted to a subject and its placement in the schedule can announce its priority. What is taught in the morning when the children are alert? What gets relegated to first forty minutes in the afternoons? If the schedule is interrupted for some reason, what is likely to be omitted? The answers to these questions communicate the relative importance of each subject. When the same type of decisions are made year after year, the pattern teaches students the school's value structure. A teacher can carefully decide instructional choices in a way to achieve his/her objectives by making implicit curriculum work as a supplement to explicit curriculum.

- The testing programme also suggests what's important to learn. What gets tested? Are some types of activities never evaluated? (If students are allowed to frame questions, which are not there in the text book?!. Does it indicate some kind of learning by students?)

- What does the report card communicate? What remarks are written in the report card? A mechanical "strive to achieve more"; "needs improvement". Of course, teachers also communicate their values. Consider the

teacher who "comes alive" during one of the chapters in science but "sighs" when it is time for another chapter in the text books.

- Think about the teacher who never misses an opportunity to quote an appropriate line of poetry.
- What if a teacher takes thrill in linking the day's lesson always with the citations from daily life situations?
- If students are taught through implicit curriculum that only the final answers which are important than the steps for mathematics problems.
- Learning 'definitions' *by heart* without meaningful understanding is accepted by the teacher (highlighting only memory)

These teachers subtly convey attitudes to children.

Curriculum materials also communicate priorities to children. For instance, if children experience a pattern in textbooks that emphasizes finding one right answers, they might learn to value answers rather than questions, ideas, issues, and controversy. Furthermore, textbooks and other materials include selected information; other information is omitted. Considering the pervasive (persistent) use of text books, it is easy to see how they become powerful influences in shaping children's views of what they should know and value how they should learn.

There are negative sides of this which we cannot overlook. Some such statements that are indicative are as follows:

- "learn only question-answers from the notes given";
- "Sh! No discussion about it among yourselves";
- "I want pin-drop silence in the class"!

Teacher should learn to guard against this.

2. The implicit curriculum also teaches attitudes about the sources of knowledge **:** Consider a teacher who looks around a classroom in order to see materials other than text books. Just as children may assume that text books contain what's important to know, they may also assume that textbooks and teachers are the only sources of knowledge. The use of a variety of resources, on the other hand, may communicate that there are many views about an idea, and that students must actively pursue knowledge. (Whenever our trainees go to various schools for their internship, the senior teachers of the schools discourage, de-motivate and finally disrupt them from the idea of using B Ed method (as the trainees go in search of various resources to teach) of teaching!! In their own scale of assessment they disqualify our trainees!!) Depending on the types of learning opportunities provided, students may learn that the teacher alone has knowledge, or that their peers also have knowledge to share.

3. The implicit curriculum teaches about the role of the teacher and that of the students in the teaching/learning process. A hint of the teacher's view of roles exists in the arrangement of the physical environment. The placement of desks and chairs might say, "The teacher talks, and the students listen. The teacher is the head of the class".

Sometimes the classrooms get converted into evaluative settings. The evaluative nature of class rooms also communicates an implicit message about roles. Evaluation tells the students whom the teachers value, accept, and respect. Through this fact of classroom life, children might learn how to read teachers in order to please them. Or, a student could learn that he/she is a failure and cannot live up to the teachers' expectation. Teachers play the role of making authoritative judgments, and the student play the role of a worker who will be judged. The long-term influence of this experience can shape students' latter attitudes about the larger world of occupations.

Children learn that some people have more power than others. Those who possess power may be teachers. In some cases children who get good grades or live in a certain part of a town or a VIP's son/daughter have more power than others in the classroom. Some may accept the status quo and fit in to the power structure; others may challenge and question and figure out how to acquire power (though not necessarily in ways that pleases the teacher).

These explanations go a long way to convince the importance of the implicit curriculum. As teacher educators we should volunteer to get ourselves equipped in order to empower the secondary teachers. Hence the teachers, as they consider their aims and how to accomplish them, also pay attention to the possible implicit curriculum in order to make better pedagogical decisions. Of course, individual teacher's beliefs will influence the teacher's perceptions of the implicit curriculum and whether he/she sees it as positive or negative. This is why it is very important to clarify our aims.

Section IV

Educational Leadership: Issues and Concerns

Educational Leadership

The ultimate purpose of teacher preparation programme must be to prepare such teachers and teacher educators who not only possess desirable knowledge, skills and dispositions, but also be able to contextualize their skills. They need to be eventually relevant to all learners and work towards all round development of *all* learners. Developing such teachers and preparing such teacher educators is indeed a tall order which is what is required. For this the professional autonomy of teachers becomes a necessity. An autonomous teacher takes freedom to innovate, experiment and takes decisions and own up the consequences of his/her freedom. In this process there is lot of experimentation, reflection, evaluation etc. Put together, all the above will make one more sensible and sensitive to the needs of learners. Thus, there is a level of independence in every teacher. This is a very important requirement of the system. Thus, teachers learn to take decisions.

Teachers and Teacher educators are also expected to provide instructional leadership too. As instruction is one of the important responsibility of teachers and teacher educators, they should be trained in the areas of curriculum management, transaction, renewal and such. They also should be careful planners of School Academic Planning (SAP), as well as Individualized Educational Plans (IEPs). Over and above this, they are also to be trained and made proficient in supervision,

monitoring and evaluation of instructional processes and overall development of the objectives of school education.

Decision taking, Critical thinking, Creative thinking and Problem solving abilities are all the virtues of effective teachers. Those who are good in these abilities can provide a good leadership to others. All autonomous teachers are eventually responsible and are capable of taking their students to their heights. Thus, they provide good personal leadership. This is a common denominator which should be developed ideally in every teacher and teacher educator. Other than this, teachers and teacher educators also need to be trained for taking up educational leadership qualities in managing school organization, administration and management too. There can be institutional leadership, where as heads of the schools and teacher training colleges, teachers and teacher educators will have to take leadership. This also calls for training.

Social Leadership is another area of importance where, every teacher must be able to communicate well with students, parents, colleagues and community at large. Teachers must be trained to develop communication skills and negotiation skills. They must be capable of negotiating with all stakeholders of the system. Using community resources and bridging school community linkages is yet another important responsibility of the teacher. Teachers need to be proficient in social leadership issues too. On the whole, educational leadership issues covering Personal Leadership, Social

Leadership, Instructional Leadership and Institutional leaderships are all important in the lives of teachers and teacher educators. The educational leadership deserves its importance in teacher preparation programmes and professional development of teacher educators which needs to be taken care of.

Editors

24. Educational Leadership and Professional Development Of Teacher Educators

Introduction :

Current Scenario:

Convergence of disciplines has created gaps in competencies, skills and delivery-systems in all professions including Teacher Education. The procedures and the processes involved in the professional organizations like Teacher Education Institutes need to be reflected upon to restructure their activities. The rapidly changing socio-economic and political systems have created greater pressures on educational organizations and demand higher competencies and skills in the products of such organizations.

School children are no more passive-listeners to an ordinary 'teacher talk'. They exhibit skills and mindsets other than what a teacher wants them to learn. Learning platform is now vibrant.

The ever changing socio-economic and socio-political events demand more from teaching community to deliver and perform better than yesteryears. Hence,

1) Teacher Education Institutions and policy making organization will have to focus on very critical issues to transform our lecture-oriented teacher education programmes, to more context oriented activities, involving

higher mental abilities than just the cognition, and move towards affective and psycho-motor areas.

The Teacher education institution must move.

2) From the current existing methodology to more practical and useful strategies, so that the Teacher-Educator becomes a leader to infuse changes in the environment where he does his duties.

1. Meanings:

Educational Leadership:

Good leaders are made not born. If one has the desire and will power one can become an effective leader. Good leaders have developed their abilities through a never ending process of self-study, education, training and experience (Jogo 1982) [1].

A leader inspires his team members into next level of team work. By hard work and continued commitment, one can improve the leadership skills.

What is Leadership?

It is a process by which a person influences others to accomplish objectives and directs the organization in a way that make its more cohesive, coherent and productive.

Leaders lead the team to achieve, success and perform well by influencing with their personality traits in solving crises

and giving solutions and add to the productivity of the organization.

1. Leaders have personality which believes in values, character and ethics.
2. Leaders motivate others by setting examples, showing trust and confidence, and have effective communication.
3. Leaders know their jobs, tasks and human nature.

Educational leadership is required to inspire students to develop attitudes, values and ethics. A Teacher Educator need to acquire leadership qualities by practicing the meta-cognitive strategies like self directed learning and reflective thinking during his professional activities. The following acronyms are borrowed from a leadership book which teaches how to become a leader in his own profession.

Acronyms

1) IMAGE 2) SPARK 3) HUMAN 4) SHINE

The acronyms explained

IMAGE – I =Innovative, M = Mastery, A = Authentic, G = Guts to talk, E = Ethics

SPARK – S= Speak with focus, P= Priorities, A = Adversity to Opportunity, R = Respond not react, K= Kudos to all

HUMAN – H= Help others, U = Understand others, M = Mingle with others, A = Amuse / Enjoy, N = Nurture good things

SHINE –S= See clearly, H = Health, I = Inspire others, N= Neglect not your family, E = Elevate your lifestyle

These ideas can be reflected upon and practiced during teacher education programmes.

Professional Development

Professional development means developing broader meanings to the tasks they are performing and achieving leadership qualities to help others in their profession. It also means to have solutions to the problems that arise in their work environment, develop skills and abilities to formulate vision and try to go towards the goals that are set by his vision. It also means to be a source of helping hand to his fellow professionals.

Teacher education refers to the policies and procedures designed to equip prospective teachers with the knowledge, attitude, behaviour and skills required to perform their tasks effectively in the classroom, school and wider community.

1. Pre-service – initial teachers training
2. Induction – the process of training and support for first few years of teaching
3. Teacher – development or continuing professional development

The curricular demands must shift from text book oriented to real-situation contexts at all levels of teacher education. The teacher education curricular should be flexible and allowed to use social contexts for teaching.

Metacognition

Metacognition is cognition on cognition. It is a shift from knowledge about outside world to knowledge about the processes inside our head. We have a variety of meta-cognitive knowledge like recalling, non academic situations, checking what we know is correct or incorrect, aware of our own memory in many situations.

There are two types of meta cognition, namely,

1. Meta memory 2. Meta comprehension.

Meta cognition operates in children, in adults and also in elderly people. Meta cognitive knowledge overseas and regulates many mental processes. By self – direction we can train ourselves to use meta cognition by using meta cognitive strategies. Two meta cognitive strategies, namely, self - directed study and reflective practices are very well known and is in practice in many areas of academic activities. We can use meta cognition by asking repeated questions on a task / situation. To apply meta cognitive strategies, questions like "what is the importance of this"?, "How this differs from that"?, "Why Bruner and not Ausubel"?, "Why problem - solving and not lecturing"? etc. can be asked.

Reviews :

1. Teacher Education reviews made by different committees (1978,1980,1988,2005 and 2009) emphasized the urgent need for reform in teacher education.

2. Review of NCFTE (2009) Chapter – 6:

Highlights that "The faculty with little or grossly inadequate professional training to handle tasks of Teacher Educator is affecting the education at all levels". It also suggests that professional preparation of trainees and Teacher Educators for different stages of education is very crucial which require immediate attention to address the changes.

Further, the report says that if a teacher needs to play his role as envisaged by NCF (2005), then it follows that the Teacher Educator should be trained and equipped with skill sets and professional competencies to transfer the same to his or her students to become effective teachers.

"Helping teachers to become more aware of their knowledge and actions influence students learning. It is critical to promote teachers' professional growth". By applying meta-cognitive strategies teacher educators might notice critical aspects that promote their own pedagogical reasoning and could motivate them to change their own teaching practices. (Kramarski, 2002).

A need has been established by the draft document for the professional development and leadership training at two stages of Teacher Training activities:

a) Pre-service level of B.Ed, M.Ed, (face to face)

b) In-Service level of professionals via virtual activities.
The draft document clearly dictates the need for suggesting and experimenting models for training which are innovative and cost effective.

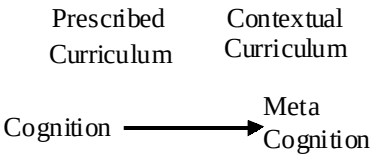
Summarizing the recommendations and observations of the reviews we need to do the following:

a. Reorganize plans and programmes; monitoring and controlling of pre-service and induction of teacher trainees.

b. Introduction of new programmes to improve the managerial skills of teacher educators.

c. Create encouraging organizational climate within the Teaching organizations so that teacher educators come out with creative ideas.

2. Need for a Model :



The proposed diagram explains the existing practice in the Teacher Educators preparation and also indicates the changes required in the existing practice.

- The circle symbolizes the time factor, it may be one single session of teaching or one semester or one academic year.
- The transition is in the curricular transaction indicating movement from cognitive engagement to meta- cognitive engagement of the trainees in all their learning sessions.
- A contextual curriculum refers to the real life or field events that will be discussed during the curricular transactions.
- Corporate training indicates that professionals must exhibit KASOC's in their activities to become a leader. 'K' stands for Knowledge of real life events at the school level, 'A' stands for Abilities to manage classroom, routines, rituals and rules related to school contexts, 'S' stands for Skills to interact with students, parents, other colleagues handling new technological devices that are available in the school systems, 'OC' stands for Other Characters like body language, soft - touch communications, people touch abilities dress code etc.

We need to examine TEO (Teacher Education Organisation) in terms of three major dimensions

1. System and Organisation
2. Supply and Demand
3. Seller and Buyer

System and Organisation

System refers in restricted sense to the schools which cater to educational needs of K-10 classes.

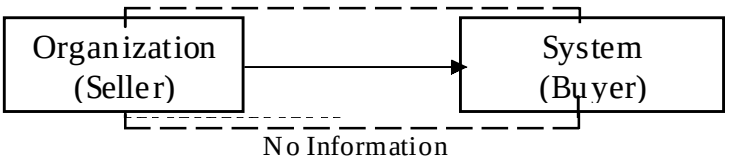
Organisation refers to the teacher training institutions where teacher receives pre-service and internship.

Today, system requires, not only teachers who can engage children in curricular transactions but also leaders who can guide other teachers, management, parents and other stake holders of the school industry, which include the principals, administrators, advisors, HR persons and purchase persons etc. but the organizations are preparing just one kind of professionals who engage only in teaching. The Teacher Educators are not utilizing the opportunities created by the system to its full capacity. Therefore the organizations will have to reflect upon their strategic and tactile planning and invent new programmes along side internship to cater to the needs of the system. It is suggested that the specialization be offered during pre-service and internship relating the system needs. This might help in creating some Teacher Educators who can pick up areas other than teaching but related to system needs. Specially designed programmes like visits, discussions, debates, seminars etc might reduce different types of product within the stipulated face to face pre-service programmes.

Supply and Demand

There is a mismatch between the supply and the demand with respect to the teaching and learning situation. Demand comes from the system with specifications. But in the field of education, demands from the system are not quite clear, so much so that the supply do not match the demand side when supply reaches the system. Therefore the demand side must analyze the needs and prepare a checklist and ask for the supply based on their needs. In many other business houses other than teaching organizations, need analysis and supply match and therefore the results will be fine. We as educationists should create a need based supply rather than adhoc supplies.

Seller and Buyer



The market in the field of education industry is monopolized by the seller. In this situation, it is TEO that decides the products. The buyer i.e. the systems buys whatever the products are in the market. There is no communication between the seller and buyer. No information is exchanged between the two, to design the product. The product here is the teacher who comes out after pre- service and internship.

At this point, if the seller and the buyer were to interact and design products, perhaps the education industry might match other industries.

3. Impact on Teaching :

The proposed model dictates the training at pre-service level of Teacher Educators to follow rigorous academic transactions which will have considerable impact on the Teacher Education. The curricular transaction should look into the demands of the system, recommendations of the National Policy on education and produce teacher educators who will be real professionals to navigate educational activities with conviction and authenticity.

Teaching Strategies:

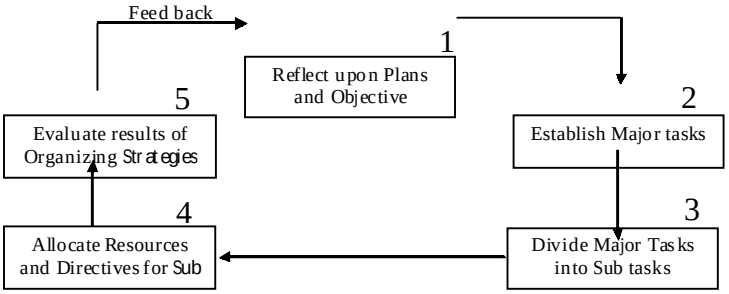
- Apart from the fixed curriculum of NCFTE, individualized choice based projects need to be given to Teacher Educators. Need to identify critical contexts in the school-systems, debate, discuss and arrive at conclusions as part requirement during internship.
- Visits to rural hubs where new genre of ICSE and CBSE schools are mushrooming so as to get the field experience of contemporary changes required in the teacher training and the professional development of teacher education.
- Reflecting on one's own teaching
- Browsing research papers

- Reading journals
- Viewing panel discussions on T V channels
- Self motivation and passion for learning
- Visits and exchange programmes

The employable skills of a Teacher Educator will be enhanced due to the impact of training which might indicate changes in the following:

- Teacher competence
- Sensitivity to critical issues
- Self – motivation
- Pedagogical skills to meet the needs of diverse learning situation
- The quality of teaching influences the curricular transaction, end – products and also social transformations.
- Initial teacher education- Induction.
- Acquiring proper knowledge, skills and attitude by teacher educator
- Professional improvement during the career of teacher – education.

The Professional development can be reached by continuous training, orientation Programmes and discussions on the emerging sociological, political and technological advances.

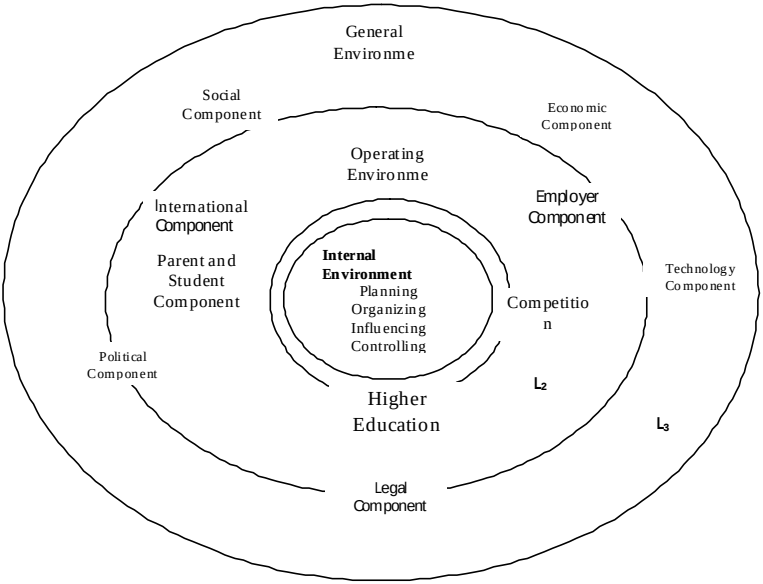


1. The applications of this model to the current practices of transaction indicate a need to shift from cognitive to meta-cognitive strategies as a major task.
2. Sub tasks would be creating opportunities to practice in meta cognitive strategies.
3. Internship activities should help the teacher to reflect upon this learning and apply on school children to practice 1) self- directed learning 2) reflective thinking.

Teacher educators need to get continuous training, orientation, discussions on the emerging sociological, political and technological advances. These bring new social order and the convergence and blending of ideas, devices and applications have given a new platform, where teachers will have to cope up with the pressures and demands of the end-users of the school system.

Professional development depends on the environmental components of the organization. Teacher

educators may benefit by understanding the interactions that happen at 3 levels as depicted in the diagram given below.



Teacher education process will be continuously interacting with the components of L_1, L_2 and L_3

Teacher educators would be acquiring the following generic competencies due to the organizational influence and impact on the interactions:

- Brain storming strategies
- Case study presentations
- Demonstration techniques

- Games, learning related and use
- Group discussion techniques
- Role play techniques
- Innovative narrations
- Creative introduction
- Mnemonic techniques
- Using puzzles for learning enhancement
- Questioning skills
- Quiz and its use
- Seminars
- Use of Internet, computers, ppts

It is suggested that the classroom transactions on a face to face basis be done on the following concepts:

- Integrative discourses
- Open and flexible curriculum
- Guidance by learning societies: 'learning to learn'
- Inclusive education to support PHC and AWC
- Liberal, humanistic, responsive to the demands of the changing socio – political contexts
- Pedagogical initiative driven by "sociological and anthropological insights"
- Usage based on 'multi cultural education' and also 'culture- specific' to the geographical region.

- Use diversity and multiplicity of learning space and curriculum (TV media, News media: internet, open –source; farms; community; NGO etc) apart from classrooms
- Preparedness to handle overload of classroom learners, multi – ethnic students, cultural diversities
- Shift from knowledge base to reflective practice
- Critical reflective methods to replace the fixed pedagogical consideration.

In today's rapidly changing world, one need to have the following to become a leader who can take the educational activities in a fitting manner:

- Set a clear direction for their teams and their work.
- Take personal accountability for results and performance
- Be genuine role models for the behavior needed of others.
- Leaders be fully prepared and equipped to achieve sustained improvement in performance
- Leaders must have deeper level of self awareness, values and personal accountability and focus on behavioral change to complement the more traditional knowledge based education.

Context: Deeply understanding how the unique demands of your changing organized environment requires you to behave differently as a leader:

1. Identity & Self Awareness,

2. Critical incidents: How can you identify, create and seize those critical moments to make a profound difference to the performance of your team through creating a vision, communicating direction and creating conditions for everyone to be their best.

Conclusion:

The deficiencies and the drawbacks of Teacher Education programmes are very well documented and discussed on different platforms. Time and again solutions and suggestions are given by the Educational Leaders. However, not everything seems to work due to the complexity of our educational theories, practices and infrastructural deficiencies. This model for training is an attempt in which integration has been suggested between the cognitions and meta-cognition spectrum. Without extra cost, educational leaders can impact the transactions by shifting the emphasis during curricular transactions.

"Learn how to learn" to constantly absorb and teach yourself new ways of doing old things or doing new things in new ways. This is required when every aspect of our job is being digitized, automated and out sourced. "Having passion and curiosity for learning" can help to develop professional knowledge without help from outside.

25. A Study of Professional Perceptions and Organisational Climate among Teacher Educators

Introduction :

"Choose a job you love, and you will never have to work a day in your life".

-Confucius

In view of the above, the teachers' perception towards their profession and their organisational climate is the culmination of his/her thoughts, beliefs and strengths that translate into action and produce the desired results. Good perception is that mysterious something that transforms an average person into an outstanding person. It is like a mystical fountain of endless energy. The role of a teacher in today's complex environment should be that of a facilitator, more so because of rapid progress of information technology and the explosion of knowledge in all fields. The progress, stagnation or deterioration of a society is directly or indirectly traceable to the mettle of a teacher. The teacher is the foundation or basis of our social edifice. So, the teacher of today needs to be more resourceful and have good perception towards his job and should have the better atmosphere in his/her organisation in order to gain a competitive edge and command.

The ethics of teaching is based on the rich ethical inner self of the teacher. It never operates in a vacuum. However,

proper functioning and implementation presupposes an ethical teaching environment. A student is like a seed, which needs constant showering of knowledge, advice and guidance to bloom into a beautiful flower. It is mainly the teacher whom he/she depends upon for this nourishment. According to Plato, "He who has a taste for every sort of knowledge and who is curious to learn and is never satisfied may be justly termed as a teacher". There will be no true education until each and every teacher educator realizes the ultimate purpose of education. For that a teacher educator should be a blend of both professional commitment and professional perception.

One of the dynamic aspects of the educative process is the organisational climate. It is the strong sub-system of the total education system where learning takes place through the interaction between the teacher- educator and the student – teachers. The uniqueness of the classroom lies in the fact that when a teacher-educator meets a class, the teacher educator and the taught are thrown into a unique relationship calling for prophetic vision to transform the whole being of the learner, lifting both the teacher and the taught and the quality of the interaction. The positive professional perception towards his/her work and his behaviour towards the higher authorities of the organisation are very important as these two influence the job satisfaction of teachers.

Need for the study: This study considers the importance of the role of professional development of the

teacher educators in effective discipline programs and classroom management strategies, the role of teacher-student relationships in effective discipline programs and classroom management, and how both of these affect the perceptions of teachers concerning school climate. The goal of this study was to determine the relationship between the professional development activities provided for teachers to improve classroom management and the perceived teacher-student relationships present after teachers participated in these activities; and their effect on school climate.

Objectives of the study: The main objectives of the study are:

(1) To study the level of professional perception and their organisational climate among teacher educators.

(2) To identify the differences in the professional perception scores and their organisational climate depending upon their personal and demographic variables.

(3) The main objective of the present study was to examine whether there were any significant differences between the professional perceptions and the organisational climate among government, govt aided and self financing teacher educators.

Hypotheses: On the basis of these objectives, the following hypotheses have been formulated. They have been set in a null form of hypothesis which is akin to the legal principle that

a man is innocent until he is proved guilty (Guilford and Fruchter, 1978; Garrett and Woodworth.1971).

(1) The teacher educators, in general, do not possess positive professional perception and do not have proper organisational climate.

(2) The personal and demographic variables of teacher educators would not influence their level of professional perception and their organisational climate. (The major hypotheses are split into different minor hypotheses are the purpose of testing each variable separately).

Methodology: The present study was a survey type of research. Convenient sampling technique was adopted to collect the data from 100 teacher educators. The teacher educators had been given the two inventories along with the personal data sheet to collect personal and demographic variables and were requested to respond to all questions without leaving any single question in the instrument. The questionnaire consisted of simple statements, which express different ways in which teacher educators think. They were required to select any one of the responses to indicate their professional perception and their organisational climate. The investigator requested the teacher educators to give their responses frankly and assured them that it would be kept confidential.

The two inventories used were Professional Perception Inventory of T. Venkateswara Rao, and Oganisational Climate Inventory of Jayalakshmi Indirasen. The Organizational Climate Inventory's Odd-even reliability coefficient (0.934) was found after spearman-brown formula was used. The sub test scores were found to be highly inter-correlated with each other. The sub-tests scores were derived by using factor analysis. The factor structure was very much similar to Halpin and Crofts OCDQ dimensions. Factorial validity was worked out for Professional Perceptions Inventory also.

As both the instruments used in this investigation were the Likert's type five point scale it has been scored by giving weights 5,4,3,2,1 in the case of positive items and 1,2,,3,4,5 in the case of negative items (9,11,14,16,17,18 and 19 in the Organisational Climate Inventory). The grand total to each individual on the entire scales has been obtained by adding the weights on all the statements. The information provided by the respondents in the personal data sheet has also been numerically coded to suit the computer analysis (spss version 11.0).

The total scores obtained by all the subjects have been carefully analysed employing appropriate statistical techniques such as mean, and standard deviation. To test the differential hypotheses, the inferential statistical techniques such as 't' test and 'F' ratio have been employed appropriately. The numerical results obtained have been interpreted.

Description of attitude scores of the teacher educators towards their professional perception and their organisational climate are presented as follows:

The attitude scores obtained through the administration of professional perception inventory and the organisational climate inventory to the teacher educators have been arranged in a systematic manner by grouping them into classes and analysis was carried out to know the level of their professional perception.

Ho.1 The level of professional perception and the nature of organisational climate of teacher educators are high.

Table-1 Showing the criteria of classifying the sample based on the scores of professional perception and organisational climate

Groups	Range	N	Percentage%	Range	N	Percentage%
	Professional Perception			Organisational Climate		
Low	26-39	8	8	30-49	6	6
Moderate	40-53	40	40	50-69	40	40
High	54-67	52	52	70-89	52	52

From the above table, it is clear that more number of teacher educators lie in the category high; from which we can conclude that most of the teacher educators possess high professional perception and have high organisational climate.

The influence of personal and demographic variables on the professional perception and organisational climate among teacher educators.

This section describes the influence of personal and demographic variables of teacher educators on their Professional Perception and their Organisational Climate. For the purpose of testing, the differential analysis was carried out separately by employing't' test (critical ratio) and F-test appropriately.

As explained earlier, 100 teacher educators were included in the study. The sample was divided into different criterion groups based on the personal and demographic variables which were included in the study to carry out the differential analysis on the professional perceptions and the organisational climate among the teacher educators. In the present study, an attempt has been made to know the influence of locality of teacher educators on their professional perception and organisational climate.

Ho. 2 There is no significant difference between rural and urban teacher educators in their professional perception and the organisational climate.

Table-2 Showing the significant difference between rural and urban teacher educators' professional perception and organisational climate

Variables	locality	N	M	S.D.	SEM	t	df	Level of significance
Professional	Rural	63	51.69	8.92	1.12	1.145	98	NS
perception	Urban	37	53.72	7.91	1.3			
Organisational	Rural	63	66.76	11.12	1.40	3.797	98	S
climate	Urban	37	74.78	8.3	1.37			

(Table value=1.96; df=2)

From the above table it is concluded that there is no significant difference between rural and urban teacher educators in their professional perception and there is a significant difference between rural and urban teacher educators in their attitude towards organisational climate. Since the obtained't' value (1.145) is less than the table value (1.96) for 98 df at 0.05 levels of significance, we accept the null hypothesis. Besides, there is a significant difference between rural and urban teacher educators in their organisational climate; since the obtained't' value is greater than the table value for 98 df at 0.05 levels of significance, we reject the null hypothesis.

Ho.3. There is no significant difference between professional perception of teacher educators with respect to their age, major subject, years of experience, .designation and the type of their organisation.

Table-3 Showing the significant difference between the mean scores of Professional Perception of teacher educators with respect to a) age; (b)Major subject; (c)years of experience**,** **(**d)designation and (e)the type of their organisation.

S.No.	Variables	Source	SS	df	MSS	F	LS
1	Age	Between groups	237.188	3	79.063	1.077 (8.53)	NS
		Within groups	7047.562	96	73.412		
		Total	7284.750	99			
2	Major subject	Between groups	461.682	10	46.168	0.602 (2.54)	NS
		Within groups	6823.068	89	76.664		
		Total	7284.750	99			

3	Years of experience	Between groups	448.430	5	89.686	1.233 (4.36)	NS
		Within groups	6836.320	94	72.727		
		Total	7284.750	99			
4	Type of management	Between groups	123.417	2	61.709	0.836 (19.50)	NS
		Within groups	7161.333	97	73.828		
		Total	7284.750	99			
5.	Designation	Between groups	63.409	2	31.705	0.426 (19.50)	NS
		Within groups	7221.341	97	74.447		
		Total	7284.750	99			

(Values given inside the parentheses indicate the table value at 0.05% LS.)

The above table reveals that no significant difference exists between the Professional Perception among teacher educators with respect to their age, major subject; years of experience, designation and the type of their organisation. Since the calculated values of all the above said variables are lesser than the table values at 0.05 levels of significance at selected degrees of freedom. Hence there is no significant difference between the two variables. So the null hypothesis is accepted. In the same way, the rest of the independent variables do not differ significantly with the Professional Perception among teacher educators.

Ho.4.There is no significant relationship between professional perception and the organisational climate of teacher educators.

Table-5 Showing the relationship between the two variables

Research variables	N	'r'-value	Level of significance
Professional perception Vs Organizational climate	100	0.385	S at 0.01 level (2-tailed)

From the table it is evident that there is a significant positive correlation between the two variables Professional Perception and Organisational Climate of teacher educators. It means, as one increase, the other also increases. So they are directly related.

H o.5 There is no significant difference between Organisational Climate of teacher educators with respect to their age, major subject, years of experience, designation and the type of their organisation.

Table-4 Showing the significant difference between the mean scores of organisational climate of teacher educators with respect to a) age; (b) Major subject; (c) years of experience

S.No.	Variables	Source	SS	df	MSS	F	LS
1	Age	Between groups	1363.270	3	454.423	4.221 (8.53)	NS
		Within groups	10334.440	96	107.650		
		total	11697.710	99			
2	Major subject	Between groups	1417.594	10	141.759	1.227 (2.54)	NS

		Within groups	10280.116	89	115.507		
		total	11697.710	99			
3	Years of experience	Between groups	2046.813	5	409.363	3.987 (4.36)	NS
		Within groups	9650.897	94	102.669		
		total	11697.710	99			
4	Type of management	Between groups	2679.103	2	1339.551	14.408 (19.50)	NS
		Within groups	9018.607	97	92.975		
		Total	11697.710	99			

5	Designation	Between groups	143.494	2	71.747	0.602 (19.50)	NS
		Within groups	11554.216	97	119.116		
		Total	11697.710	99			

The above table reveals that no significant difference exists between the Organisational Climate among teacher educators with respect to their age, major subject; years of experience, designation and the type of their organisation. Since the calculated values of all the above said variables are lesser than the table values at 0.05 levels of significance at selected degrees of freedom. Hence, the null hypothesis is accepted. In the same way, the rest of the independent variables do not differ significantly with the organisational climate among teacher educators.

Ho.6 There is no significant relationship between male and female teacher educators in their professional perception, "challenging"

Table-6 Showing significant relationship towards "challenging" among teacher educators

S.No.	Variables	N	X^2	df	LS
1	Male Tr.	52	6.137	3	0.105
2.	Female Tr.	48			Asymp. Sig, (2-sided)

(Table Value=7.815 at 5% LS for 3 df)

Data was collected from 52 male teacher educators and 48 female teacher educators and the relationship between their Professional Perception "challenging" was calculated. It was found that the calculated value (6.136) was lower than the table value (7.815) at 0.05% for 3 df. So, there is no association or relationship between male and female teacher educators in their professional perception, "Challenging". So, the formulated null hypothesis is accepted.

Ho.7.There is no significant relationship between male and female teacher educators in their Professional Perception, "Respectable".

Table-7 Showing significant relationship towards "Respectable"

S.No.	Variables	N	X^2	df	LS
1	Male Tr.	52	3.862	4	0.425
2.	Female Tr.	48			

(Table value=9.488 at 0.05% LS for 4df)

Data was collected from 52 male teacher educators, and 48 female teacher educators and the relationship between their Professional Perceptions, "Respectable" was calculated. It was found that the calculated value (3.862) is lower than the table value (9.488) at 0.05% for 4 df. So there is no association or relationship between male and female teacher educators in their professional perceptions, "Respectable". So, the formulated null hypothesis is accepted.

Findings: (1) 52% of the teacher educators possess high Professional Perception and perceive a high Organisational Climate. (2) There is no significant difference between rural and urban teacher educators in their Professional Perception and there is a significant difference between rural and urban teacher educators in their attitude towards Organisational Climate. (3) There is no significant difference between the Professional Perception among teacher educators with respect to their age, major subject, years of experience**,** designation and the type of their organisation. (4) There is no significant difference between the Organisational Climate

among teacher educators with respect to their age, major subject, years of experience, designation and the type of their organisation. (5) There is a significant positive correlation between the two variables, Professional Perception and Organisational Climate of teacher educators. (6) There is no association or relationship between male and female teacher educators in their Professional Perceptions, "Challenging" (7) There is no association or relationship between male and female teacher educators in their Professional Perceptions, "Respectable".

Conclusions:

Teacher educators must develop their attitude towards their profession so that they can work effectively in any type of organisation. He/She is leader of the group of pupils in the class room. As a leader he/She has to motivate and guide students in a variety of matters. The results of this study do support previous findings (Darling-Hammond, 2000; Okpala & Ellis, 2005) that teacher quality is an important educational issue, and that teacher qualification is an important component of teacher quality.

It is apparent from this study that quality teachers must embrace the vision of caring for students and their learning. The primary customers of educational organizations are the students, and quality teachers need to be committed to students and their learning goals. Teacher educators must have the ability

to use a variety of instructional methods in their classroom to meet students' learning needs, create a relaxing environment and cater for the needs of students regarding language learning, motivation and interests. However, the affective side is thought to be the most important quality teacher educators should have. Students accept that they are responsible when they fail but believe that if teachers give them enough encouragement and positive feedback, this would increase their desire to study harder.

26. Perspectives on Education Role and Values of Pre-service Women Teachers in the 21st Century

Introduction

The Teacher is the top most academic and professional person in the educational pyramid. He can either make or mar the Nation. The teacher plays a major role in shaping the destiny of a child. The more active, resourceful and competent the teacher is the more effective and useful is the education. Influence of a teacher is felt throughout life. Maintenance of quality education depends on good teachers. It is true that all good education is the process of developing human personality in all its dimensions- intellectual, physical, social, moral and spiritual. But for a variety of socio-cultural reasons, the affective dimensions of educational objectives i.e., development of feelings, values, attitudes, etc. in recent times, have been neglected.

Education today has degenerated into a process of information transmission with the primary objective of producing examination results. So it is required to draw attention to the neglected dimensions of education i.e., the development of social, moral, aesthetic and spiritual side of man's personality. Education, in its true sense, should heighten a person's awareness of himself/herself and his/her relationship with the outside world. Education must result in refining one's perceptions.

Reflecting the crucial role of the teachers in national development considerable attention has been focussed on

pre-service teacher training programme. In India three different models of teacher training programmes are running to cater to the needs of secondary school students. These are one year B.Ed., two year B.Ed. and four year integrated B.Ed. models. Since there is no literature available to compare the pre-service women teachers perspectives on education role and values in 21st century the present study has been taken up with the following objectives;

Objectives:

(1) To study the perception of one year B.Ed., two year B.Ed. and four year integrated B.Ed. women pre-service teachers trainees role of education in the 21st century.

(2) To compare the value pattern of one year B.Ed., two year B.Ed. and four year integrated B.Ed. women pre-service teacher trainees in the 21st century.

Hypotheses:

(1) There exists significant difference in the perception of one year B.Ed., two year B.Ed. and four year integrated B.Ed. women pre-service teacher trainees about the role of education in the 21st century.

(2) There exists significant difference in the value pattern of one year B.Ed., two year B.Ed. and four year integrated B.Ed. women pre-service teacher trainees in the 21st century.

Methodology: Purposive sampling technique has been followed in the present study. Two year B.Ed. and four year integrated B.Ed. women pre-service teacher trainees of Regional Institute of Education, Bhubaneswar and one year B.Ed. women pre-service teacher trainees of NDWCTE, Bhubaneswar were selected for the study. A total of 120 women pre-service teacher trainees (40 from each course) were selected randomly in the year 2007-2008 academic sessions for the present study. Two different questionnaires were used for the study. The first one was on the Perception of Education role of and second one was on Values. To know the perception of role of education of women pupil teachers, altogether 14 questions (10 close ended and 04 open ended) were asked by covering both national and international issues. The second tool was Teacher Values Inventory which was developed and standardized by Singh and Aluwalia (1981). The Teacher Value Inventory consists of six dimensions which measures theoretical, economic, aesthetic, social, political and religious values of the teachers. The reliability and validity of the tools is 0.81 and 0.78 respectively.

The data was collected individually from all 120 women pre-service teacher trainees after establishing proper rapport with them. They were treated with suitable statistical techniques.

Main findings: A. Percentage wise perception of pre-service women teachers' role in education

1. It is found that from the *graph-1* that pre-service women pupil teachers of all the three courses were in favour of (a) achieving global cooperation rather than (b) competing in a global market.

2. *Graph-2* indicate that both one year B.Ed. and four year B.Ed. women pupil teachers were of the opinion that (a) education should give preference to the needs of every person irrespective of nationality at the same time two year B.Ed. students consider that (b) education should emphasize the needs of every person irrespective of nationality.

3. All the three categories of B.Ed. women pupil teachers in *graph-3* were of the opinion that educational policies of the countries should ensure that (a) every child should attain levels of literacy rather than (b) providing opportunity to attain the levels of literacy.

4. *Graph-4* pointed out the curriculum aspects of school curriculum. It is noticed that minimum 60% B.Ed. women pupil teachers from all the three courses were of the opinion that (a) curriculum should stimulate children to critically evaluate the existing social inequalities as compared to the opinion of 40% teachers that (b) curriculum should prepare children to take their place within the social structure.

5. From *graph-5* it is noticed that 53% one year B.Ed. women pupil teachers have preferred that the decisions regarding the subjects to be taught in the school should be made at the local level whereas 56% two year and 53% four year B.Ed. students have opined that it should be at national level.

6. From *graph-6* it is depicted that 60% one year, 80% two year and 67% four year B.Ed. women trainees had opined that standard for assessing the levels of students academic achievement should be decided at national level as compared to the local and the state level.

7. From *graph-7* it is seen that 73% one year, 83% two year and 57% four year B.Ed. women trainees have perceived that developing a highly literate society should be a collaborative efforts of educators, parents, business communities and other social groups as compared to the responsibility of the school system only.

8. From *graph-8* it is noticed that 50% one year, 60% two year and 50% four year B.Ed. women teachers have opined that the decision about every aspect of school should be a collaborative effort of administrators, teachers and community members.

9. From *graph-9* it is visible that 67% one year, 60 % two year and 80% four year B.Ed. women trainees have perceived that teacher training institution should prepare teachers who can learn skill at IT in the training to fit themselves in the job market rather than to think critically.

10. From *graph-10* it is revealed that 63% one year, 83% two year and 73% four year B.Ed. women trainees have perceived that teachers of the 21st century should possess higher standard of vigour than the standard of vigour presently required.

11. Women teacher trainees of all three models of B.Ed. course have opined that the students should possess balanced personality, future oriented education, justice, social and moral qualities and academic excellence when they reach adulthood although the priority of qualities shown in *graph-11* is different from course to course.

12. From *graph-12* it is seen that one year B.Ed. women teacher trainees have given preference to punctuality, good personality, national feelings, skill and knowledge whereas two year B.Ed. women teacher trainees have given importance to knowledge values, skills, nationality feeling and personality traits in order of priority but four year B.Ed. women pupil teachers have given emphasis on knowledge, personality, integration of skills, values and national feelings in order of priority hence it can be concluded that there exist difference in the perception of qualities and its priority by the teacher trainees.

B. Analysis of pre-service women teachers' ideas on value pattern (mean score)

1. It is noticed that there exists no significant difference among the one year, two year & four year B.Ed. pre-

service women's pupil teachers in the context of theoretical values.

2. There exists a significant difference between one year vs. four year B.Ed. women pupil teachers in economic value pattern although there is no difference between two year vs. four year B.Ed. students. Economic value indicates the desire for money and material gain and it is noticed that four year B.Ed. women pupil teachers have given high priority to it as compared to other groups.

3. It is seen that two year B.Ed. women pupil teachers have highest aesthetic mean value (priority to fine arts, drawing, painting, music, sculpture and love for literature and surroundings) as compared to four year and one year B.Ed. students in their day to day life.

4. It is found that one year B.Ed. women pupil teachers have shown better social qualities like kindness, love, sympathy for the people, interested to sacrifice their personal comfort and give emphasize on service to mankind than that of their counterparts.

5. It is visible from the analysis that four year integrated B.Ed. women pupil teachers have shown more inclination towards political activities and interested to participate in active competition as compared to their counterparts.

Similarly one year B.Ed. pupil teachers have given high priority to faith in God, belief in divine worth, piety and belief

in worshiping God as compared to other categories of B.Ed. students. The results suggest that one year B.Ed. students are better in social and religious values whereas two year and four year B.Ed. students are better in theoretical, aesthetic, economic and political values respectively.

Hence, it can be concluded that all the three different modes of pre-service teachers training programmes have different priority of values in their way of thinking.

Conclusions: Success in teaching depends on teachers. Teachers are the real custodians of the future of the students. It is said that quality of education in a country and quality of its culture depends upon the qualities of its teachers. It is also clearly visible that teachers' clear perception about the role of education, value in life and positive attitude towards teaching helps the student to become achievers in their future life. It is only when the teacher himself/herself is wedded to discipline and observes good habits in their life can shape his or her pupils into ideal individuals and citizen in the society. The teacher should be an example before the student. But, unfortunately these good qualities with the teachers are absent in schools today. Therefore it is suggested that the pre-service women teacher trainees of all the three courses of the 21st century should practice the value like punctuality, kindness, love, sympathy and national feeling in their day to day life to bring excellence in the education system although there is a difference in their perception.

27. Teacher Educators – Are you Inclusive Education savvy…..?

Introduction: The difference between us and the pupils entrusted to our care lies only in this, that we have traveled a longer tract of the parabola of life. If the pupils do not understand, the fault is with the teacher who does not know how to explain. Most new teachers often default to the pedagogical practices to which they themselves were exposed to as students and teacher candidates. This point was emphasized in a 1997 Report by NCATE (National Council for Accreditation of Teacher Education), in which the council stated, "Today's teacher candidates will teach tomorrow as they are taught today" (p. 1). A growing body of research shows that candidates in teacher preparation programmes reproduce to a great extent the pedagogical methods that were used in their programmes (Wideen, Mayer-Smith, & Moon, 1998). Too often our students in Teacher Education fall into what Carol Dweck (2000) classifies as "helpless pattern" thinkers who are more interested in getting answers right than growing as learners.

The 'Every Child Matters' agenda in which teachers' responsibilities for the socio-emotional education of students emphasize upon 'personalized learning' in which teachers are now expected to collect and analyze data in relation to the academic progress of every student so that they can meet their learning needs better. The continuation of an inclusion policy

has resulted in teachers having to manage a greater range of educational needs in their classrooms.

Although the reality is that most teachers adapt, at least survive, and do not leave the profession; little is known about variations in their work and lives and how these affect their effectiveness. Such knowledge would not only be useful to teachers themselves, school leaders, and all with a stake in quality education, but also to those who are engaged in initial teacher education and training.

Inclusive Education- The context: Inclusion, if we go by the definition 'placement of students with special educational needs in mainstream education', is much easy to 'achieve' (in the sense that, theoretically, all mainstream school has to do in order to be considered 'inclusive' is to enroll students with special educational needs). But it does not necessarily imply high-quality education for such students.

More recent reforms (for example, DFES, 2004; UNESCO, 2005) have arrived at broadening of the term 'inclusion' to include the promotion of *all* students' *presence* (that is, without the use of withdrawal classes or other forms of 'integrated segregation'), *participation* (that is, the quality of students' educational experiences), *acceptance* (for example, by teachers and peers) and *achievement* (for example, greater academic progress, better social and emotional skills) in mainstream schools.

This definition is consistent with current academic literature in this area (such as Humphrey, Bartolo, Ale, Calleja, Hofaess, Janikova, Mol Lous, Vilkiene &Wetso, 2006). Furthermore, it provides a stimulus for teachers to think of inclusion as an ongoing process. This is preferable to the earlier, more rudimentary 'inclusion as the placement of students with special educational needs in mainstream schools' definition, which, although much easier to 'achieve' does not necessarily imply high-quality education for such students. Cooper(2005) suggests that teachers in mainstream schools may be prone to 'typing' of students with special education needs; that is, placing students into readymade categories relating to perceived ability, behaviour, motivation and so on, on the basis of limited interactions and observations.

Need and Significance of the Study: If inclusion is about increasing the participation of all learners in mainstream schools, then it must go beyond general questions of the presence of children with special educational needs in such schools. We need to address questions of classroom teaching and curriculum in considering inclusion and inclusive practices (Norwich and Lewis, 2005).

A 'distinct pedagogy' position in relation to students with special educational needs suggests that the needs of such learners dictate that they require distinct kinds of teaching in order to learn the same content as those without special educational needs. Norwich and Lewis (2005) argue that

pedagogic needs can be addressed in three ways; firstly, by thinking about these needs those are common to all; secondly, by thinking about those needs that are specific to a certain group and thirdly, by thinking about those needs that are unique to individuals. The present Teacher Education scenario fully caters to the first one, totally ignoring the second and third. It is high time to equip the prospective teachers for the inclusive settings which in turn solely depends on the Teacher Educators and hence the study.

Objectives of the study:

(1) To assess the level of awareness about the concept of Inclusive education among Teacher Educators.

2) To find out the opinion about the need for using specific strategies to equip the student teachers in the inclusive settings.

3) To find out the specific strategies adopted by Teacher Educators to meet the challenges in the inclusive classroom.

Methodology : Normative survey method was used for conducting the present study. The sample comprised 90 Teacher Educators from 10 Training colleges in Kerala. Random sampling technique was used for collecting data. The tools used were unstructured interview and opinionnaire. There were 25 items in the opinionnaire and for each item, the response can be marked as 'YES' or 'NO'. Percentage analysis was used in the study.

Results and Discussions:

1) The awareness level of Teacher Educators on inclusive education.

The response of Teacher Educators on each item was analyzed and percentage was calculated. All (100%) the Teacher Educators were aware of inclusive education but only 18 (20%) were familiar with the concept of children with Special Education Needs (CWSN) and they have got a limited opportunity to be with CWSNas a part of the discipline of their specialisation but not confident enough to address their needs effectively. On the other hand, 72(80%) of the teacher educators opined that they have not got a real platform to engage themselves with children with special needs (CWSN).

Out of ninety, 36 (40%) of the Teacher Educators collected information about inclusive education through articles, 45 (50%) attended seminars related to this area and 9 (10%) of them utilised articles, seminars and information from Resource Teachers.

2) Opinion about the need for using specific strategies :

All the Teacher Educators opined to have specific strategies to equip the student teachers in the inclusive settings. Out of ninety, 72 (80%) of the Teacher Educators have attended in-service courses (either orientation or refresher courses). But all of them

agreed that they never got training in this regard and strongly expressed the need for more practical training programmes.

3) **The specific strategies adopted by Teacher Educators :**

Only 9 (10%) of Teacher Educators conducted discussions on inclusive education and CWSN in their classes. All the Teacher Educators have not used any specific teaching strategies to equip their students to meet the challenges of inclusive settings due to lack of time, lack of awareness, lack of training, absence of the concepts and practices in the Teacher Education curricula and presence of Resource Teachers in schools to engage children with SEN.

Conclusions: If teacher education programmes are to promote the concept of inclusive education, they must not only teach the theoretical aspects of inclusion, but must model inclusive pedagogy within their programmes and provide candidates meaningful opportunities to take part in inclusive educational practices. We can not expect our candidates to demonstrate innovative practice if they have rarely experienced it in their teacher preparation courses It is easy to have a smattering of everything but what we require is to be knowledge savvy in the respective areas of demand. Planning and practice should go hand in hand in any field to realize the objectives. It is high time to implement better training and workshops to make the Teacher Educators cope with the most complex and challenging inclusive settings.

28. Mobile Learning for Teacher Educators

Introduction: Mobile Learning is a relatively new phenomenon in the academic circles. This article assesses some of the possible methods, challenges and future potential of using this approach for teacher training. M-Learning is learning accomplished with the use of small, portable computing devices. These computing devices may include: smart phones, personal digital assistants (PDAs) and similar handheld devices. M-learners typically view content and/or lessons in small, manageable formats. It is currently being used in a variety of educational, governmental and industrial settings. This paper assesses some of the possible methods, challenges and future potential of using this approach for teacher training.

Characteristics of Mobile Devices: Mobile devices cover different aspects of mobile learning such as the learner and device usability, the pedagogical issues of information overload, and collaborative learning and knowledge navigation in mobile learning. By knowing the characteristics, educators can design mobile learning materials and use effective teaching and learning strategies and in the development of mobile devices for mobile learning. The following are the various aspects of mobile learning:

Device Aspect (D): This refers to the physical, technical, and functional characteristics of a mobile device,

including input and output capabilities, internal processes such as storage capabilities, power, processor speed, compatibility, and expandability. These characteristics result from the hardware and software design of the devices and have a significant impact on the physical and psychological comfort levels of the users.

Learner Aspect (L): This refers to the individual's cognitive abilities, memory, prior knowledge, emotions, and possible motivations. This aspect describes how learners use what they already know and how they encode, store, and transfer information. This aspect also draws upon learning theories regarding knowledge transfer and learning by discovery.

Social Aspect (S): This takes into account the processes of social interaction and cooperation. Individuals must follow the rules of cooperation to communicate – thereby enabling them to exchange information, acquire knowledge, and sustain cultural practices. Rules of cooperation are determined by a learner's culture or the culture in which interactions take place. In mobile learning, this culture may be physical or virtual.

Types of learning supported by mobile devices: Mobile devices are used in various educational programmes, both formal and non-formal. The following are some of the educational situations in which mobile devices are used:

- **Informal, personalized, situated technology-driven mobile learning** – Some specific technological innovation is deployed in an academic setting to demonstrate technical feasibility and pedagogic possibility.
- **Miniature but portable e-learning** – Mobile, wireless, and handheld technologies are used to re-enact approaches and solutions already used in conventional e-learning, perhaps porting some e-learning technology such as a Virtual Learning Environment (VLE) to these technologies or perhaps merely using mobile technologies as flexible replacements for static desktop technologies.
- **Connected classroom learning** – The technologies are used in classroom settings to support collaborative learning, perhaps connected to other classroom technologies such as interactive whiteboards.
- **Mobile learning** – The technologies are enhanced with additional functionality, for example location awareness or video-capture, and deployed to deliver educational experiences that would otherwise be difficult or impossible.
- **Mobile training/ performance support** – The technologies are used to improve the productivity and efficiency of mobile workers by delivering information and support just-in-time and in context for their immediate priorities.

- **Remote/rural/development mobile learning** – The technologies are used to address environmental and infrastructural challenges to delivering and supporting education where conventional e-learning technologies would fail, often troubling accepted developmental or evolutionary paradigms.

Use of mobile technology for teacher training: When mobile, and using mobile technologies, it is convenient for teachers to have the course content available to study on the mobile devices or iPods. In addition, when mobile, students must be able to:

- access the course forum to read archived messages (if necessary).
- access messages emailed to them.
- access their course forum to submit their contributions to the course discussions
- send email to fellow students, their teacher, and to administration (i.e., study advisor)
- receive email from fellow students, their tutor, or from administration
- submit their assignments by email, including attachments
- receive assignments back from their tutor, corrected and commented on, as attachments

To access email and discussion forums, mobile phones with Internet connection also can be used.

Suitability of Mobile Learning to teacher education: Mobile learning uniquely supports many types of learning. It takes place in a wider social and economic context, true of distance learning and part-time students. Mobile learning allows the learner to exploit small amounts of time and space for learning, to work with their students on projects and discussions, and to maximize contact and support for them. By manipulating these three aspects of mobile devices, we can utilize them effectively for teacher training purposes. Particularly the physical characteristics are very much accommodative in remote places.

Barriers to Mobile Learning: The following are some of the barriers for mobile learning.

(a) Learning the features of mobile devices: It is not a simple task for teachers to learn to use all the features available on these devices. Nowadays most of the mobile devices are loaded with a wide range of software. They provide users with a number of built-in features, touch screen, thumbing keyboard, capability to transcribe handwriting to text, WiFi hotspots, GPRS, wireless connectivity to send email, Internet, audio/ video conferencing programs, Instant Messenger, Skype, 3G, Google Earth, etc. WiFi can be made available at the study centres, Institution buildings, spots around the community (for example, coffee shops) as well as

the home networks of some learners. Unless teachers familiarize themselves with these features they cannot put their mobiles into proper use.

(b) Wireless connectivity: All the students may not be able to make the GPRS data connection work when using the devices on their own. Sometimes, they may successfully use the WiFi connectivity, but may not try the GPRS connectivity. Also, in some restricted places, they can't use wireless connectivity. By making proper policies to allow the use of wireless devices at certain places, this may be solved.

(c) Inability to access and use Learning Management Systems: LMS are used for communications and for sharing of resources. Logging into the screen, but not logging into the course, using Java scripting, need for the use of learning management systems and websites designed specifically for mobile use (for example, Google Mobile), etc. some times remain hurdles for new users which may discourage them from using the mobile.

(d) Portability: Through portability is a virtue of mobiles it is not devoid of disadvantages. Most of them are suitable to carry in purse or pocket or clipped to a belt whenever this is feasible. Loss of these devices is another issue. Many young students often misplace or lose them. So, they are wary of carrying swanky mobile devices for learning, collaborating and communicating with others.

(e) Visibility: One of the most significant attributes of mobile technologies is their ability to support situated learning. This implies that mobile devices might be used in a variety of lighting situations, including outdoors or in automobiles. So, the brightness of the screen should be easily adjustable using a slider on the home screen. If the screens are sufficiently bright and the color and type size of the text allow them to be clearly read, it will lead to a better learning. Brightness in outdoor locations, glare, suitable screen size, etc are some other factors causing mobile learning either interesting or a hurdle.

All teachers and trainee teachers can be given mobile devices or Personal Digital Assistants. The aims are to build m-learning and m-teaching capacity, to enable teachers to join the m-learning community linked to the local teacher training course, and to encourage reflective practice amongst trainee teachers. The teachers should be instructed to use the handhelds to access course information, the Google access to answer students' and colleagues' questions, and multiple methods of recording available on the handheld: video, audio, and written notes, etc. Teachers can use these to record observations on each others' lessons, students' work, student behaviour, and progress in teaching. The blog can be used to reflect on practice.

Informal and lifelong learning and learning and teaching support are particularly relevant to initial teacher

training where trainees move regularly between university and school placement and are expected to acquire, decipher, and understand a wealth of information, both pedagogical and practical, in the process. M. learning can facilitate all these irrespective of the geographical locations of both the teacher and the student.

Section V

Recommendations and Implications

Recommendations and Implications

The recommendations pooled in different sessions were assorted at different levels as having implications for different stakeholders in the system as follows.

I. Educational Planners

1. There is a need for setting up Teacher Education Universities on par with Tamil Nadu Teacher Education University and Gujarat Teacher Education University at the National and State levels.
2. There is a need for continuing the financial support to IASE, and DIETs for continuing the professional development and capacity building programmes for Teacher Educators.
3. Realising the importance of integrated B.Ed. programmes, other universities and institutions also need to come forward and start offering integrated B.Ed. programme. This should be promoted at all levels.

II. Educational Administrators

1. The co-operation of private partners like some NGO's or IT companies (Eg- Infosys, Wipro and such) may be explored for imparting ICT skills to teacher –educators and empowering them to use ICT as an effective tool. Educational administrators need to suitably seek their cooperation.

2. Social networking, teleconferencing and web resources are major tools of ICT used to some extent by teachers for their professional development. These may be further strengthened. Needed support may be extended and ensured by the educational administrators.

3. In-service teacher education programmes planned and organised should meet the needs of all teachers. Most importantly, there must be follow up programmes to ensure effective utilisation of the programme. This is a very weak area which needs to be strengthened by all states and UTs.

4. There is a need to encourage Private-Public interaction so that both can mutually benefit from each other. PPP models may be suitably promoted.

III. Educational Policy Makers

1. Need-based and field-based in-service education for teachers and teacher educators is the need of the hour. This has policy implications.

2. There is a need for making the M.Ed. course more practical oriented, as most of the papers of this course deal with theoretical aspects and not the practical aspects. This requires attention.

3 There is a need for ICT integration in teacher education at all stages. This needs policy directions.

IV. Teacher Education Institutions

(a) ICT Components

1 There is a need for promoting ICT in teacher education programmes and its integration with specific subject areas for enhancement of learning. It also provides opportunities for higher order thinking.

2. ICT must be viewed as a facilitating instrument for the teacher by bringing in vividness in teaching-learning process.

3. Web-based learning needs to be promoted. The success story of Karnataka experience highlights the use of web-learning.

4. There is a need for longitudinal research on testing the efficacy of different models of ICT integration in education.

5. Mobile devices, digital devices should be brought into the Teacher Education programmes as they are easily available and have the potentiality of being very useful.

6. Every teacher education institution should develop a CD bank of educational programmes which displays effective strategies to be practiced.

(b) Research Issues

1. Research activities in teacher education must be utilized for bringing innovations and transformation in teacher education instead of conferring degree alone.

2. Research competence of the teacher educators, particularly those working in the DIETs, SCERTs, SIEs and other central/state level agencies needs to be developed by organizing short term courses or seminars at regular intervals.

3. Regular seminars (weekly/monthly) may be planned so that the researchers can grow continuously.

4. At the time of selecting a research problem, senior members of staff must ensure the creation of a sound knowledge base of teacher education so that theories could be developed with respect to the outcomes of researches.

5. Research areas identified by the researchers are to be discussed thread-bare in seminars involving all the faculty members. Need based researches at Ph.D. level are to be promoted.

6. Experiments in the field of education need to be encouraged.

(c) Professional Development Issues

1. Preparation and professional development of teacher educators should take a holistic view as a continuum from one time preparation to the on going development; integrating pre service and in service segments one complementing the other.

2. An important aspect of teacher development is raising their self-esteem, for which environment of co-operative learning and sustainable development may be promoted.

3 In order to have strong foundation in Teacher Education, the professional perception of Teacher Educators and the organizational climate should be enhanced.

4. The Teacher Education Institutions should encourage their faculty to acquire higher professional competencies that would help enhance their professional perception and thereby bring a positive change in the organizational climate.

5. The Teacher educators should be trained and guided particularly, the women student teachers to fulfill the desired educational roles in building their future professional competence. Teaching professionals should be taught the basic values intrinsic to the Teacher Training programmes and work on locally relevant curricular needs.

6. Teacher education programmes should focus more intensely on developing positive attitude towards teaching.

7. Implicit curriculum should be given an importance to encourage pedagogical decisions, to develop sensitivity to classroom voices and to select appropriate aims that guide the process of teaching.

8. The supervision of the entire lessons during internship of the teacher trainees with constructive feedback are very necessary and it should be taken seriously.

9. Classroom contexts should be suited as the seat of tasks in teacher education programmes to provide better insights into classroom learning.

V. NCERT

1. Education should evolve as an autonomous discipline with its significant features centred on problems and issues unique to education.

2. There should be a specialized cadre of teachers who have special expertise in teaching teachers.

3. There is a need to evolve new models for teacher education programme at different levels.

4. The researchers be encouraged to undertake research in education by selecting short term research problems so that they get training in research processes, develop abilities and skills to analyze and synthesize new ideas and knowledge and come up with sound theories which will have relevance in the field.

5. At the institutional level, the researchers need to be regularly oriented with current research issues through workshops/field visits.

6. There is a need to use multiple selection procedures for recruitment of teacher trainees, teachers, and teacher educators.

VI. NCTE

(a) Curricular issues:

1. Reflective practices for different components of the preparation of teacher educators should form an integral part of the teacher education course. Appropriate tools and rubrics should be developed for this purpose.
2. It is time we evolved our own (Indian) model of preparation of teachers and teacher educators.
3. There is a need for evolving proper strategies for integrating ICT which should involve empowering of self-learning for classroom interactions leading to valuable outcomes.
4. Micro-specializations in fields like ICT have their value only when suitable and essential teaching-learning conditions are ensured.
5. Specialization in ICT in education courses will be useful only when E-courses and E-content are evolved.
6. Androgogy principles and methods should be imbibed into teacher educators' preparation programmes with an emphasis on self-directed learning.
7. Multi-grade contexts and learning approaches should be part of teacher educators' programme with an aim of

equipping teacher educators to train the teachers to cope with the multi-grade contexts.

8. Critical pedagogy and its approach to assessment may be inducted in the curriculum of pre-service teacher education and teacher educators' curriculum.

9. Teacher Education programmes should focus on developing meta-cognitive skills.

10. ICT may be integrated in to the curriculum of teacher educators' preparation and the potentials of ICT may be utilised for providing continuous professional development for teacher educators.

11. Taxonomy of student behaviours and teacher behaviours has to be prepared and inducted into teacher education curriculum.

12. There is a need for analyzing the available curriculum of preparation courses for teacher educators.

(b) Quality control measures:

1. There is a need to start a course on Master of Teacher education for preparing teacher educators.

2. Many countries across the world have framed standards for teacher educators and teacher education institutions. It is necessary to conduct a follow up workshop to formulate such standards in our country. This would also subsume the profile of a teacher educator as well as the taxonomy of competencies.

3. Government should strictly follow the recruitment criteria for selection of Teacher Educators.

4. Networking among teacher-educators can be promoted with already existing e- platforms.

5 Advanced masters programmes have to be thought of under new models for teacher preparation.

6. Trained professionals of ICT must be available in every teacher-education institutions. This needs to be insisted upon by the NCTE.

7. A regulatory mechanism is to be put in place to prevent the mushrooming of institutions for preparing Teacher Educators which do not fulfill the minimum requirements of the course.

(c) Professional Development initiatives:

1. 'Professional development' needs to be defined in terms of value additions such as degrees, qualifications, courses and seminars attended, salary and service conditions, promotions etc, on the one hand and output performance indices to achieve benchmarks in the transaction of the curriculum on the other.

2. Development of a National Portal for Teacher education for continuous professional development of teacher educators is the need of the hour.

(d) Systemic issues:

1. A national model for pre-service teacher preparation needs to be developed on the lines adopted by the educationally advanced systems, after its contextualization for adoption by the country.

   The course should be conceived with due consideration given to the following.

   i. Trainees should be exposed to lesson planning based on pedagogic analysis where different models are discussed.

   ii. Internship be given broader definition to cover competencies like school observation, communication skills, class management, questioning skills, instructional strategies, interaction with senior professionals and in different support programmes like guidance and counselling, preparation of instructional materials and evaluation tools, organisation and management of co-curricular activities, participation in demonstration classes, preparation of lesson designs, conduct of action research, case studies etc.

   iii. The supervisory practices should be reconceived and new practices are introduced using publicised assessment criteria. The entire practice lesson should be video graphed for group assessment and general discussion.

iv. The professional competencies of trainees should be expressed in the competencies in the profiles and reported along with the total grades for future use.

v. The trainees should be provided a certified CD of her/his teaching for placement.

vi. Approach in teacher education should be 'Theory for Practice'

vii. Trainees should be required to develop instructional aids-supplements and these must be included for final assessment of practical work.

2. A change in school education programme should reflect an immediate change in teacher education programme or vice versa

3. The specialization opted during pre-service teacher education programme should also be reflected in the nomenclature of the degree.

4. There is a need to evolve new models for teacher education programme at different levels.

5 There is a need for new kind of assessment and accreditation.

6. Private institutions should be given guidance and guidelines for quality assurance and for their development as they are also a part of the macro system. They should not be isolated.

7. The code of conduct and the development of a work culture for each teacher educator should become an integral part of the preparation of teacher educator. The code of conduct should be one of the components in the self assessment scale for teacher educators as also in their assessment by trainees and authorities.

* * *

1. Reflective practices and teaching competence among teacher educators

Dr. Santhosh Areekkuzhiyil

Reflective practices have very important role in teachers' professional and personal development and there by the development of a society. Reflection is the fundamental process that enhances professional development. It is a kind of practice, which is subject to self-review for bringing their work in to more sophisticated forms. A sound and effective system of education results in the enfoldment of learner's potentialities, enlargement of their competencies and transformation of their interest, attitudes and values. This emphasises a greater importance in teacher cognition and reflective thinking. Therefore the Teacher education must focus on enhancing the abilities of student-teachers by introducing a strategic approach based on reflective practices.

The study is designed in such a way that it will explore the influence of the reflective practice on the teaching competence of the teacher educators. If teachers acquire teaching competencies and if they are enabled and empowered to their multiple tasks in the class room as well as in the school and the community in a genuinely manner, then a chain reaction can begins with a sound teacher performance and its reaction of high quality learning among students. Professional competencies are necessary for every teacher to excel as an educational practitioner. The study has been carried out on 110 teacher educators.

2. Does Professional Attitude influence Professional Development of Teacher Educators?

Dr. S. Francisca
Dr. A.R. Anandha Krishnaveni

The present investigation intended to study the attitude of teacher educators towards their professional development. Professional development is important in any career and it is equally important for teacher educators. The positive attitude towards profession is essential in order to achieve success in professional aspirations. The investigators have employed descriptive survey method and used simple random sampling technique. The sample consisted of 310 teacher educators from the colleges of teacher education in southern districts of Tamil Nadu. Professional Attitude Scale developed by Srinivas (2008) and Professional Development Checklist developed by Francisca (2009) were used to collect the data. Mean, standard deviation, 't' test and correlation analysis were used to analyse the data. Significant difference was found between teacher educators in their professional attitude with reference to marital status. There was significant difference between teacher educators in their professional development with reference to gender, marital status, years of experience and qualification. Significant positive correlation was found between professional attitude & professional development of teacher educators.

3. Preparation of Teacher Educators through Outreach Programmes: An Examiner's Perspective

Dr. G. Viswanathappa

In order to provide the opportunities for the learners who either cannot or will not pursue their education in traditional universities and colleges and to disseminate the innovative courses and to meet the challenges of higher education, alternative programmes were attempted by many universities in India and abroad. The outreach is one of the alternative models to meet the challenges of higher education. The jurisdictions of the universities and higher learning institutions has became obstacle to the students who are interested in higher learning through the various innovative courses offered in different universities and higher learning institutions. The University of Mysore, Mysore provides an opportunity for learning through the innovative courses through the Outreach Programs. The University has started the Directorate of Outreach Courses to identify the institutions to engage the specilised courses to different parts of the country and abroad. Outreach Programme operates as stand-alone facilities using a variety of approaches to meet the individual needs of learners in higher education institutions to complete the courses. The Outreach Programmes will provide students with educational services that are in addition to distance learners.

The teacher educator preparation programme 'Masters Degree in Education (M.Ed.)' is one of the courses offered by the University of Mysore, Mysore through the outreach programmes to meet the needs of different parts of country. The University has entered in to Memorandum of Understanding (MoU) with the institutions and organizations to offer the Masters Degree in Education (M.Ed.) course through the outreach programmes. The Masters Degree in Education (M.Ed.) a professional course to prepare the teacher educators. The teacher educators are the role models to student teachers and teachers. The competence of teacher educators will have impact on the professional preparation of teachers. Therefore, there is a need to provide efficient teacher educator preparation programme. To achieve the task of providing quality teacher educator preparation course the University of Mysore, Mysore made an attempt through its outreach centers in Chittoor and Kakinada in Andhra Pradesh, Jammu in Jammu & Kashmir and Savaimadhapur in Rajasthan. The present paper is an attempt to provide the critical analysis of the course objectives, transactional approaches adopted and monitoring mechanism and support of the university to focus on issues related to relevance, suitability and lacunas in the course organization from an examiner's perspective.

4.Making Assessment a part of Learning: Teacher Educators Design Rubrics for their Classrooms

Ritesh P. Khunyakari

Assessment is significant to contexts of learning, more so for teacher educators who are deeply concerned about 'teacher learning'. The feedback from teacher educators is an important source of learning for teachers, especially in a discourse where teacher educators try to identify and account for complex concerns emerging in classrooms. Assessment of teachers in classrooms can be done to facilitate their growth and learning. One of the important ways to assess and support teacher learning is through the use of a "rubric", which indicates the progression as well as detailing out the nature of evaluation done. The argument is that in contrast to having pre-determined frameworks for observing, monitoring and providing feedback, assessment rubrics designed by teacher educators through a collaborative venture, can be grounded in rich and contextual field experiences gained from observing teacher practices.

This paper reports an experience of a workshop with education officers, who were exposed to the idea of rubrics and were later engaged in designing appropriate rubrics for analysing classroom teaching. Drawing on the analysis of rubrics designed by education officers, their engagement and appreciative feedback, the paper argues for potential implications of this engaging exercise for teacher educators

as well as teachers. It is proposed that such emergent rubrics would allow scope for contextually driven criteria, with a greater sense of ownership and involvement of teachers who may benefit from the supportive interactions of their peers and teacher educators.

5. Emotional Intelligence: A *Sine Qua Non* for Professional Development of Teacher Educators

Gaurang Tiwari

Successful voyaging in any profession requires possession of such traits as are essential, according to the very nature of the profession. According to Flanders (1970) teaching behavior by nature exists in a context of social-interaction. So, a teacher educator must become a professional who is capable of making rational, humane, and creative decisions concerning better management of social-interactions. It is handling of social-interactions which can distinguish effective teacher educators from not so effective teacher educators. Adaptability, leadership, self-confidence and interpersonal skills are some of the most important factors which distinguish top performers from the poor performers and that they have no direct relationship with so-called traditional intelligence, rather, they are related to the effective and intelligent management of emotions, *viz*. '**Emotional Intelligence'**.

This paper will address the following questions, how can social and personal competency component of emotional intelligence contribute in the professional development of teacher educators and how can emotional intelligence of teacher educators influence and improve their performance at work place.

6. Perception of Work Culture by Teacher Educators of University of Mysore

Dr. K.V. Sridevi

Work culture is a very important quality indicator to measure the effectiveness of the functioning of any institution and also for accreditation. Work culture promotes the individual and institutional growth if provided in a healthy way. The focus of the study was to examine the perceptions of teacher educators who mould the future teachers towards the work culture of their institutions. Work Culture Scale was administered to a sample of 120 teacher educators from fourteen colleges of Mysore City. Analysis revealed that (1) 93 (77.5%) teacher educators perceived a healthy work culture in their institutions. Where as 26 (22%) felt a moderate work culture and only one teacher educator perceived an unhealthy work culture in their institutions. (2) Irrespective of gender, length of service and the type of institution the teacher educators are working, all of them perceived the work culture in their institution as healthy. It is well known that every individual has the responsibility of improving the performance of an institution. Especially being nation builders, it is all the more a responsibility of teachers and teacher educators to uplift the down trodden in society by educating their wards and preparing technologically advanced teachers who work together with team spirit.

7. Professional Ethics for Teacher Educators – An Analysis

Dr. Savitha Pande M.

Quality in any profession only happens when one cares enough to do one's best for the profession. We all know that teaching is considered as the noblest profession among all. Teacher plays a key role in this profession. This profession demands certain ethical values from the teacher in order to continue its Professional sacredness. In this context discussion on the concept of Professional Ethics becomes relevant. The concept of Professional Ethics is partly what a professional should, or should not do at the work place. It also encompasses a much greater part of the professionals' life. If a professional is to have ethics then that person needs to adopt that conduct in all of his dealings. Things that are included in professional ethics include: professional respect, avoidance of dishonest or fraudulent activity such as plagiarism and the professional development of the individual. Another aspect of this is the enhancement of the profession and the organisation within which the professional works. This concerns a professional's conduct and behaviour while carrying out their professional work. This then, is work for the good of the community and mankind.

The main objective of this paper is to analyse the need and importance of "Professional ethics of a teacher" and also to analyse the challenges and constraints to be faced by the organization while implementing these Professional- ethical-principles.

8. E-Sources for Sustainable Professional Development of Teacher Educators - Priorities and Concerns

Dr. Baiju K. Nath
Vidhya. V

The idea of teacher professional development is not new. The design for on-going professional learning is critical to successful implementation of various educational reforms (Day 1993, & Gacent 1997). The need for in-service education was stressed by the Indian Education Commission (1964-66) and by the Chattopadhyay Commission (1983-85) and various other committees. The establishment of SCERTs, IASEs, CTEs & DIETs has changed the in-service training scenario in elementary and secondary teacher training in India. The network became more profound by the implementation of SSA and there by the establishment of Block Resource Centres and Cluster Resource Centres. The platform thus created a momentum for continuous learning by school teachers.

The training of trainers (teacher educator) has not undergone any change in the course of time. There are absolutely no such comprehensive programmes and no network of institutions to empower teacher educators for professional growth as in the case of school teachers. The issues and concerns of teacher educators' in-service training will be different from that of teacher training, and hence, it is the time for a professional approach to in-service education. This paper discusses the scope for an electronically mediated learning

platform as an effective means for implementing continuous and comprehensive professional development programmes for teacher educators.

9. Quality of Teacher Educator and its impact on SSA, RMSA and RTE Act 2009

Anshu Kumari
Sanjay

The goal of this paper is to raise issues in a way that will elevate them on national agenda and address teacher education programme in its totality. SSA, a flagship programme of Government of India for the promotion of universalisation of elementary education, has several features that seek to improve the quality of elementary teachers. The physical spaces of school can be transformed into learning space only when facilities for training of teachers, structure to provide regular on site academic support, grants to facilitate development are in proper place. If we regard SSA as a successful programme then we have to evaluate it's outcome. Students in eight years of schooling are not equipped to face the outside world. So we need another programme that is RMSA. RMSAs programes have lofty goals, highly complicated objective which might lead to infrastructural development but human resource should be at par with material resource. No doubt, IASE, DIET, NCERT and NUEPA have done commendable job but they act as outside expertise, not inherent in the system. Teachers are inherent in the system and fully control teaching performance. Quality of teachers ultimately rest with teacher educators. After historic RTE Act 2009, it becomes imperative to enhance the quality of entire teaching

workforce to a common national standard. Although adherence to RTE stipulation is difficult, it needs to be implemented judiciously by teacher educators. Teacher educators' commitment now is to identify, educate and place highly qualified teacher leaders in schools. These individuals will help bring about dramatic expansion of educational opportunity and quality at all levels. Will they rise to the challenges and become teacher educators of future?

10. Professional Development of Elementary Teacher Educators in India: Opportunities and Challenges

Dr. K. Anil Kumar

Education is empowerment. The quality of students' achievement depends on what goes on in the school and classrooms. This brings the performance of teachers and teacher educators as crucial inputs for school quality. The Indian Education Commission (1966) rightly emphasized the need for professional development of teachers and teacher educators. It states that '….in all professions, there is a need to provide further and special course of study, on a continuing basis, after initial professional preparation. The need is most urgent in teaching profession, because of rapid advancement in all fields of knowledge and continuing evolution of pedagogical theory and practice'.

The elementary teacher educators in India are at stake due to the pedagogical shift in transaction of the school content and its implications for the pre-service teacher education at elementary stage. Further, the programmes for Universalisation of Elementary Education (UEE) such as SSA and RTE have necessitated that the teacher educators may undertake multiple roles and responsibilities. The new teacher education programmes at the elementary stage has under- gone sea change in the recent years in many of the Indian states. But teacher educators at the Elementary Stage have not been able to acquire the necessary skills and education to meet the new challenges.

Though, the programmes like SOPT, DPEP and SSA, the elementary teacher educators working in the DIETs have been empowered, but a large chunk of educators working in the government (other than DIETs), aided and private unaided teacher education institutions are deprived of having any opportunities for their professional development. The programmes organized by the National, Regional and State level agencies are mainly catering to the needs of DIET faculty alone.

The present paper takes the stock of various professional development programmes existing in India for the elementary teacher educators through various modes such as face-to-face, distance/teleconferencing and also through the web based. The paper also highlights the need for having more concerted approach to meet the professional development needs of all elementary teacher educators in India with a special reference to the technology driven next generation modes.

11. Teacher Educator's Competence and Attitude towards ICT

Dr. Sunita G. Hiremath

Education is expected to play a key role in achieving community development in the process of globalization through its technological development. This can be achieved by introducing Information and Communication Technology (ICT) in teaching learning process.

The key to successful ICT enabled education is the teacher. As a teacher plays very prominent role in moulding up tomorrow's citizen, the teachers should posses training in using the most modern technologies in the field of education. The field of education is expanding each year as advancement is made in technology and brain based research. To keep pace with the changing world, teachers must have current knowledge and skills of educational technology. To facilitate professional development for teacher educators, it is necessary to examine teacher educators' competence & attitude towards ICT. This study examined teacher educators' competence and attitude towards ICT. Gender influence, influence of stream on their competence and attitude were also examined. Participants were 50 teacher educators from 10 teacher training colleges of Maharashtra. The data collected through questionnaire were analysed using percentage, means, and chi square statistics. Findings revealed that majority of teacher educators have positive attitude towards the use of ICT and they are competent

in the use of few basic ICT tools. Overall, no significant difference was established between male and female teacher educators' attitude and use of ICT. Also significant difference was established between arts and science teacher educator's attitude and use of ICT.

12. Professional Development of Teacher Educators using ICT: Challenges and Opportunities

Dr. S.S. Patil
Mr. R. H. Bommannavar

In the era of technology the teaching and learning environment is changing continuously and rapidly. This has paved the way for innovations in the use of Information and Communication Technology. It has also created plenty of opportunities and challenges in the field of teacher education, particularly in Teacher Education Institutions. New opportunities and potentials especially those in electronic and other related applications for development of skills outside formal learning structures stimulate the reform of the existing educational provisions. In the past decade teacher educators were provided initial training in the use of computers. Other schemes included financial support to acquire hardware, setting up of computer labs and other resource supports. All these developments posed new questions on the regulatory capacities of the organizations, infrastructure development, the way teacher educators view learner and learning, available technology and ICTs and provisions for teaching and learning.

This paper focuses on the role of Indian Teacher Education Institutions in ICT application, integration and use in teacher training programmes, on issues and challenges associated with the use of ICT in enhancing teacher quality and enabling and enhancing ICT use in associated schools.

This paper also attempts to look at the efforts put in by Indian Government through the formulation of National Policy on ICT for secondary schools. The role of teacher education institutions in training teachers would be to enable them for the use of ICT to teach secondary school students. To some extent attempt has also been made to look at the challenges the institutions and the Governments may come across in implementing and integrating the ICT at various stages of teacher preparation and the perceived threats.

13. Availability and Utilization of ICT among Teacher Educators

B. Saminathan
C. Mattuvarkuzhali

Present learning community's needs for quality of education is higher for their creative learning and over all development. Quality of education for all children is not just dependent upon the reconstruction of schools, colleges and knowledge base of the students. Teacher plays a vital and dynamic role in providing higher standards of learning opportunities to their students. Rabindra Nath Tagore, the first Nobel Laureate from India, has expressed in his words "a teacher can never truly teach unless he is still learning himself. A Lamp can never light another lamp unless it continuous to burn its own flame." For successful reform in education the professional status of teachers' should be strengthened. Teacher educators' need constant and continuous renewal of and updating their knowledge base, reflective skills and their potentiality. ICT enabled Pre-Service Teacher Education is one of the innovative ways for making classroom instructional process effective. The potentials of Information and Communication Technology (ICT) to facilitate students' learning, improve teaching and enhance institutional administration had been established through research. (Kazu & Yavulzalp, 2008; Kirschner & Woperies, 2003). Currently vast source of ICT such as Laptop, Computer, Web Technologies and Internet and telephones are available. This

study investigates the availability and Utilization of ICT among 400 Teacher Educators from Perambalur, Trichy, Madurai and Karur districts. There is a variation in the results. This study reveals that women use ICT less than male teacher educators, the urban area teacher educators use the ICT facilities higher than the rural area teacher educators. In some places they have used less of ICT even though more facilities are available in their place. In some places they are having more interest to use ICT but have least facilities. These issues are discussed in detail.

14. Opportunities and Challenges in the Professional Preparation and Development of Teacher Educators

Dr. Seema Agnihotri

This paper attempts to deliberate upon the opportunities and challenges in the professional preparation and development of teacher educators in the current scenario. Since the beginning of this century, the field of education seems to get swarmed with pervasive reforms ranging from school education to higher education in a very drastic manner. Wide recognition of constructivism, expansion of educational technologies, incorporation of issues like globalization, gender, environment, equality etc. in the curriculum and provision of continuous and comprehensive evaluation backed by the provisions of Right to Education Act and universaliation of secondary education etc., have created a strong intangible pressure even for the teacher education programme all across the country to bring desirable changes in its style of functioning and offerings without any delay. But while juxtaposing these trends and reforms in the context of teacher education programmes, it seems difficult to ignore the prevailing reality, virtually unmatched with the contemporary needs and requirements.

Keeping this background in view, this paper tries to explore the hindrances followed by a critical analysis of the traits required for developing professional competencies among

the teacher educators. The paper articulates that by evolving strategies which can enable the teacher education programme all across the country to develop fresh outlook, attaining positive recognition, tantamount to other professions in the society.

15. Facilitating Professional Development of Teacher Educators through Web Based Programmes – The Karnataka Experience

Dr Kumara Swamy H
Smt Geetha N

This paper is a presentation on the web based induction programme for elementary teacher educators conducted by DSERT, Karnataka. The programme was originally planned and implemented in collaboration with RIE, Mysore. This six month course provides inputs to DIET faculty on their roles and functions. It also sets to develop clarity on various issues concerning primary education. The course contains face to face interactions, tele-interactions and interactions through email. The assignments are sent to online facilitators. The Principals of DIETs are onsite facilitators who provide facilities and support the programme. A team of online facilitators maintain the web page, edit the contents to suit the changing scenario and add new content. The programme has already completed three batches covering about 160 faculty from DIETs all over Karnataka. The response has been good. It has been found that the faculty who undergo this training do learn to use the email for communication and the web for further professional development. This web page can be used by any elementary teacher educator for professional development. This paper describes the assumptions, objectives, processes and outcomes of this programme.

16. Strategies for Integrating ICT in the Professional Preparation and Development of Teacher Educators

Reena Bajaj

With the advancement in technology and globalization, there is worldwide emphasis on the use of Information and Communication Technology (ICT) for education. India, struggling with the issue of access, quality, and equity, has adopted several ICT policies and programmes to meet global educational standards. The National Curriculum Framework 2005 reiterates the need for integrating ICT in schools for the enhanced learning of students. Undoubtedly, the teachers play a key role in building ICT rich teaching and learning environment in the classrooms. For teachers to successfully integrate ICT in school education, it is imperative that teacher educators are proficient in using ICT tools for teaching and self-enrichment. A sustained ICT professional preparation programme is therefore required for the teacher educators to acquire these skills. In this regard, there appears to be an urgent need for the revision of existing professional training programmes. This paper investigates the limitations of teacher educators in the use of ICT tools. In addition, the paper proposes strategies for the infusion of ICT in the training programmes for teacher educators in order to enable them to keep pace with the rapidly changing face of technology. The recommendations are based on interactions with teachers and educators as well as experiences acquired during visits to schools, teacher training colleges, and professional development workshops.

17. Using Classroom-based Tasks as Contexts for Reflection and Situating Teacher Learning

Shikha Takker

Teacher learning remains a significant concern in the context of teacher education. The current discourse on teacher professional development places high demands on teacher educators to design tasks which facilitate teacher learning. However, little support is offered to teacher educators to equip and encourage them to design tasks such that the aim of continuous professional development of teachers as well as their own can be attempted for.

The paper reports a case study where students' responses on different mathematical tasks were used as contexts for stimulating discussions and reflection with the teacher. Findings of the study suggest that such a framework for reflection encourages teachers to explicate their knowledge and reflect on classroom teaching. An analysis of classroom gives valuable insights into ways in which children think through mathematical problems. Also, it is suggested that design and initiation of tasks, coupled with teachers' engagement in critically analysing their classroom discourses, serve as meaningful contexts for teacher learning.

An attempt of this kind has implications for preparation of teacher educators in planning their pedagogic discourses with teachers by contextualising them. Teacher educators can

engage with more realistic and complex experiences of teachers arising in situations and support teachers in ways where a mutual learning environment can be created. Pedagogical approaches where teacher educators offer such situations and listen to teachers, would lead to useful insights into teacher (and teacher educators) learning from practice.

18. Learning to Learn: Preparing Teacher Educators for Self-Directed Learning.

Mrs. Gauri P. Hardikar

Radical changes are sweeping the Indian educational scene with a shift in focus from teacher centeredness to learner centered education. Implementation of CCE in schools and the credit system in higher education underlines the importance of learner needs and education for development of individual potential. These changes also necessitate that learners are empowered to take responsibility for their own learning. The framework for understanding the psychological basis of learning has gradually shifted from behaviourism to cognitivism (Anderson, Reder, & Simon, 1995; Bredo, 1997).

The role of the teacher educator is now to model strategies which place emphasis on learner responsibility in learning, as well as facilitating the teachers to organize environments conducive to this in their classroom. Since teacher educators are themselves adults and preparation of teacher educators is also to prepare them to deal with adults, an understanding and implementation of conditions for effective adult learning is crucial. An estimated 70 per cent of adult learning is self-directed learning (Cross 1981). Self-directed learning has been described as "a process in which individuals take the initiative, with or without the help of others," to diagnose their learning needs, formulate learning goals, identify resources for learning, select and implement

learning strategies, and evaluate learning outcomes (Knowles 1975).

This paper discusses the roles of educators to facilitate self directed learning. It also discusses models of self directed learning and their implementation in the preparation of teacher educators.

19. ICT integration in the Education of Teacher Educators

Dr. Sharmista

Today, integrating Information and Communication Technology (ICT) to the work of teacher educators is a must. The use of ICT which is not limited to the mere purchase of equipment can contribute significantly to improving the learning outcomes of teacher educators and optimizing school management processes. Globally, educational systems are under great pressure to adopt innovative methodologies and to integrate new Information and Communication Technology in the teaching and learning process, to prepare teacher educators with the knowledge and skills they need in the 21st century. Undoubtedly the new Information and Communication Technology has brought about many challenges and opportunities for teacher educators. The teacher education system needs to come to terms with these new challenges and take full advantage of the opportunities. If educational institutions have to ensure that their students leave the institutions as confident individuals capable of using new technology creatively and productively, then their teachers should have the competence to integrate the emerging technologies and the digital content with all their operations. Therefore, the challenge for higher education institutions, particularly teacher education, has been to create a new generation of teacher educators capable of employing a variety of technology tools into all phases of academic, administrative, research, and extension functions.

20. Understanding of Critical Pedagogy and Assessment of Teacher Educators

Dr. Rakesh Tomar

The pedagogy has been debated for more than three decades and appears in many and varied constructions and characterizations. One of the key issues to be considered is the potential for implementation of critical pedagogy in institutionalized educational setting. The historical development of critical pedagogy is the focus of attention. Some of the central tenets are examined with a view to understanding how critical pedagogy has evolved over the years and what critiques have written about it. This paper focuses on the issue of assessment, and the possibility of incorporating some of the principles and practices of critical pedagogy in the assessment process in teacher education. This paper is considered in relation to the establishment of empowering not only for learning but also for assessment.

21. Teaching and Learning in Multi-grade Classrooms: Implications for Teacher Education

K Ramakrishna Rao

Multi-grade teaching environment is prevalent in most of the schools in India. Teaching two grades or more than two grades at the same time by teacher in a classroom is known as multi-grade teaching. The Multi-grade teaching is not a new concept in our system of education. This system was followed in our traditional 'Gurukul' method. Even today, this multi-grade teaching is being practised in many schools. These classes exist in both developing and developed countries. India has passed the historic *Right of Children to Free and Compulsory Education (RTE) Act, 2009*. Every child in the age group of 6-14 years will be provided eight years of quality elementary education in the vicinity of his/her residence. More schools and more number of teachers are required to achieve this objective. Hence it is reliably predicted that more number of multi-grade classes will increase in future. Though multi-grade classes have been with us for a long time, formal education systems have not paid sufficient attention to the challenges posed by the multi-grade environment. For example, (I) the majority of teachers currently teaching multi-grade classes have had no special training for teaching these classes. (II) There is little attention paid to this issue in government education policies. (III) There is little or no in-service support for multi-grade teachers. (IV) Teacher education institutions have tended to ignore multi-grade teaching in their teacher

development programmes. A deliberate and conscious attempt must be made to assist teachers in developing the skills and knowledge necessary to provide a quality education to children in multi-grade classrooms. Teacher Education in India should be reformed for professional development of teachers and teacher educators in Multi-grade teaching. This paper addresses the issues and challenges in Multi-grade teaching and implications for Teacher Education. It also discusses elaborately the role expectations and training needs of teacher educators in relation to multi-grade teaching and teacher education.

22. Impact of Information & Communication Technology (ICT) on Teacher Educators Professional evelopment (TPD)

Prof. GV. Gopal
Nadeemulla Sheriff
Imran Ahmed Farooqi

The rapid technological changes in the 21st century have affected many aspects of our lives, including the way we teach and learn. Technology is being harnessed to improve the quality of learning at all levels of education; ICT is the combination of computing and data processing and communication. ICT is one of the key technologies of this era and has proved its effect on every aspect of our life and society at large including teacher education.

Globalization has placed on educational institutions a great responsibility of preparing individuals to work in a knowledge based economy. The ability to transform information into knowledge and to apply that knowledge in a dynamic, cross-cultural context leads to better participation in a knowledge economy. ICT is a means for meeting these challenges. ICT can improve access to promote quality in education by providing educational opportunities to a greater number of people of all ages and different pace of learning. ICT can enhance the quality of teaching and learning by providing access to a variety of educational resources and by enabling participatory pedagogies. ICT can improve the

management of education, make administrative processes efficient, including human resource management, monitoring, evaluation, and resource sharing. Right opportunities should be given for learners to use ICT for learning. For this integration of ICT education system has to be systematic.

23. Training Secondary Teachers to Make Pedagogical Decisions Based on Implicit Curriculum

Dr. Asha B.N

Teaching is usually seen as a form of professional work, that is, a type of complex work requiring a great deal of specialized knowledge. Nation building lies in the hands of its teachers. No matter how good the curriculum, infrastructure or teaching aids are at the end of the day it is the teacher who makes a difference. Teachers are valuable human resources that a nation can count upon to mould and nurture its young minds.

Teacher education has always been a crucial and symbolically significant field of education development. High quality programmes on preparation of teacher educators are very important in order to provide the right kind of direction towards school education.

Curriculum is the base to frame any instructional objectives & we formulate learning experiences that help us achieve these objectives. But learning experience and learning atmosphere that we create may also result in unintended learning by the students.

This throws light on the fact that there prevails another curriculum which is not explicit but hidden. This is the implicit curriculum. The implicit curriculum includes the curriculum experienced by children, the leanings they develop as a part of the process of being educated.

The main objective of this paper is to throw light on not only the existence of implicit curriculum and its impact on learning but also the need to equip teacher educators with the knowledge, ability, & attitude towards the implicit curriculum. This merits a place in the Professional preparation and development of Teacher Educators. Only such teacher educators identify the significance and need to empower the 'would-be' teachers to frame worthy achievable instructional aims based on not only explicit but also implicit curriculum in order to make pedagogical choices relevant.

24. Educational Leadership and Professional Development of Teacher Educators

C.G. Nagaraja

An attempt is made to propose a model for preparing and training of teacher educators in which a paradigm shift from cognition to meta cognition in curricular transaction is envisaged. The current Teacher Education programmes are mostly theory based and it is proposed to move away from that traditional approach to practical based approach. It is suggested to import the Management Training Concepts of Corporate Programmes. KASOC's training may have to be incorporated in transactional activities of Teacher Educators and Educational courses.

25. A Study of Professional Perceptions and Organisational Climate among Teacher Educators

Dr. S. Nirmala Devi
Dr. S.D. Selvakumar
Rama.C

High quality programmes on preparation of teacher educators are very important in order to provide the right kind of direction to school education. This paper discusses the major roles of educational institutions in terms of achieving development. (1) Research: Teacher educators and their institutions are responsible for research including the necessary knowledge, and skills required for the same. (2) Qualified faculty: High-quality education depends on qualified teachers, and the teacher education incorporates institutions that train those teachers. (3) Entrepreneur & Leadership: Education produces the leaders of the society, who direct and manage political parties, government, and private industries. Educational leadership and teacher education are like two faces of the same coin. Developing leadership among teacher educators is a major concern. This needs to be articulated in changing contexts in terms of various issues and concerns comprehensively. For this, the researchers intended to study the perceptions of teacher educators about their teaching profession and their organisational climate among 100 teacher educators. Convenient sampling technique was adopted for the study.

The main objective of the present study was to examine whether there were any significant differences between the professional perceptions and the organisational climate among government, govt aided and self- financing teacher educators. Questionnaires were administered to get the measure of professional perceptions and the organisational climate of teacher educators. The scores were analysed suitably. Findings are discussed in the main paper.

26. Perspectives on Education Role and Values of Pre-service Women Teachers in the 21st century

Dr.B.N.Panda
Vikramjit Singh

The present paper tries to explain the perception on education role and values of pre-service women teachers of one year, two year and four year integrated B.Ed. courses run in the state of Odisha in the 21st century. Purposively 120 pre-service women teacher trainees (40 from each course randomly) were selected for the study. Two different questionnaires were used for the study. The first one was on the Perception about Education Role (10 close ended and 04 open ended) were asked by covering both national and international issues. Similarly the second tool was a standardized Teacher Values Inventory consisting of six dimensions which measures theoretical, economic, aesthetic, social, political and religious values of the teachers.

From the study it was found that teachers' clear perception about the role of education, value in life and positive attitude towards teaching helps the student mass to achieve good things in their future life. It is only when the teacher himself/herself is wedded to discipline and observes good habits in their life can shape his or her pupils into ideal individuals and citizens in the society. Women teacher trainees of all three models of B.Ed. course have opined that the students should possess balance personality, future oriented education, justice,

social and moral qualities and academic excellence when they reach adulthood although the priority of qualities on education role is different from course to course. Similarly, one year B.Ed. students are better in social and religious values whereas the two year and four year B.Ed. students are better in theoretical, aesthetic, economic and political values respectively.

Hence, it can be concluded that all the three different modes of pre-service teachers training programs have different priority of education role and values in their way of thinking.

Therefore it is suggested that the pre-service women teacher trainee of all the three courses of the 21st century should practice the value like punctuality, kindness, love, sympathy and national feeling in their day to day life to bring excellence in the education system although there is a difference in their perception.

27. Teacher Educators - are you Inclusive Education savvy.....?

Anju I.

The quality of teachers under preparation solely depends on the quality of Teacher Educators. Teacher Education programmes should produce a "better teacher" in executing his responsibility by providing additional quality to excel in inclusive settings. Inclusive education is fundamentally about how we understand and engage with difference in constructive and valued ways. Teachers have a great role in understanding and accepting these children with their limitation and help them to improve their self-esteem. Children with very severe learning difficulties are generally taken care in special schools. But those with moderate disabilities who have been included in the mainstream should not suffer at any cost and that depends on the awareness and practices undertaken by Teacher Educators in this context. To have a smattering of everything will not indicate the quality of Teacher Educators rather they should be knowledge savvy.

The present paper is an effort to assess the awareness and strategies adopted by Teacher Educators in equipping the prospective teachers in the context of inclusive settings. The data obtained were analysed, interpreted and conclusions were drawn.

28. Mobile learning for Teacher Educators

Dr. K. S. Ramakrishnan

Mobile Learning has revolutionized the entire academic circles. It is learning accomplished with the use of small, portable mobile devices such as smart phones, personal digital assistants and similar handheld devices. M-learners view content in small, manageable formats. It is used in a variety of educational, governmental and industrial settings. This paper assesses possibilities, challenges and future potential of mobile learning for teacher training. FRAME model describes the major characteristics of mobile learning such as Device Aspects, Social Aspects, Learner Aspects, learner and device usability, pedagogical issues of information overload, knowledge navigation, and collaborative learning. By knowing the characteristics, educators can design mobile learning content and use effective teaching-learning strategies, and technologists can develop mobile devices suitable for mobile learning. Informal, personalized, situated and technology-driven mobile learning, miniature, portable e-learning, connected classroom learning, remote/rural development mobile learning, mobile training and performance support are some of the types supported by Mobile Learning. Lack of knowledge about the features of mobile devices, wireless connectivity, ability to access and use Learning Management Systems (LMS), poor visibility and portability are some of the most pervasive barriers to mobile learning. Collaboration via Virtual Learning Environment (VLE), Discussion groups and

email, acquisition of science information from e-books and encyclopedias, organizing commitments, lesson plans and timetables, calendar/diary scheduler, searching/ researching Internet, etc are some of the possibilities of Mobile Learning in Teacher Training Situations. This paper assesses some of the possible methods, challenges and future potential of using this approach for teacher training.

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