ICT and Teacher Education

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Abstract

Education and technology are in separable in modern world. Education needs technology and technology needs educated persons. The world is changing very fast; new frontiers of knowledge are being added with passage of time. The latest developments in the field of energy, environment, communication etc. are to be included in the frontline curriculum. Few years ago technology has become an important part of education and providing fruitful base make teaching learning process joyful but still a huge gap between curricular stipulations and their implementation. Now the time has come when the teacher educators will have to learn how to be co-learner with the trainees. Naturally the trainees will also cultivate the habits of learning the areas of frontline curriculum. ICT has become an integral part of schooling process. The school curriculum has to gear up to challenges of ICT, accordingly the teacher education programmes should also respond to the changes brought through ICT. The pre-service and inservice programmes should be aimed to train prospective teachers to use ICT competently and making teaching learning process a joy.

Key words: Teacher Education, ICT

Introduction

The quality of education depends upon the quality of teachers, which in turn depends upon the quality of teacher education. Today education has degenerated into a process of information transformation with the soul objective of passing examinations. In order to improve the quality of education there is a need to improve the quality of teacher education. The need for improved levels of educational participation for overall progress is well recognized. Universal accessibility to quality education is considered essential for development. This has necessitated improvement in the system of teacher education so as to prepare quality teachers. The challenges thrown by the scientific and technological changes in economic aspects have to be brought into the realm of teacher education. The Education Commission (1964-66) stressed that in a world based on science and technology it is education that determines the level of prosperity, welfare and security of the people and that a sound programme of professional education of teachers is essential for the qualitative improvement of education.

Need and importance

Now a days teaching has been replaced by the term teaching learning process. There is no teaching without learning. In order to make one to one correspondence between teaching and learning it is essential for a teacher to use appropriate media or technology.

For over a decade there has been an ongoing debate whether or not media do, might, or ever will influence learning. Clark considered media as vehicle delivering groceries (instructional methods but having no influence on nutrition (learning). Moore (1993) pointed out that media of communication have received considerable scrutiny both within and without the field. Schramm (1977) explained methodology and content provided via a medium contribute to learning. Kozma (1991) has preferred to regard method and media as integral part of learning environment. Jonassen et al. (1994) explored the effect of cognition with media and technology media. John Carroll(1963) defined school learning as a function of time. The amount of time students are successfully covering the content is termed as Academic Learning Time (ALT). Changes in ALT are most directly impacted by the teachers' classroom performance in terms of planning, management and instruction. It is ultimately the result of many decisions about how time is spent in schools and in classrooms as depicted in fig. 1.1.The gap between ALT and allocated time can be reduced by properly using ICT.

Current trends

Teacher educators in our country are generally averse to innovation and experimentation in the use of methods of teaching. They have shown a remarkable allegiance to the traditional method of instruction 'Lecturing and notes dictation'. Their acquaintance with modern classroom communication devices is inadequate. In many cases the lectures are dull monotonous and uninspiring. The methods media and materials that are used in teacher training institutions are not relevant, economical and practicable in day-to-day life. The impact of teacher training programmes has not been perceptible over the years in terms of transacting curriculum in schools. Lecture method, mostly taken recourse to by teacher educators, is generally not supplemented by using instructional materials. Interactive teaching, co-operative teaching learning, and self-discovery approaches seldom find place in the day-to-day teaching practices. What is of importance and calls for top priority in the training programme, is to lay appropriately proportioned emphasis on 'why to teach', 'how to teach' and 'what to teach' aspects of teaching. It has to be reflected in the teaching-learning situations planned by teacher educators.

Objective of the study:

1. To find out the status of parameter student teachers developing for ICT based teaching learning and to observe a number of situations of teacher education programmes by keeping in view three indicators viz. ICT based pedagogical environment, networked learning and practice of using ICT in schools.

Methodology:

All the colleges of affiliated to Barkatullaha University Bhopal are the population. And out of them we are selecting 10 colleges as sample. In order to assess the parameter student teachers developing for ICT based teaching learning, observation is done by keeping in view three indicators viz ICT based pedagogical environment, networked learning and practice of using ICT in schools.

Analysis and Findings:

The situations observed and recorded pertaining to particular indicators and results are presented in following table.

Table: 1-Status of parameter student teachers developing for ICT based teaching learning.

Status	F	%
Good	10	20
Moderate	26	52
Poor	14	28

When teacher education practices are observed in respect of parameter student teachers developing for ICT based teaching learning the majority of teacher education practices are rated as moderate (52%), some as poor (28%), and rest (20%) as good. This indicates that a majority of teacher education practices are only satisfactory not up to mark, some practices are poor in respect of this parameter and some are good.

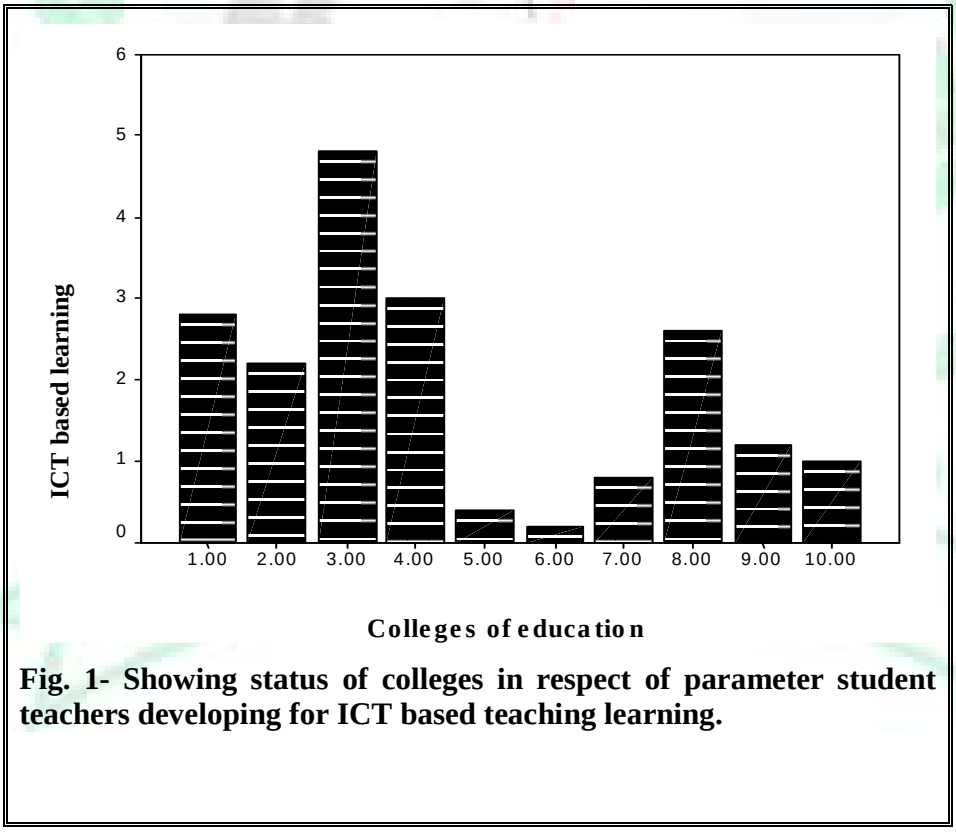

Fig. 1- Showing status of colleges in respect of parameter student teachers developing for ICT based teaching learning.

Fig. 1 shows that in case of parameter student teachers developing for ICT based teaching learning the situation is very poor. Almost half of the colleges are below average in respect of this parameter. In rare cases this facility is up to the mark and rest of colleges are only at satisfactory level. The parameter ICT based teaching learning is found mostly neglected in curricular practices of pre service teacher education. It is clear that colleges of education are not paying much attention towards preparing student teachers for ICT based teaching learning.

Table-2: Observation on student teachers developing for ICT based teaching learning.

Indicator	Rating								Total
	Not observed		Appearing		Developing		Integrated		
	f	%	f	%	f	%	F	%	
ICT based Pedagogical Environment	18	36 (24)	24	48 (41.3)	8	16 (53.4)	0	0 (0)	50
Network Learning	25	50 (33.3)	20	40 (34.4)	4	8 (26.6)	1	2 (50)	50
Practice of ICT in schools	32	64 (42.6)	14	28 (24.1)	3	6 (20)	1	2 (50)	50
Total	75	50%	58	38.6	15	10	2	1.2	150

When the ratings within the indicators of this parameter are examined ICT based pedagogical environment is not observed in 36% cases, appearing in 48%, developing in 16% and integrated not at all. It means that in average number of occasions this parameter is appearing, in some situations it is not observed, in few situations it is developing and integrated in practices not at all. Net worked learning is not observed in 50% cases, appearing in 40%, developing (8%) and integrated (2%). It means that in majority of situations the parameter is not observed, in some situations it is appearing, in few instances it is developing and integrated in very less number of situations. Practice of ICT in schools is not observed in (64%) occasions, appearing in 28%, developing in (6%) and integrated (2%) occasions. This means that practice of ICT in schools is not observed in majority of instances, appearing in some instances, developing in few and integrated in non remarkable situations.

When the ratings among the indicators of this parameter are examined, the parameter is not observed for ICT based pedagogical environment in (24%) instances, for networked learning in (33.3%) cases and for practice of ICT in schools (42.6%) cases. It means that the parameter is not observed mostly in terms of practice of ICT in schools, moderately in terms of networked learning and some times in terms of ICT based pedagogical environment. The parameter is appeared in (41.3%) situations, in 34.4% situations in

respect of networked learning and in (24.1%) situations in respect of practice of ICT in schools. It means that the parameter is mostly appeared in respect of pedagogical environment, moderately in respect of networked learning and some times is respect of practice of ICT in schools.

On the bases of the results shown in table-2 curricular practices on each indicator of this parameter are detailed as follows. With regard to the indicator ICT based pedagogical environment majority of curricular practice rated as appearing. This means that teacher educators discussed about any one of the aspects, like, computer assisted learning, web based learning, internet, video conferencing etc. some practices are rated as not observed, where ICT is not at all used in learning. This is a normal classroom environment but not ICT based pedagogical environment. Few practices are rated as developing, where some attempt is made to equip student teachers in using information technology for learning or attempted to motivate student teachers to use ICT in learning.

The observations on networked learning reveal that most of the teacher education practices are rated as not observed, where no networked-learning taking place in teacher education practices. All learning is isolated and not with network connectivity. Some practices are rated as appearing, where teacher educations provide information or discuss about local and global networked learning. There are few practices rated as developing. In this case teacher educators attempted to motivate student teachers to become part of local or international learning group through networking. There are very few cases in which practices rated as integrating where teacher educators have made an attempt for locally and globally networked learning.

As regards practice of using ICT in schools, most of the teacher education curricular practices are rated not observed. This indicates that student teachers are not at all prepared to use ICT in their teaching and its use in schools. Most of the curricular practices are without ICT and hence student teachers are not equipped to use or practice ICT in schools. There are some curricular practices that are rated appearing where the possibilities of using ICT in teaching school students are discussed. Developing stage is noticed in very few occasions, where some attempted is made to prepare student teachers to develop skills of using ICT mostly they are computer related skills there are very few instants of integration of ICT is evident, where student teachers are equipped to use ICT in practice lessons.

Conclusion

One of the potential challenges of teacher education is preparing teachers to facilitate learning among school children. It is evident in curricular practices that the efforts made for preparing student teachers in using participatory teaching learning method, using multiple resources for learning, adopting collaboration learning and executing self evaluation are not substantial, It is observed that curricular practices are not so prevalent that it would in transforming the prospective teacher into facilitator of learning. The prospects of developing student teachers for ICT based teaching learning through existing curricular practices seem to be discouraging. Utilizing ICT for accelerating learning and in improving quality of teacher preparations is pharmacist in these days of rapid technological developments and transformations. There is no evidence where the indicators regarding ICT based teaching learning are integrated in curricular practices.

The situation is gloomy in respect of networked learning and practice of using ICT in schools. If this trend of curricular practices continues there will be a very little scope for developing among student teachers the skills and competencies essential for using ICT as a tool for enhancing learning. In order to reflect ICT based teaching learning in curricular practices there is a need to train & encourage teacher educators about use of ICT because there are some institutions where facilities are available but teacher educators shown apathy in using ICT for curricular practices.

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