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ISSN (Online) : 2455 - 3662
SJIF Impact Factor :3.395 (Morocco)

EPRA International Journal of
**Multidisciplinary
Research**

Volume: 2 Issue: 11 November 2016



Published By :
EPRA Journals

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TEACHER EDUCATION: TRAINING INPUTS OF INFORMATION TECHNOLOGY (IT)

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ABSTRACT

In the last strides of the twentieth century, both school education and society have witnessed bizarre hi-tech advancements. Clearly, all these changes occurred in quick succession in school and society, coupled with new challenges to be faced in the initial decades of the twenty-first century. If teacher education has to remain effective and functional updating and coping with the new dimensions, teacher education, for both elementary and secondary stages of education, has to be conceived with a more comprehensive paradigm encompassing a number of interrelated components. In this context, it is very important to analyze certain components before designing and preparing pre-service and in-service teacher education programmes. Particularly, usage of Informational Technology has become a fundamental element of present life and an indispensable instrument in most of the disciplines.

KEYWORDS: teacher education, classroom, technology, education programmes, Web-Based Training

INTRODUCTION

In the last strides of the twentieth century, both school education and society have witnessed bizarre hi-tech advancements. Clearly, all these changes occurred in quick succession in school and society, coupled with new challenges to be faced in the initial decades of the twenty-first century. If teacher education has to remain effective and functional updating and coping with the new dimensions, teacher education, for both elementary and secondary stages of education, has to be conceived with a more comprehensive paradigm encompassing a number of interrelated components. In this context, it is very important to analyze certain components before designing and preparing pre-service and in-service teacher education programmes. Particularly, usage of Informational Technology has become a fundamental element of present life and an indispensable instrument in most of the disciplines.

PRESENT SCENARIO

Unfortunately, education sector has been somewhat slow to catch up with Information Technology. Despite advances in Computer and

Information Technology, the potential of participants of education remains untapped. Some teachers have happily risen to the challenge of the Information Technology using computers and Internet, but many others, for a variety of reasons, are not able to do so. It might also be deduced from other sources that many teachers do not know how to use, in the classroom, the mass of information, which is so easily accessible.

While everyone acknowledges that technology can increase interaction, hardly a few actually resort to it. Schools with computer labs and Internet connections permit students to learn software packages and do project works but little regular learning takes place through Computer-Based Training (CBT) or Web-Based Training (WBT). Added to this is the general dissatisfaction with classroom instruction methods. Lack of awareness and complexes are the major hurdles in this concern. In India most institutional heads are not aware of the advantages of e-learning. Not only experienced but also youngsters among teacher educators lack the real insight into this aspect.

It is now imperative that the education engineering wakes up to realize how Information Technology can improve the excellence of education. Newer and innovative techniques of teaching and better student – monitoring can go a long way in imparting better quality education. Imparting quality education is of prime concern today, as rapid pace of development renders textbooks grossly inadequate. It is probably more important than ever that teachers are to be provided with the tools, which they need to take advantage of the explosion of information availability.

The comments above, and many others from students, colleagues and teachers, as well as my work over the last few years in primary, secondary and university classrooms using Information and Technology sources for developing work in a range of subject contexts, have led me to look at and think about the ways in which we prepare would-be teachers for the challenge of making effective use of the “Resource to end all Resources”.

Hence it is very significant to integrate these parameters in teacher education. It will provide a great help to teacher educators, pre-service, in-service teachers and students. Inclusion of computer education may have the following objectives.

- Sensitizing the teachers to the real and practical advantages of computer education
- To give them the knowledge and skills of utilizing the technology in a practical and right perspective.

For this it is essential to assess the needs of teachers. What help can they get out of IT? How can they utilize it up to a maximum limit? What are the areas that they really correlate with their knowledge of computers in discharging their responsibilities? These are some of the contemporary and interesting questions. Hence here is an effort made to identify the needs of all teachers’ right from university level to the elementary level along with the areas to be utilized for this purpose.

Needs at Macro Level:-

- ✓ Teaching needs such as reference material and other information (content as well as pedagogical).
- ✓ Teaching – Learning material preparation
- ✓ Meeting individual differences
- ✓ Evaluation
- ✓ Needs pertaining to the organization of supporting activities.
- ✓ Administrative needs
- ✓ Basics of maintenance of computers

Teaching needs such as reference material and other information (content as well as pedagogical):-

With the dawn of globalization and knowledge explosion, the curriculum at all levels of education is undergoing numerous changes. No

teacher can thoroughly do a fine work of teaching unless he is willing to make a clear analysis of his job and be guided by that analysis. One should have a burning desire for self-learning. There is knowledge explosion especially in the subjects like mathematics. What one has learnt during his academic career in mathematics may be treated as poor and shallow at present. Different methods are emerging to deal with the new topics. The knowledge of pedagogy is also an essential part. One more important aspect is teacher’s handbook or manual, which is a valuable resource of every teacher. But unfortunately, no such material is available at elementary as well as secondary stage. Most of the teachers did not see the handbook in their entire service. Hence updating content as well as pedagogical skills is a very important concern. Information Technology should support the teachers in this dimension.

Teaching – Learning material preparation:-

The traditional approach to teaching has no place in school education. Play-way learning and pragmatic learning occupy a major role in curricular transactions. The role of educational technology is widening its scope with a great pace. It is also important to develop the skills of teachers to prepare their teaching-learning material easily and attractively. Computers have to play a major role in this concern.

With the advent of psychological theories, child-centered approach has become popular. A teacher has to play a multidimensional role like a councilor, facilitator etc. A teacher must be equipped with these individualized and supporting instructional patterns. He must be acquainted with these skills through computer education.

Evaluation:-

The major burden on the shoulders of teachers is evaluation procedures not only to evaluate the answer scripts of teachers but also develop interpretation through reports. These processes involve more clerical labor than the academic work. Knowledge of computers should come to the rescue of teachers and make their job easy and quick.

Needs pertaining to the organization of supporting activities:-

Apart from the curricular transaction, a teacher has to organize several co-curricular activities like science fairs, clubs, and cultural, literary and other activities. Awareness of computer education will help them in conducting all these activities.

Administrative needs:-

Apart from teaching, a teacher has to shoulder so many other administrative and organizational responsibilities and help the school

and society in various other activities, Computer knowledge can lessen their burden.

Basics of maintenance of computers:-

It is not adequate to have the basic knowledge of utilizing different packages and getting the work done; a teacher has to know fundamentals of healthy maintenance of computer systems. It is just like servicing a small sewing machine.

Inputs to be given to meet the above

needs: To meet the above said needs the areas to be tapped in computer arena are as follows:

- ✓ Offline (Using different software, packages, CD-ROMs, Encyclopedias, etc.)
- ✓ Online aspects (Through Internet)
- ✓ Database administration and correspondence
- ✓ Maintenance fundamentals (Utilizing system tools, Antivirus etc.)

Offline (Using different software, packages, CD-ROMs, Encyclopedias, etc.):-

Teachers must be equipped with fundamentals and essentials of interacting with computers and using different packages. The following are considered as essential in this direction.

- i. Using Operating Systems and Protocols
- ii. Data processing skills like MS-WORD
- iii. Spreadsheet skills like MS-EXCEL
- iv. Database skills like MS-ACCESS
- v. Publishing skills like MS-PUBLISHER
- vi. Interacting and browsing encyclopedias from CD/DVD-ROMs.
- vii. Using diskettes.
- viii. Simple user – friendly multimedia techniques like Adobe Photo editor, Upload Photo Express, Photo impact MS – flow chart creator and sound recorders like Jukebox etc.
- ix. Preparation of multimedia modules through MS – Power Point in branching programming style.
- x. Utilizing the Macro Media Flash Player like tools for simple animations.
- xi. Using simple programming languages to generate progress reports of students and item analysis etc.
- xii. CAI/CMI etc.
- xiii. Preparation of models and charts etc. (Poster printing/Banner printing etc.)
- xiv. Utilizing LCD Projector.

Online aspects (Through Internet):-

- i. Using Internet navigation tools.
- ii. Data transfer protocols.
- iii. Internet browsing.
- iv. Using search engines like Google, Altavista and Zinternet etc.
- v. Using e-mail (including file transfers through attachments).
- vi. Utilization of newsgroups.
- vii. Chatting.
- viii. Video Conferencing.
- ix. Updating / Maintenance of Website etc.

Database administration and correspondence:-

Again for this they should be given MS-ACCESS based database maintenance. These should be interlinked with word processing and simple programming language applications.

Maintenance fundamentals (Utilizing system tools, Antivirus etc.):

To prevent malfunctioning and spoiling of the system, a few easy fundamentals like the ones given below may be provided to the teachers.

- i. Virus scanning.
- ii. Scandisk.
- iii. Disk defragmentation.
- iv. Disk cleanup.
- v. System restores.
- vi. Scan registry.

CONCLUSION

As it is very difficult to incorporate all these in pre-service training of teachers, it would be appropriate to introduce a diploma course in “Computer-Based Training” with the essential skills. This will be of great help not only for pre-service but also for in-service teachers who missed the chance of studying computer education as a part of their teacher training. This course of action would help the teacher to face the new challenges in the field of education.

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