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**DEVELOPMENT OF ICT AWARENESS PROGRAMME FOR TEACHER TRAINEES
AND STUDY ITS EFFECTIVENESS**

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Abstract:

The study focused on the ICT awareness of the teacher trainees and also development of awareness program with its effectiveness. The objectives of the study were To find out the awareness of latest technologies among teacher trainees ,To identify necessity of teacher trainees in various field of ICT, To develop an Orientation programme for teacher trainees depending on their need, To test the effectiveness of Orientation Programme. Survey and Experimental methods were used for this research study. Single group pre - post design was used for the study. Firstly a survey of 200 teacher trainees was conducted to test the level of awareness and to check the needs about ICT. The sample was selected by random sampling method. As per the needs found in the survey the awareness program was developed and was implemented on the group of thirty, which was selected by purposive sampling method. The conclusions were as follows: It was found that teacher trainees have average level of overall awareness of ICT, Large percentage of teacher trainees needs to be guided about the latest in the technology, The awareness programme was helpful to enhance the level of ICT awareness of teacher trainees .

Key Words : *ICT awareness ,teacher trainees, orientation programme*

1 Introduction

1.1 ICT in Education

The United Nations Educational, Scientific and Cultural Organization (UNESCO) use the term ICT, or information and communication technologies, to describe:

“...the tools and the processes to access, retrieve, store, organize, manipulate, produce, present and exchange information by electronic and other automated means. These include hardware, software and telecommunications in the forms of personal computers, scanners, digital cameras, phones, faxes, modems, CD and DVD players and recorders, digitized video, radio and TV programmes, database programmes and multimedia programmes.”

1.2 Skills and Competencies for ICT :

There are three areas of literacy, namely cognitive, technical and social. In technologically connected world, one does not live in isolation and therefore needs soft' as well as 'hard' skills to confidently, and responsibly use ICT.

Various competencies are needed to be developed throughout the educational system for ICT integration to be successful. Change is a constant condition in our education system. With coming of the ICT in education there are implications on teacher identity and role. Mere retooling of teacher competencies for specific purposes will not solve the problem. An approach is needed to bring about renaissance in teacher development so that he can effortlessly integrate ICT in teaching learning process.

This Research has tried to identify awareness of ICT of student teacher. It has also tried to focus attention on current areas of ICT education that need to be concentrated upon in teacher training institutes.

This is important because unless and until we know that what our current teaching in teacher training institutes is producing we cannot effectively integrate the ICT in education system.

1.3 ICT in Modern Era:

ICT, if used creatively, can make a big difference in the way teachers teach and students learn and can help students acquire 21st century skills like digital literacy, innovative thinking,

creativity, sound reasoning and effective communication. ICT can help in enhancing the quality of education through blended learning by supplementing the traditional talk and chalk method of teaching

In recent years we have seen a significant, and long overdue, shift in education from an emphasis on 'teaching' to an emphasis on 'learning'. The focus of attention is now firmly on the learner, their needs, interests and aspirations, at the heart of the education system. This change in focus needs to be welcomed as education is, of course, first and foremost about learners.

So ICT in education is the need of the hour. It has the potential to provide solution to many of the challenges higher education faces today. The common fear that ICT shall replace a teacher is totally unfounded. Realization now seems to be slowly dawning on the teaching community that ICT is primarily to empower them and not to replace them. ICT is, therefore, not to be feared but to be embraced so as to empower our future generations by providing them high quality ICT- enabled education.

This research attempts to focus on idea of teachers as learner's i.e. Teacher trainees. Based on needs of the teacher trainees an orientation programme of ICT has been developed to bridge the loopholes between curriculum and learning.

2 NEED AND IMPORTANCE

2.1 Need:

- Though it is era of globalization, developing country like India carries a great disparity between users of ICT. The problems lead to a more closed off climate where ICT cannot flourish as greatly. With the help of ICT based education in schools, teachers can play a pivotal role. Training to teachers to use ICT not only for teaching but for developing the mindset for positive approach towards ICT is very important and need of the Nation.
- Education system is going through the phase of transition due to introduction of ICT. For smooth transition into the ICT integrated world teachers role is indispensable. So this necessitates the development of teachers first, understanding their needs, learning methodologies, anxieties and approach towards learning , this study was necessary.

- There is need to know if the present curriculum in teacher education is capable of making student- teacher employ their knowledge in classroom teaching environment. The present study will put light on the areas which need to be focused in teacher training institutes.
- In 21st century not only knowledge but professional development plays an critical role. There is need to know if ICT is being used in an effective way so that novice teachers understand the concept and importance of professional development.
- Being a member of teacher community researchers wanted to know about ICT awareness of teacher trainees, for this purpose it was necessary to study.

2.2 Importance

- This research has brought into focus the ICT awareness level among teacher trainees.
- This research has helped to identify the focus needed in particular area of ICT e.g. in knowledge, its application, technical handling of hardware, decision making etc.
- This research has enhanced the awareness of ICT of teacher trainees.
- This research can be helpful in upgrading the ICT syllabus of B.Ed students.
- The teacher trainee will be able to effectively applicative their knowledge in classroom environment.
- This research will help change the focus of curriculum builders from “teaching the tools” to “using the tools to teach”

3 STATEMENT OF THE PROBLEM

To Develop ICT Awareness Program For Teacher Trainees And Study Its Effectiveness

3.1 Operational Definition

- **ICT Awareness Program:**

A Programme of duration 10 hrs to give knowledge and awareness about ICT to B.Ed students of University of Pune.

ICT awareness means that particular individual can make use of diverse set of technological tools and resources like computers, the internet, telephony and broadcasting technologies to communicate, disseminate, store, manage, and create new information for personal and professional development.

- **Teacher Trainee:** Teacher trainees are the students who are doing B.Ed Course from the Teacher Training institutes affiliated from University of Pune.

4 OBJECTIVES OF THE STUDY

1. To find out the awareness of latest technologies among teacher trainees.
2. To identify necessity of teacher trainees in various field of ICT.
3. To develop an Orientation programme for teacher trainees depending on their need.
4. To test the effectiveness of Orientation Programme

5 ASSUMPTIONS

1. Teacher trainee has knowledge about ICT.
2. Teacher trainee is using Technology in their daily routine.
3. There is integration of ICT in education.
4. Teacher trainee have access to Technology in teacher training institute.

6 HYPOTHESES

- **Null Hypothesis:** There will be no significant difference between the mean of the pre-test and post-test scores of the test of awareness of ICT. ($M_1 - M_2 = 0$)

7 SCOPE

The conclusions of this research are applicable to all the Teacher Trainees of B.Ed colleges of University of Pune.

7.1 Limitations

- 1) Size of sample was small.
- 2) Students age, their prior knowledge was not controlled .
- 3) Research was taken into consideration the students of year 2012-13 only.
- 4) The data collection tool was researcher made.
- 5) The conclusions of this research study were based on the responses of the students only.

7.2 Delimitations

- 1) In this research awareness of only B.Ed. students was studied.
- 2) B.Ed. College only from University of Pune has been taken into consideration.
- 3) Orientation programme of few (10 cl hrs) hours has been prepared consisting of PowerPoint presentation, lecture method and demonstration method.

8 RESEARCH METHODOLOGIES

8.1 Method of the Study

- To find out the awareness and the needs regarding ICT of teacher trainees, a survey was conducted
- Experimental research method was used for this study.

8.2 Research Design:

Researchers used Single Group Pre-test Post-test Design in the present study.

Awareness test (pre) -- Orientation Programme -- Awareness test (post)

8.3 Variables

- **Independent Variable**

Orientation Programme

- **Dependent Variable**

ICT Awareness of Teacher Trainees

8.4 Tools for data collection

- **Awareness Test:**

Awareness Test prepared by the researchers was conducted to test the level of awareness of ICT among the teacher trainees.

Test consisted of 20 questions on various aspects of ICT in education. The same awareness test was used to test the difference in students understanding of ICT before and after the orientation programme through pre-test and post-test technique.

8.5 Population

In the present research All the Students who are doing B.Ed from university of Pune are the constituents of the Population.

8.6 Sample

For orientation programme group of 30 students was selected by purposive sampling method.

8.7 Procedure of the study

- **Survey:** To find out the awareness. and the needs regarding ICT of teacher trainees a survey was conducted with the help of awareness test.
- **Pre-Test :** For experimental study awareness test was conducted as a pre- test.
- **Treatment of the Orientation Programme :** About ten clock hours orientation program based on Lectures, demo and PPTS was conducted to enhance the awareness level of teacher trainees.
- **Post-Test:** To test the awareness level of teacher trainee’s awareness test was conducted on the experimental group.

8.8 Statistical technique

In the present study percentage, Mean, standard Deviation and ‘t’ test were used to analyze the data.

9 ANALYSIS OF DATA AND INTERPRETATION:

- **Awareness level**

The below table No 2 indicates awareness level

Table No 2 Awareness level

Awareness Level	Interpretation
0- 20	Below Average
20 – 40	Average
40 – 60	Good

Table No 3 Mean of the Awareness Test

Teacher Trainees	Mean	Awareness
200	33.68	Average

Since 33.68 lies in the class interval 20-40, it indicates that by the survey conducted level of ICT awareness among student teachers is **Average**.

Testing the Null hypothesis :

Table No. 4
Mean Standard deviation and t-value of ICT Awareness

Sr. No.	Test	N	Mean Value	S.D.	t-value calculated	Null Hypothesis*
1	Pre test	30	44.4	7.541	7.81	Rejected
2	Post test	30	51.43	4.065		

Interpretation

From table no 4, since t-calculated is much higher than the standard value, hence null hypothesis was rejected, it means that the difference between awareness of pre-test and post test for Teacher Trainee was found significant.

10 CONCLUSIONS:

1. It was found that teacher trainees have average level of overall awareness of ICT. Teacher trainees vary in their knowledge and awareness about various aspects of ICT. When it comes to word processing they are well aware about it whereas they need help with spreadsheets and searching information on net. There are other aspects like searching information with key words on net, use of ICT in professional development, etc. where they need to get some help.
2. Large percentage of teacher trainees needs to be guided about the latest in the technology. Most of them had heard about cloud computing and 3-G but not aware what it is. They need to be made aware of use of spreadsheets, preparing PowerPoint presentations, communicating through blogs, building relationships..

3. Orientation programme was developed according to the needs of the teacher trainee and implemented properly for fulfilling the objectives of the study.
4. The awareness programme was helpful to enhance the level of ICT awareness. Thus it was successful as marked increase in the ICT awareness of various aspects was observed among the teacher training.

11 DISCUSSIONS:

The findings of the present study make it very clear that teacher trainees need to focus on certain areas of ICT. In the research conducted by Manoj Kumar Sinha it was found that teachers were more comfortable in using word processing. In the present researcher found that teacher trainees are most comfortable in using word processing whereas In the study conducted by Sasikala it was found that teacher of D.T.ED had little knowledge of computers. Teachers are apathetic and ignorant to use computer. They had language problem and do not have sufficient confidence to use computer.

In the present study researcher found out that teacher trainees have confidence in using computers. The teacher trainees were quite active on social networking sites.

12 RECOMMENDATIONS

1. Teacher trainees should be made more computer savvy.
2. Word processing, internet search, spread sheets should merge in the syllabus and day to day use for gathering knowledge so much that teacher educators become expert in it.
3. Ample practice should be incorporated not only for submissions of files and practical's but in daily learning as well.
4. Mere Teaching of basic computer literacy such as –the traditional operating system, word processor spreadsheet, database and telecommunications is not enough. In every profession there is a level of literacy beyond general computer literacy. Professional literacy is best learned in context.
5. Training should be given that how ICT can be used in their own learning, and how they can explore further creative uses of ICT while helping the learners to learn.

13 CONTRIBUTIONS TO THE FIELD OF EDUCATION

1. The orientation program developed is useful for Training to teachers to use ICT not only for teaching but for developing the mindset for positive approach towards ICT is very important and need of the Nation.
2. The survey result puts light on understanding of the needs, learning methodologies, anxieties and approach towards learning of teacher trainees.
3. The present study has bring forth areas which need to be focused in teacher training institutes .
4. It may give direction to the teacher trainee the importance of professional development.
5. The results may be helpful for teacher trainee who conducts computer based practical.
6. It highlights the importance and need of the moral and ethical education in the needs today.
7. It may also contribute in the construction of B.Ed. syllabus. The benchmark of ICT elements may be defined by the result of the study.

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