# AN INVESTIGATION INTO THE ICT KNOWLEDGE AMONG THE PROSPECTIVE TEACHER EDUCATORS

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## ABSTRACT

*An appropriate technology in the hands of a competent Teacher Educator can ensure better teaching-learning process. Moreover. in the fast developing world, where knowledge explosion is taking place in every sphere, it is unreasonable to expect that mere spoken or written words alone could convey the volume of relevant information to the learner in an attention-winning manner. The teacher is the topmost academic and professional person in the educational pyramid under whose charge the destiny of our children is shaped. The Kotharai Commission (1966) remarked that a sound programme of professional education of teachers is essential for the qualitative improvement of education, and the quality of education largely depends on the quality of the teacher as he is the person who makes or mars the nation. In this assumption, the present study attempts to investigate into the ICT (Information and Communication Technology) Knowledge among the prospective Teacher Educators in Bharathidasan University and its affiliated colleges.*

## INTRODUCTION

Teachers play a vital role in helping students develop their knowledge and skills of ICT for their professional development. The explosive impact of communication has not only eased the lives of people but also has had a profound effect on the ordinary people in their effort to come in personal contact with new ideas, trends and sources of information in the globe. ICT has revolutionized the way lessons are dealt with and learnt at school. Gone are those days when classroom learning was confined to the black board and endless lectures. ICT enabled education has opened up a whole new style of learning. When learning becomes interactive and enjoyable students will learn faster and perform better. This two way learning methodology will eventually help the students achieve success in the future.

Educational systems around the world are under increasing pressure to use new information and communication technologies to teach students the knowledge and skills they need in the 21st century. With the emerging new technologies, the teaching profession is evolving from an emphasis on teacher centered, lecture based instruction to student centered, interactive learning environments.

The successful use of ICT in teacher training Institutions requires the teacher educators and teacher trainers themselves to be familiar with and competent in the use of that technology. In order to produce an ICT enabled and ICT literate society, it is also essential that the teacher educators themselves become proactive in understanding and internalizing the skills needed in the 21st century. It is commonly assumed that high quality teacher training will lead to improvement in students' performance in the schools. Thus the teacher education curriculum has to be regularly updated and changed in order to keep abreast of the latest technological developments. In the training process, the student teacher educators are actively participating in various courses to learn how to use ICT in education.

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## OBJECTIVES OF THE STUDY

The present study is committed to accomplish the following objectives :

● To develop and design a tool to assess the ICT knowledge of prospective teacher educators.

● To ascertain the level of ICT knowledge of prospective teacher educators.

● To find out the significant difference in the level of ICT knowledge between prospective teacher educators of Bharathidasan University and those of its affiliated colleges.

## RESEARCH QUESTIONS

The present study sought to find answers to the following research questions related to and derived from the above objectives:

1. What are the levels of ICT knowledge among the prospective teacher educators in Bharathidasan University and its affiliated colleges?

2. What is the present status of student teacher educators of Bharathidasan university and its affiliated colleges in respect of ICT knowledge with special reference to teaching and learning?

3. Is there any difference between the student teacher educators of Bharathidasan university and its affiliated colleges in respect of ICT knowledge and skills of teaching?

## METHODOLOGY

As the study is descriptive by nature, the survey technique was adopted in the present study. As many as 35 student-teacher educators from the Dept. of Educational Technology, Bharathidasan University and 125 student-teacher educators from five affiliated colleges of Bharathidasan University were chosen. As there are only five affiliated colleges of Bharathidasan University offering the M.Ed. programme at the time of data collection, the investigator chose all the 125 M.Ed. students of these affiliated colleges besides the 35 M,Ed. students of Bharathidasan University as sample. The ICT knowledge Questionnaire for PG Students in education (ICTKQ) was administered to the student teacher educators for the purpose of data collection.

## CONSTRUCTION AND VALIDATION OF THE TOOL

The tool ICTKQ ( Information and Communication Technology Knowledge Questionnaire) constructed for the purpose of collecting data for the present study has two parts : general information and knowledge of ICT. The general information consists of items eliciting background information regarding name, gender, age, course of study etc. The second part consists of 20 items pertinent to ICT knowledge. The questionnaire was developed after a careful analysis of a few similar tools circulated to five experts in the field of Educational Technology for obtaining their opinion. Based on their opinion, necessary modifications were carried out to validate the ICTKQ. The content validity of the questionnaire was established.

The investigator herself administered the tool and it was ensured that the questionnaire was filled in by the respondents without any omission.

## RESULT AND DISCUSSION

### Table-1

### RESPONSES OF PROSPECTIVE TEACHER EDUCATORS OF BHARATHIDASAN UNIVERSITY AND ITS AFFILIATED COLLEGES REGARDING THEIR KNOWLEDGE OF ICT

| S. No. | Items of ICTKQ | Responses | | | $x^2$ |
|---|---|---|---|---|---|
| | | Yes | To some extent | No | |
| 1. | Do you know the basic principles of computers ? | 116 | 37 | 7 | 239.22 |
| 2. | Do you use MS Word? | 94 | 47 | 19 | 69.629 |
| 3. | Do you use MS Excel? | 74 | 55 | 31 | 17.525 |
| 4. | Do you use Power Point? | 78 | 47 | 35 | 18.579 |
| 5. | Do you use any word processing programme? | 47 | 70 | 43 | 8.000 |
| 6. | Do you search information using the help menu? | 79 | 38 | 43 | 18.870 |
| 7. | Do you know how to send an e-mail? | 93 | 21 | 46 | 50.42 |
| 8. | Do you use all the keys on the key board? | 96 | 47 | 17 | 60.00 |
| 9. | Can you locate the task bar on the desktop? | 72 | 36 | 52 | 12.27 |
| 10. | Do you know how to switch on and boot the computer? | 135 | 22 | 3 | 192.15 |

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| No. | Question | | | | |
|---|---|---|---|---|---|
| 11. | Do you use the start button to launch programmes? | 100 | 33 | 27 | 61.96 |
| 12. | Do you use the start menu to shutdown the computer? | 123 | 19 | 18 | 137.37 |
| 13. | Do you use a mouse to select icons? | 124 | 30 | 6 | 146.76 |
| 14. | Do you close Windows using the close button (X)? | 121 | 23 | 16 | 130.05 |
| 15. | Do you minimise and maximise the windows screen using the relevant button? | 115 | 24 | 21 | 107.7 |
| 16. | Do you use the toolbar to access different facilities? | 77 | 47 | 36 | 16.98 |
| 17. | Do you use 'My Computer' or 'Windows Explorer' to see the files and folders on any disc? | 78 | 42 | 40 | 17.25 |
| 18. | Do you know how to delete unwanted files? | 99 | 29 | 32 | 59.10 |
| 19. | Do you know how to switch on and use the printer? | 66 | 35 | 59 | 9.96 |
| 20. | Do you use the OHP? | 103 | 28 | 29 | 69.81 |

The chi-square values so calculated are given in Table 1. It is found that all the items are significant at the 0.01 level of significance except item no 5. It is heartening to note that more than 70% of prospective teacher educators of Bharathidasan University and its affiliated colleges responded 'yes' for the items 1, 10, 12, 13, 14, 15 and roughly 60% of them responded 'yes' for the items 2, 7, 8, 11,18,20. The level of ICT knowledge of the prospective teacher educators for the rest of the items is below average. Hence, nineteen items out of twenty in the knowledge part are significant except the item on 'use of word processing programme'. Only a handful of prospective teacher educators have mastered the applications of Information and Communication Technology namely, General skills, mouse, Windows, disks, Word, multimedia, internet, e-mail and technical skills. The use of computers by prospective teacher educators in Teacher Education institutions as reported by teacher educators is also very much limited and restricted to perform a small variety of Computer tasks. Hence it is inferred that the teacher educators are not adequately informed about the ICT practices. It is unfortunate that the ICT practices have not seen widespread application for teacher education.

It was hypothesized that prospective teacher educators of the Department of Educational technology and affiliated colleges of Bharathidasan University do not differ in their ICT knowledge.

### Table-2
### MEAN DIFFERENCE IN THE KNOWLEDGE OF ICT OF THE RESPONDENTS OF BHARATHIDASAN UNIVERSITY AND ITS AFFILIATED COLLEGES

| Category | N | Mean | Standard Deviation | 't' value |
|---|---|---|---|---|
| Bharathidasan University Department | 35 | 13.9 | 7.79 | 1.78 |
| Affiliated Colleges | 125 | 11.22 | 8.12 | |

It can be seen from Table 2 that the calculated 't' value (1.78) is less than the table value (1.96) at the 0.05 level of significance. Hence, the prospective teacher educators of the Department of Educational Technology and the affiliated colleges of Bharathidasan University do not differ in their ICT knowledge. However, it is found from the table that the prospective teacher educators of the Department of Educational Technology have higher mean scores than the students of affiliated colleges.

It is inferred that the prospective teacher educators of the Department of Educational Technology and the affiliated colleges do not differ in their ICT knowledge as ICT is part of the curriculum of the M.Ed. programme. The students of the Department of Educational Technology might have been given better exposure in strengthening their ICT knowledge than the students of the affiliated colleges of Bharathidasan University. It is suggested that further study may explore the possibilities of strengthening the ICT knowledge of the prospective teacher educators.

### RECOMMENDATIONS:

The following strategies are suggested for the improvement of the teaching-learning situation in the teacher education institutions through the integration of ICT.

It is recommended that the Teacher Education Institutions should play a new role in the coming years in promoting the use of Information Technology in their education through a variety of teacher education programmes.

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1. Developing teachers' confidence in using ICT as a teaching tool.

2. Providing them with fresh approaches to teaching familiar topics.

3. Helping them to assess the impact of ICT on their teaching and their learners.

4. It will be worthwhile to develop a regional online teacher resource base and offline network of teacher training institutions to share teacher developed educational courseware and innovative practices.

5. Teachers need to be fully aware of the technology that engages students on a daily basis and use that technology as a stepping stone to academic achievement.

6. In addition to the above, need based entry level programmes in information technology related areas and follow-up programmes in specific topics in greater depth and at a more advanced level are recommended .

7. It is recommended that Video-conferencing, one of the most powerful features of Information and Communication Technology today be attempted at the Inter-teacher education institutional level.

## CONCLUSION

The present investigation is a very unique study conducted in a developing country like India to study the ICT knowledge of prospective teacher educators and this study has contributed to the field of computer education. This investigation besides other things has contributed to the computer knowledge test. Also the study has revealed that a majority of the teachers have low level of computer knowledge and hence their computer knowledge needs to be improved in order to equip themselves to face the challenges in the future classroom.

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importance of parental involvement on their wards' studies, extra curricular activities and behaviour.

Adolescence stage is a peculiar period of human life and students of this age feel independent and they neglect parental care and advice. The students have to be made aware that it is their parents' influence and hard work that made them reach this much of excellence. The parents must be able to find out the talents of their wards' and give them inspiration and guidance on what is good for them. The parents should have an expectation according to the capacities of the wards' and should also help them to set goals which are achievable. College students achieve more when their parents are involved. This is regardless of their socio-economic status, ethnic background, or parents' education level. Students exhibit more positive attitudes and behaviour when their parents are involved. Youth risk behaviours, such as alcohol use, violence, and antisocial behaviour decrease as parental involvement increases. Let the educational institutions take initiative for involving the parents in the studies, behaviour and extra curricular activities of their wards, for the benefit of both students and colleges.

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