A Study on Ict Knowledge of B.Ed Trainees in Villuppuram and Chennai Districts

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Abstract

In the present Investigation has been under taken in order to study the ICT knowledge of B.Ed trainees in Villuppuram and Chennai Districts. Teaching Competency of B.Ed trainees Scale was Constructed and Standardized by Investigators (2017) and ICT Knowledge of B.Ed trainees Scale was Constructed and Standardized by Investigators (2017) has been administrated to a random sample of 1152 B.Ed trainees. It is found that higher secondary school teachers significantly differ in ICT knowledge with respect to place of school, medium of Instruction, qualification, age and type of management of B.Ed trainees.

Keywords: ICT knowledge, B.Ed trainees.

1.Introduction

India had the Gurukula system and system of education in prehistoric times which teachers are called guru who taught the learners everything which was closely linked with nature and life from arithmetic to astrology. Even though, they cramped in classrooms, education is a wide area for research. It supports the human to make their behaviour is in a desirable way. In education, the teaching and learning is essential elements. Education helps us to build opinions and some say education is the process of gaining information about the surrounding world while knowledge is something very different states. The importance of education is as follows, Happiness flourishes: Stable, balance, self-dependent life, Economic growth of the nation, The willpower leads to score success, Imparts ability to work across genres and cultures, Adapting to newer techniques for productivity, Cognitive against the contradictory, Education has been the manifestation of the perfection already in man.

2. NEED AND IMPORTANCE OF THE STUDY

Professional development is not a one - time event; it should be focused on the needs of the B.Ed. trainees and sustained through coaching and periodic updates. In this context, there is a need to study the ICT knowledge and attitude towards teaching among B.Ed. trainees in the colleges of education. The present investigation fulfills the research gap of the study. There is a technological gap between the progress of the society and instructional activities of the teacher in the classroom. But present 21st Century's education is student centric education. Students learn from multi sources and for this reason use of ICT is very much essential in educational field and simultaneously teachers knowledge of ICT also required. So the present study has great need and significance because this study shows roles of ICT knowledge of B.Ed. trainees in teachers education. The role of teachers and teacher educators is complex to

meet the individual needs of the learners. The teachers face innumerable number of challenges in their daily classroom teaching. They are to be equipped with the most relevant research works and progress taking place in the technology of teaching; this also enhances the quality of teaching. Consequently, the researchers feel that particularly the B.Ed. student-teachers' opinions or their attitudes can never be ignored, rather those should be reviewed or re-explored time to time, and this feeling that has urged these investigators to take up the present study on a particular region. It is expected that, this study, through small, will be able to make some significant contributions in the field of education.

3. OBJECTIVES OF THE STUDY

The following objectives have been formulated by the investigator for the present study,

1. To find out the level of ICT knowledge of B.Ed.trainees.

2. To find out the difference exists if any, between B.Ed. trainees studying in college located at rural and urban areas with respect to their ICT knowledge.

3. To find out the difference exists if any, between B.Ed. trainees based on medium of instruction with respect to their ICT Knowledge.

4. To find out the difference exists if any, between the UG and PG B.Ed. trainees with respect to their ICT knowledge.

5. To find out the difference if any, among B.Ed. trainees belonging to different age group (below 25 years, 25-30 years, 30 years and above) with respect to their ICT knowledge.

6. To find out the significant difference if any, among B.Ed. trainees studying in different types of management (Government/ Government aided/ Self Financing) with respect to their ICT knowledge.

4. HYPOTHESES OF THE STUDY

1. The level of ICT knowledge of B.Ed. trainees.

2. There is a significant difference between rural and urban B.Ed. trainees respect of their ICT knowledge.

3. There is a significant difference between Medium of instruction B.Ed. trainees respect of their ICT knowledge.

4. There is a significant difference among B.Ed. trainees belonging to different qualification (UG/PG) respect of their ICT knowledge.

5. There is a significant difference among B.Ed. trainees belonging to different ages (below 25 years, 25-30 years, 30 years and above) respect of their ICT knowledge.

6. There is a significant difference among B.Ed. trainees studying in different types of managements (Government/ Government aided/ Self Financing) respect of their ICT

knowledge.

5. METHOD OF THE STUDY

The investigator considers the number of main variables which is given in the topic and time constraints for selecting the appropriate method. The study includes four variables, so that the investigator has planned to collect data about all those variables in a single time. So the investigator was adopted the survey technique with descriptive method for the study.

5.1 Population of the study

The population of the study consists of B.Ed. trainees of Villupuram and Chennai districts in Tamil Nadu.

5.2 Sample of the study

A sample is a small proportion of B.Ed. trainees which was selected for observation and analysis. The investigator used random sampling technique for selecting the sample of 1152 B.Ed. trainees.

5.3 Statistical Techniques Used

Descriptive analysis, Differential analysis and Correlation analysis ('t' test, 'F' test and 'r' test) were used in the present study to test the hypotheses and interpret the data.

5.4 Tools Used for the Study

The investigator constructed the ICT Knowledge scale. The scale used for the pilot study, consists of 76 items. All the 76 items were with five point scale (1) Always, (2) Often, (3) Sometimes, (4) Occasionally and (5) Never type answers. In order to validate the tool the investigator conducted the pilot study. The pilot study was conducted among 100 B.Ed. Trainees. The total number of sample used for the pilot study was 116. The investigator scored the test by giving (5-0) to the Positive response. The total number of marks secured by each sample was calculated by the investigator. Based on the total marks secured by the sample item total correlation was used to identify the reliability of the tool. The items with 0.5 level value above 0.3 was selected for the final study. Thus out of 76 items, 66 items were selected for the final study. The item total correlation and the selection of items for the final study were analyzed.
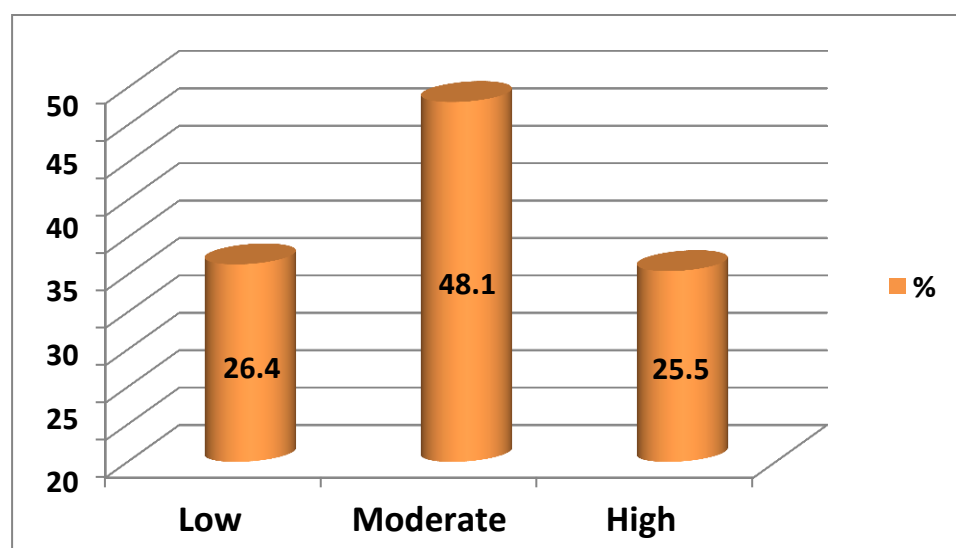
6. DESCRIPTIVE ANALYSIS

Hypothesis 1. The level of ICT knowledge of B.Ed. trainees.

Table – 1: Level of ICT Knowledge of B.Ed. Trainees.

Level of ICT Knowledge	Count	%
Low	304	26.4
Moderate	554	48.1

High	294	25.5
Total	**1152**	**100.0**

Figure – 1: Level of ICT Knowledge of B.Ed. Trainees

Hypothesis 2

There is significant difference between Rural and Urban B.Ed. Trainees in respect of their ICT Knowledge.

Table 2: Mean and Standard Deviation Scores of ICT Knowledge and its dimensions of Rural and Urban B.Ed. Trainees and the calculated „t‟ Values.

Overall ICT Knowledge and its Dimensions	Locality				t value	P value	Remarks
	Rural (N=455)		Urban (N=697)				
	Mean	SD	Mean	SD			
Effective Teaching	57.05	9.90	58.38	10.11	2.198	0.028	0.05 Significant
Attitude Thoughts	79.47	15.46	80.38	16.57	0.942	0.346	Not Significant
Economic Impact	19.80	5.33	19.48	5.91	3.655	0.001	0.01 Significant
Creative Thinking	21.46	5.05	21.90	5.39	2.110	0.035	0.05 Significant

Life based Learning	48.86	10.17	49.89	10.33	1.304	0.193	Not Significant
Overall ICT Knowledge	**226.64**	**39.31**	230.04	42.20	3.030	0.002	**0.01 Significant**

From the Table 2, it is inferred that ‗t' value is 3.030 which is higher than the table value of 2.6 to be significant at 0.01 level of significance. It is concluded that there is significant difference between ICT Knowledge and its dimension namely, Economic Impact 3.655 in their mean and standard deviation ICT Knowledge scores with respect to Rural and Urban B.Ed. Trainees. But, Effective Teaching 2.198 and Creative Thinking 2.110 are less than the table value of 2.6 to be significant at 0.05 level of significant.

But, calculated table value from the Table 2, it is inferred that 't' value is Attitude Thoughts 0.942 and Life based Learning 1.304 which is less than the table value of 2.6 to be significant at 1.00 level of significance. It is inferred that both Rural and Urban B.Ed. Trainees do not differ significantly in their dimension Attitude Thoughts and Life based Learning in their mean and standard deviation ICT Knowledge scores with respect to Rural and Urban B.Ed. Trainees. There is a significant difference between Rural and Urban B.Ed. Trainees in respect of their ICT Knowledge and its dimensions namely, Effective Teaching, Attitude Thoughts, Economic Impact, Creative Thinking and Life based Learning of the hypothesis 2 is accepted. It is inferred that both Rural and Urban B.Ed. Trainees differ significantly in their ICT Knowledge.

Hypothesis 3:

There is significant difference between Tamil and English Medium of B.Ed. trainees in respect of their ICT Knowledge.

Table 3: Mean and Standard Deviation Scores of ICT Knowledge and its dimensions of Tamil and English Medium of B.Ed. Trainees and the calculated „t" Values.

ICT Knowledge and its Dimensions	Medium				t value	P Value	Remarks
	Tamil (N=765)		**English (N=387)**				
	Mean	**SD**	**Mean**	**SD**			
Effective Teaching	57.36	10.08	58.83	9.92	2.341	0.019	0.05 Significant
Attitude Thoughts	79.57	16.06	80.91	16.28	1.331	0.183	Not Significant
Economic Impact	19.55	5.70	19.72	5.66	0.473	0.636	Not Significant
Creative Thinking	21.68	5.29	21.81	5.22	0.405	0.686	Not Significant
Life based	49.13	10.14	50.19	10.53	1.645	0.100	Not

Learning							Significant
Overall ICT Knowledge	**227.30**	**40.80**	**231.46**	**41.60**	**1.624**	**0.105**	**Not Significant**

From the Table 3, it is inferred that _t' value is 2.341 which is higher than the table value of 1.96 to be significant at 0.05 level of significance. It is concluded that there is significant difference between ICT Knowledge and its dimension namely, Effective Teaching 2.341 in their mean and standard deviation ICT Knowledge scores with respect to Tamil and English Medium B.Ed. Trainees.

From the Table 3, it is inferred that 't' value is 1.624 which is less than the table value of 1.96 to be significant at 1.00 level of significance. But, It is calculated that there is no significant difference between the ICT Knowledge dimensions namely; Attitude Thoughts 1.331, Economic Impact 0.473, Creative Thinking 0.405 and Life based Learning 1.645, in their mean and standard deviation ICT Knowledge scores with respect to Tamil and English Medium B.Ed. Trainees.

Therefore significant difference between Tamil and English Medium B.Ed. Trainees in respect of their ICT Knowledge and its dimension namely, Effective Teaching, Attitude Thoughts, Economic Impact, Creative Thinking and Life based Learning of the hypothesis number 3 is rejected. It is inferred that both Tamil and English Medium B.Ed. Trainees do not differ significantly in their ICT Knowledge.

Hypothesis 4: There is significant difference between UG and PG of B.Ed. trainees in respect of their ICT Knowledge.

Table 4: Mean and Standard Deviation Scores of ICT Knowledge and its dimensions of UG and PG of B.Ed. Trainees and the calculated „t‟ Values.

ICT Knowledge and its Dimensions	Educational Qualification				t value	P value	Remarks
	UG (N=870)		PG (N=282)				
	Mean	SD	Mean	SD			
Effective Teaching	58.45	9.76	56.01	10.70	3.561	0.001	0.01 Significant
Attitude Thoughts	80.53	15.74	78.45	17.24	1.880	0.060	Not Significant
Economic Impact	19.94	5.54	18.59	6.02	3.473	0.001	0.01 Significant

Creative Thinking	22.02	4.97	20.81	5.99	3.384	0.001	0.01 Significant
Life based Learning	50.10	9.64	47.60	11.85	3.559	0.001	0.01 Significant
Overall ICT Knowledge	**231.04**	**39.10**	**221.47**	**46.06**	**3.415**	**0.001**	0.01 Significant

From the Table 4, it is inferred that 't' value is 3.415 which is higher than the table value of 2.6 to be significant at 0.01 level of significance. It is concluded that there is significant difference between ICT Knowledge and its dimensions namely, Effective Teaching 3.561, Economic Impact 3.473, Creative Thinking 3.384 and Life based Learning 3.559 in their mean and standard deviation ICT Knowledge scores with respect to UG and PG B.Ed. Trainees.

From the Table 6, it is inferred that 't' value is 1.880 which is less than the table value of 1.96 to be significant at 1.00 level of significance. But, it is calculated that there is no significant difference between the ICT Knowledge dimensions namely; Attitude Thoughts 1.880, in their mean and standard deviation ICT Knowledge scores with respect to UG and PG B.Ed. Trainees. Therefore significant difference between UG and PG B.Ed. Trainees in respect of their ICT Knowledge and its dimensions namely, Effective Teaching, Attitude Thoughts, Economic Impact, Creative Thinking and Life based Learning of the hypothesis number 4 is accepted. It is inferred that both UG and PG B.Ed. Trainees differ significantly in their ICT Knowledge.

Hypothesis 5: There is significant difference among the B.Ed. trainees with different ages in their ICT Knowledge and its dimensions

Table 5: Difference among B.Ed. trainees with different age in their ICT Knowledge and its dimensions with calculated „F" Values.

ICT Knowledge and its Dimensions	Source of Variation	Df = (1,149)		Calculated 'F' Value	'P' Value	Remarks
		Sum of Squares	Mean Square			
Effective Teaching	Between Groups	2650.564	1325.282	13.408	0.000	0.01 Significant
	Within Groups	113572.803	98.845			
Attitude Thoughts	Between Groups	6139.507	3069.753	12.009	0.000	0.01 Significant
	Within	293709.906	255.622			

ICT Knowledge and its Dimensions	Source of Variation	Sum of Squares	Mean Square	Calculated „F" Value	„P" Value	Remarks
	Groups					
Economic Impact	Between Groups	385.189	192.595	6.007	0.003	0.01 Significant
	Within Groups	36841.029	32.064			
Creative Thinking	Between Groups	433.895	216.948	7.932	0.000	0.01 Significant
	Within Groups	31427.424	27.352			
Life based Learning	Between Groups	2141.600	1070.800	10.301	0.000	0.01 Significant
	Within Groups	119442.178	103.953			
Overall ICT Knowledge	**Between Groups**	**46758.093**	**23379.046**	**14.158**	**0.000**	**0.01 Significant**
	Within Groups	**1897371.587**	**1651.324**			

From the Table 5, it is inferred that ‗F' value is 14.158 which is higher than the table value of 4.6 to be significant at 0.01 level of significance. It is concluded that there is a significance difference among ICT Knowledge and its dimensions namely, Effective Teaching 13.408, Attitude Thoughts 12.009, Economic Impact 6.007, Creative Thinking 7.932 and Life based Learning 10.301 in their mean square ICT Knowledge scores with respect to different age group of B.Ed. Trainees. There is a significant difference among teachers belonging to different ages (below 25, 25-30 and above 30 years) in respect of their, ICT Knowledge and its dimensions namely, Effective Teaching, Attitude Thoughts, Economic Impact, Creative Thinking and Life based Learning is the hypothesis 5 is accepted. It is inferred that among B.Ed. Trainees with age below 25, 25-30 and above 30 years differ significantly in their ICT Knowledge.

Hypothesis 6:

There is significant difference among the B.Ed. trainees with Type of Management in their ICT Knowledge and its dimensions.

Table 6: Difference among B.Ed. trainees with Type of Management in their ICT Knowledge and its dimensions with calculated „F" Values.

ICT Knowledge and its Dimensions	Df = (1,149)			Calculated „F" Value	„P" Value	Remarks
	Source of Variation	Sum of Squares	Mean Square			

Effective Teaching	Between Groups	103.172	51.586	0.51	0.6	Not Significant
	Within Groups	116120.195	101.062			
Attitude Thoughts	Between Groups	752.849	376.424	1.446	0.236	Not Significant
	Within Groups	299096.564	260.31			
Economic Impact	Between Groups	220.693	110.347	3.426	0.033	0.05 Significant
	Within Groups	37005.526	32.207			
Creative Thinking	Between Groups	258.309	129.154	4.696	0.009	0.01 Significant
	Within Groups	31603.011	27.505			
Life based Learning	Between Groups	420.187	210.093	1.992	0.137	Not Significant
	Within Groups	121163.591	105.451			
Overall ICT Knowledge	**Between Groups**	**7076.985**	**3538.493**	**2.099**	**0.123**	**Not Significant**
	Within Groups	**1937052.69**	**1685.86**			

From the Table 6, it is inferred that 'F' value is 2.099 which is less than the table value of 3.00 to be significant at 1.00 level of significant. It is concluded that there is no significant difference among ICT Knowledge and its dimensions namely, Effective Teaching 0.510, Attitude Thoughts 1.446, and Life based Learning 1.992 in their mean square ICT Knowledge scores with respect to Type of Management of B.Ed. Trainees.

But, calculated 'f' value 3.426 and 4.696 is greater than table value 3.00 at 0.05 and 0.01, level of significance. It is concluded that there is significance difference among Economic Impact and Creative Thinking on ICT Knowledge in their mean square ICT Knowledge scores with respect to Type of Management of B.Ed. Trainees. There is a significant

difference among B.Ed. Trainees belonging to different Type of Management (Government, Government Aided and Self Financing) in respect of their, ICT Knowledge and its dimensions namely, Effective Teaching, Attitude Thoughts, Economic Impact, Creative Thinking and Life based Learning‖ of the hypothesis number 6 is rejected. It is inferred that among Government, Government Aided and Self Financing do not differ significantly in their ICT Knowledge.

7. Educational implications of theStudy

Based on the investigation of the study, the implications were analysed and described.

1. From the findings that the B.Ed., trainees has moderate level of ICT Knowledge. Even though there are from, government, government-aided and self- financing institute of study they are at a moderate level towards teaching. The B.Ed. trainees should be well equipped with their own aspects of teaching and examining themselves to get valuable points in extension activities.

2. It was concluded that, the ICT Knowledge along with their dimensions doesn't show any significant difference towards teaching. The B.Ed. trainees should involve themselves to improve the ICT Knowledge by updating the knowledge towards teaching.

3. From the findings, there were significant differences in locality of the B.Ed. trainees from rural and urban along with their dimensions towards ICT Knowledge. The involvement and attitude towards teaching will recommend as a better teacher in the society.

8. RECOMMENDATIONS:

- The attitude towards ICT Knowledge should be highly enhanced by the administrators to improve better teaching among the younger teacher's learners.

- The Supervisor should be updated in the ICT Knowledge sectors, so that the involvement of the B.Ed trainees will become better towards teaching.

- There should be a continuous motivation and guidance to the under graduate B.Ed trainees for the betterment to develop the ICT Knowledge.

- Whatever is the age group, constant motivation and encouragement leads to the success of innovative teaching towards the latest technology.

- The B.Ed trainees should involve themselves to improve the teaching competency by updating the ICT Knowledge towards teaching.

9. SUGGESTIONS FOR THE FURTHER RESEARCH

Based on the findings, the investigation suggests the following for future study.

1. Comparative study for both male and female B.Ed. trainees in ICT Knowledge may be conducted all over the state.

2. A similar research work may be undertaken with B.Ed. trainees studying in government, government aided and private colleges can be conducted all over the State.

3. Research may be conducted about B.Ed. trainees situated in rural and urban areas who are studying in Universities all over India.

4. A similar research work may be undertaken with B.Ed. trainees based on educational qualification of UG and PG can be conducted all over the State.

10. CONCLUSION

This research work gives a brief explanation on variables used objectives and hypothesis, method of investigation, instruments used for the research, statistical techniques, analysis and clarification of the study reports. These studies may be much more important towards database analysis for every professional list.

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