

Awareness And Adoption of ICT Among B.Ed Students at Colleges of Education in Trichy District

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Abstract: *Information and Communication Technology (ICT) has become an integral component of modern education, significantly influencing teaching-learning processes in teacher education institutions. The present study investigates the level of awareness and adoption of ICT among B.Ed. students in Colleges of Education. A descriptive survey method was employed, and data were collected from a representative sample of student teachers using a structured questionnaire. The study further highlights that although students show a positive attitude towards integrating ICT in education, there is a need for systematic training programs to improve their competency and confidence in using digital tools. Strengthening ICT infrastructure and incorporating technology-based pedagogical practices in teacher education curriculum can significantly enhance adoption levels.*

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1.1 Introduction: The quality of Education depends to a great extent on the quality of teachers. It is the known fact that quality teachers opt for an innovation in their teaching aspect through integrating technology in the Classroom Instruction to give the best to student-teachers. Since Technology is a powerful tool for problem solving, conceptual development and critical thinking help to make the learning process much easier for the student-teachers. To be effective in the classroom Instruction, Teacher-educators should acquire the knowledge and skills to use the new challenges in promoting innovative teaching strategies that are student centered collaborative, engaging, authentic, self-directed and based on the development of higher order thinking skills with respect to handling classes for B.Ed Students which aims to achieve high academic standards.

1.2 Need And Significance of the Study: Information and communication technologies have brought new possibilities into the teacher education. The inclusion of ICT into the teacher education programme will help in the paradigm shift in learning. Information and communication technologies exemplified by the internet and interactive multimedia are obviously of great significance for teacher education. They need to be effectively integrated into the formal classroom teaching and learning conditions. The integration of ICT in education in general and teacher education in particular is a need of the day. Teacher education institutions have to play a major role in shaping the teacher trainees with adequate awareness, adoption, knowledge and

training in the use of ICT tools in their classrooms. The effective and efficient use of information and communication technology depends largely on awareness of ICT. The awareness and Adoption ICT among B.Ed students towards information and communication technology can promote the usage of information and communication technology in the teaching learning process effectively. Hence, in this context, it is essential to know how the awareness and adoption of B.Ed student towards ICT can promote the usage of information and communication technology in the teaching learning process. Thus the investigator tries to find the awareness and adoption of ICT among B.Ed students at colleges of education in Trichy District

1.3 Statement of the Problem: Teaching is one of the most complex human endeavours imaginable. Teachers arrange content information around an organizing idea, determine appropriateness of available resources, and make judgment about the people involved. The teacher has to play a pivotal role for the success of the educational technology. The teaching aids either modern or traditional only supplement the efforts of the instructor to enhance the learning process. They cannot be a substitute for him. The technologies assist the teachers to do their work in an efficient manner to achieve the educational objectives.

While selecting the media, the criteria to be kept in mind are Availability, Accessibility, Acceptability, Cost and Validity of the media. In recent years, educational access to digital information and communication technologies (ICTs), tools, applications, networks and media worldwide has grown dramatically. They are flexible, offering freedom from rigid scheduling and barriers of time and location; through connectivity, they provide access to every other person on the planet who has an internet account, to thousands of information archives and to millions of web pages. Hence it is obvious for the B.Ed Students of colleges of education to be Aware of ICT and able to adopt ICT in their learning process to enhance their academic performance. Therefore the Investigator is intended to study on “Awareness and Adoption of ICT among B.Ed Students at Colleges of Education in Trichy District”.

1.4 Objectives of the Study: The major objective of the study is to find out the level of Awareness and Adoption of ICT among B.Ed Students at Colleges of Education in Trichy District.

The specific objectives of the study are

1. To find out the significant difference between the Mean scores of B.Ed Students towards Awareness and Adoption of ICT with respect to Gender.
2. To find out the significant difference between the Mean scores of B.Ed Students towards Awareness and Adoption of ICT with respect to Major Subject.
3. To find out the significant difference between the Mean scores of B.Ed Students towards Awareness and Adoption of ICT with respect to Locality of College.
4. To find out the significant difference between the Mean scores of B.Ed Students towards Awareness and Adoption of ICT with respect to their Parental Educational Qualification.
5. To find out the significant difference between the Mean scores of B.Ed Students towards Awareness and Adoption of ICT with respect to their Parental Occupation.
6. To find out the significant difference between the Mean scores of B.Ed Students towards Awareness and Adoption of ICT with respect to their Parental Annual Income.
7. To find out the significant relationship between Awareness and Adoption of ICT among B.Ed Students at Colleges of Education in Trichy District.

1.5 Hypotheses of the Study: From the above objectives, the following research hypotheses have been formulated.

1. There is no significant difference between the Mean scores of B.Ed Students towards Awareness and Adoption of ICT with respect to Gender.
2. There is no significant difference between the Mean scores of B.Ed Students towards Awareness and Adoption of ICT with respect to Major Subject.
3. There is no significant difference between the Mean scores of B.Ed Students towards Awareness and Adoption of ICT with respect to Locality of College.
4. There is no significant difference between the Mean scores of B.Ed Students towards Awareness and Adoption of ICT with respect to their Parental Educational Qualification.
5. There is no significant difference between the Mean scores of B.Ed Students towards Awareness and Adoption of ICT with respect to their Parental Occupation.
6. There is no significant difference between the Mean scores of B.Ed Students towards Awareness and Adoption of ICT with respect to their Parental Annual Income.
7. There is no significant relationship between Awareness and Adoption of ICT among the B.Ed Students at Colleges of Education in Trichy District.

1.6 Methodology: The present study followed Survey Research Design method. A sample of 300 B.Ed Students of Self-Finance Colleges of Education was chosen through random sampling technique. A questionnaire aimed at assessing the Awareness and Adoption of ICT which was a standardized tool constructed by the Investigator. Data collected through the administration of the above tool were subjected to descriptive analysis.

1.7 Sample of the Study: The investigator has randomly selected seven Colleges of Education in Trichy district. The B.Ed Students who were studying in those Self - Finance Colleges of Education were taken as samples. The size of the sample was 300 B.Ed Students who have been selected by random sampling from the seven Colleges of Education.

1.8 Data Analysis

Hypothesis: 1 (H01): There is no significant difference between the Mean scores of B.Ed Students towards Awareness and Adoption of ICT with respect to Gender

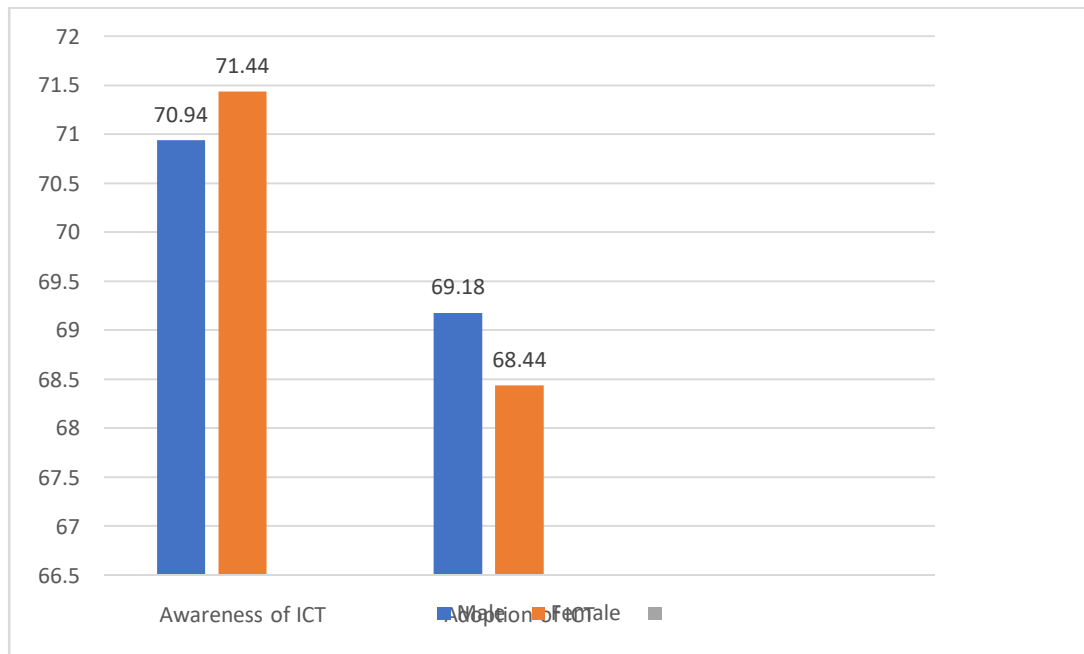
Table – 1.1: Distribution of ‘t’ Value between the Mean Scores of B.Ed Students Towards Awareness And Adoption of ICT With Respect To Gender

Category	Gender	N	Mean	SD	‘t’ value
Awareness of ICT	Male	54	70.94	6.70	0.31**
	Female	246	71.44	11.24	
Adoption of ICT	Male	54	69.18	7.14	0.56**
	Female	246	68.44	8.98	

** - Not Significant at 0.05 level

Table 1.1 shows that the ‘t’ values, 0.31 and 0.56 are not significant at 0.05 level. It is understood from the results that there is no significant difference between Male and Female B.Ed Students towards their Awareness and Adoption of ICT. Male and Female B.Ed Students are having similar level towards their Awareness and Adoption of ICT. Therefore the framed null hypothesis is accepted.

Graph-1.1: ‘t’ Value Between The Mean Scores of B.Ed Students Towards Awareness And Adoption of ICT with Respect to Gender



Hypothesis:2 (H02): There is no significant difference between the Mean scores of B.Ed Students towards Awareness and Adoption of ICT with respect to Major Subject

Table – 1.2: Distribution of ‘t’ Value Between The Mean Scores of B.Ed Students Towards Awareness And Adoption of ICT With Respect to Major Subject

Category	Major Subject	N	Mean	SD	‘t’ value
Awareness of ICT	Arts	125	71.99	10.34	0.88**
	Science	175	70.90	10.72	
Adoption of ICT	Arts	125	68.10	9.08	0.80**
	Science	175	68.92	8.37	

** - Not Significant at 0.05 level

It is seen from the Table 1.2 that the ‘t’ values, 0.88 and 0.80 are not significant at 0.05 level. It implies from the results that there is no significant difference between Arts and Science B.Ed Students towards their Awareness and Adoption of ICT. Arts and Science subject B.Ed Students are found to be similar towards Awareness and Adoption of ICT. Therefore the framed null hypothesis is accepted.

Hypothesis:3 (H03): There is no significant difference between the Mean scores of B.Ed Students towards Awareness and Adoption of ICT with respect to Locality of College

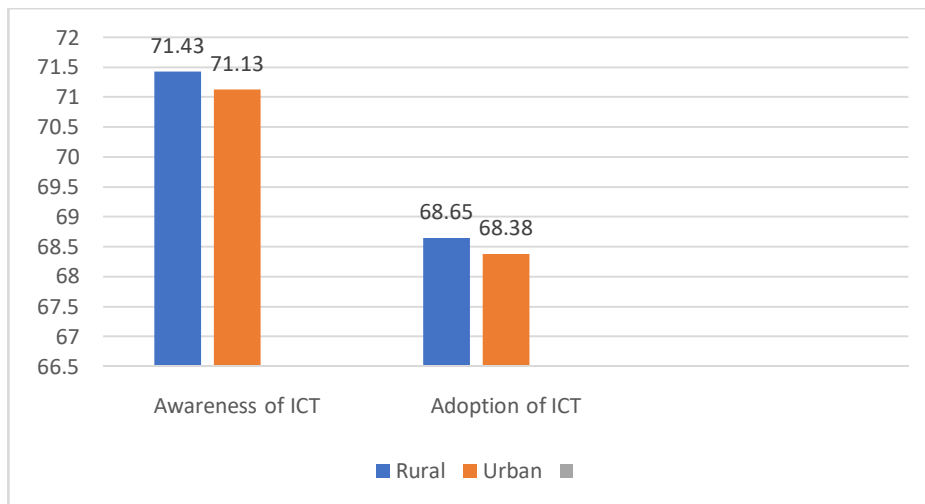
Table – 1.3: Distribution of ‘t’ Value Between The Mean Scores of B.Ed Students Towards Awareness And Adoption of ICT With Respect to Locality of College

Category	Locality of College	N	Mean	SD	‘t’ value
Awareness of ICT	Rural	220	71.43	10.51	0.22**
	Urban	80	71.13	10.762	
Adoption of ICT	Rural	220	68.65	7.92	0.23**
	Urban	80	68.38	10.51	

** - Not Significant at 0.05 level

It is seen from the Table 1.3 that the ‘t’ values, 0.22 and 0.23 are not significant at 0.05 level. It is understood from the results that there is no significant difference between Rural and Urban college area B.Ed Students towards their Awareness and Adoption of ICT. Rural and Urban college area B.Ed Students are found to be similar towards their Awareness and Adoption of ICT. Therefore the framed null hypothesis is accepted.

Graph-1.2: ‘t’ Value Between The Mean Scores of B.Ed Students Towards Awareness And Adoption of ICT With Respect to Locality of College



Hypothesis:4 (H04): There is no significant difference between the Mean scores of B.Ed Students towards Awareness and Adoption of ICT with respect to their Parental Educational Qualification

Table – 1.4: Significant Differences between The Mean Scores of B.Ed Students Towards Awareness And Adoption of ICT With Respect to Their Parental Educational Qualification

Category	Parental Educational Qualification	Sum of Squares	df	Mean Square	F
Awareness of ICT	Between Groups	47.09	2	23.54	0.21**
	Within Groups	33340.53	297	112.25	
	Total	33387.63	299		

Adoption of ICT	Between Groups	147.93	2	73.96	0.98**
	Within Groups	22345.34	297	75.23	
	Total	22493.27	299		

** - Not Significant at 0.05 level

Table 1.4 reveals that the F values, 0.21 and 0.98 are not significant at 0.05 level. The result shows that there is no significant difference between B.Ed Students towards Awareness and Adoption of ICT with respect to their Parental Educational Qualification. Therefore the framed null hypothesis is accepted.

Hypothesis:5 (H05): There is no significant difference between the Mean scores of B.Ed Students towards Awareness and Adoption of ICT with respect to their Parental Occupation

Table – 1.5: Significant Differences between The Mean Scores of B.Ed Students Towards Awareness And Adoption of ICT With Respect to Their Parental Occupation

Category	Parental Occupation	Sum of Squares	df	Mean Square	F
Awareness of ICT	Between Groups	140.34	2	70.17	0.62**
	Within Groups	33247.29	297	111.94	
	Total	33387.63	299		
Adoption of ICT	Between Groups	169.60	2	84.80	1.12**
	Within Groups	22323.67	297	75.16	
	Total	22493.27	299		

** - Not Significant at 0.05 level

It is obviously seen from the Table – 1.5 that the F values, 0.62 and 1.12 are not significant at 0.05 levels. The result reveals that there is no significant difference between B.Ed Students towards Awareness and Adoption of ICT with respect to their Parental Occupation. Therefore the framed null hypothesis is accepted.

Hypothesis:6(H06): There is no significant difference between the Mean scores of B.Ed Students towards Awareness and Adoption of ICT with respect to their Parental Annual Income

Table – 1.6: Significant Differences between The Mean Scores of B.Ed Students Towards Awareness And Adoption of ICT with Respect to Their Parental Annual Income

Category	Parental Annual Income	Sum of Squares	df	Mean Square	F
Awareness of ICT	Between Groups	344.23	2	172.11	1.54**
	Within Groups	33043.39	297	111.25	
	Total	33387.63	299		

Adoption of ICT	Between Groups	52.27	2	26.13	0.34**
	Within Groups	22441.00	297	75.55	
	Total	22493.27	299		

** - Not Significant at 0.05 level

It is understood from the Table – 1.6 that the F values, 1.54 and 0.34 are not significant at 0.05 levels. From the above table the result shows that there is no significant difference between B.Ed Students towards Awareness and Adoption of ICT with respect to their Parental Annual Income. Therefore the framed null hypothesis is accepted.

Hypothesis:7 (H07): There is no significant relationship between Awareness and Adoption of ICT among B.Ed Students at Colleges of Education in Trichy District

Table – 1.7: Significant Relationship between The Level of Awareness And Adoption of ICT Among B.Ed Students At Colleges of Education in Trichy District

Variables	N	r
Awareness and Adoption of ICT	300	0.27*

** . Correlation is significant at the 0.01 level (2-tailed).

From the above table 1.7 it is seen that the 'r' value 0.27 is a significant at 0.01 levels. It is understood from the result that there is a significant relationship between Awareness and Adoption of ICT among B.Ed Students at Colleges of Education in Trichy District. Hence the framed null hypothesis is found to be rejected.

1.9 Findings of the Study: The following are the major findings of the study from the analysis of the data

- Male and Female B.Ed Students are similar in Awareness and Adoption of ICT.
- B.Ed Students of Arts and Science major are found to be similar in Awareness and Adoption of ICT.
- B.Ed Students of Rural and Urban college area are similar in Awareness and Adoption of ICT.
- There is no significant difference between the Mean scores of B.Ed Students in Awareness and Adoption of ICT with respect to their Parental Educational Qualification.
- B.Ed Students of colleges of education are similar in Awareness and Adoption of ICT with respect to their Parental Occupation.
- There is no significant difference between the Mean scores of B.Ed Students in Awareness and Adoption of ICT with respect to their Parental Annual Income.
- There is a significant relationship between Awareness and Adoption of ICT among B.Ed Students.

1.10 Conclusion: From the results obtained through data analysis, it is revealed that the level of Awareness and Adoption of ICT among B.Ed Students is high in Tiruchirappalli district. It shows that the B.Ed Students are having more knowledge about ICT. Male and Female, Arts and Science, Rural and Urban, UG and PG qualified B.Ed Students are having similar level of Awareness and Adoption of ICT. There is no

significant difference in the level of Awareness and Adoption of ICT among B.Ed Students also with respect to their Age, Parental Educational Qualification, Parental Occupation and Parental Annual Income. More awareness programmes on adoption of ICT and multi-sensory learning experience may be provided through orientation to make them technology oriented skill persons in future. It is necessary for the B.Ed Students who are having more knowledge about ICT should also have the attitude in adopting the ICT tools for classroom instruction to improve their academic career.

References:

- Akudolu, L.R. (2002). Restructuring Nigerian Secondary Education System through Information and Communication Technology (ICT) Driven Curriculum. *Journal of the World Council for Curriculum and Instruction*, 3(1), 8-17.
- Best, John W. (1986). *Research in Education*. Allyn & Bacon, Ed.8 A Viacom Company.
- Martin Valeke, et al (2007). ICT Teacher Training: Evaluation of the Curriculum and Training Approach in Flanders. *Teaching and Teacher Education*, 23,795–808.
- Neeraj Kaushik and Anita Sharma (2010). Computer and Internet Awareness in School-going Students. *Edutracks*, 9(10), 25-31.
- Rajandran, G. (2011). A study on Teachers' Views on Application of Information Technology in Teaching University Students.
- Rafeedali, E. (2009). Computer-Based Technology and its Pedagogical Utility. *Edutracks*, 9(2), 37-39.
- Sunday A. Adeyemo (2010). The Impact of Information and Communication Technology (ICT) On Teaching and Learning of Physics. *International Journal of Educational Research and Technology*, 1(2), 48-59.
- Tholappan, A., & Krishna Kumar, R. (2012). Effectiveness of Video Assisted Instruction in Learning Economics. *Journal of Educational & Psychological Research*, 2(1), 45-48.
- Verma, S.K. (2011). Use of Communication Technologies by Male and Female Teachers of Professional Courses. *GCTE Journal of Research and Extension in Education*, 6(2), 119-122.
- Willem, et. al. (2006). *Evaluation of a Media Literacy course at the University of Barcelona*. An article Retrieved from the website on 06-06-2012 www.eric.ed.gov.
- Yasemin Gulbahar and Ismail Guven (2008). A Survey on ICT Usage and the Perceptions of Social Studies Teachers in Turkey. *Educational Technology & Society*, 11(3), 37-51.