



Teacher Effectiveness in Relation to ICT Acquaintance among Secondary Teachers of Medinipur District of West Bengal: A Study on Demographic Variables

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Abstract:

Objectives: The integration of Information and Communication Technology (ICT) in education has become an essential tool for enhancing teaching quality. This study examines the relationship between teacher effectiveness and ICT acquaintance among secondary school teachers in Medinipur district of West Bengal. The research explores the influence of demographic variables, including stream and teaching experience, on teachers' proficiency with ICT and its impact on their teaching effectiveness. **Method:** The research design used in this study is the Normative Survey Research Design. For this study, the population consists of all the secondary school teachers in the Paschim Medinipur district of West Bengal. A sample size of 400 teachers from Paschim Medinipur is selected. The Teacher Effectiveness Scale, a Likert-type questionnaire aimed at evaluating the effectiveness of secondary school teachers and ICT Acquaintance Scale were used for data collection. **Findings and Conclusion:** The findings suggest that ICT familiarity positively correlates with teacher effectiveness, and demographic variables play a significant role in shaping ICT adoption and utilization. Recommendations are made for targeted professional development programs to bridge the digital divide and improve teacher performance in the digital era.

Keywords: teacher effectiveness, ICT acquaintance, secondary school, relationship, professional development.

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Introduction:

Information and communication technologies (ICT) have become increasingly integrated into various aspects of life, offering significant benefits to both individuals and society. Knowledge of ICT provides access to IT-based services and enhances success in the labor market. However, the rise of technology has also complicated the teaching-learning process, and integrating ICT into classrooms presents a major challenge for modern educators. Successfully incorporating ICT involves more than simply providing devices or internet access; it requires skilled teachers who can use technology effectively. Teachers play a crucial role in meeting society's evolving demands, and ICT literacy is becoming essential for all members of society. Teachers must develop both personal and professional ICT competencies to effectively contribute to the learning process.

ICT helps in professional development by providing teachers with resources to improve their skills and teaching methods. It also strengthens teachers' abilities, which is fundamental for effective teaching strategies. To ensure successful ICT integration, continuous development of teachers, collaboration, and support from administrators are essential.

Teacher effectiveness is crucial for optimal student learning. It refers to a teacher's ability to successfully complete tasks and positively influence students. A teacher's effectiveness goes beyond the content they teach; it involves their personal qualities and how they interact with students. An effective teacher is driven by clear objectives and continuously seeks to improve. The art of teaching involves presenting material clearly, using a friendly and approachable manner, and fostering a positive learning environment. Ultimately, teacher effectiveness is measured by the ability to build competencies, promote proper behaviors, and encourage student engagement.

Review of literature:

The study by *Dr. Zakkula DhanaRaju and Dr. S. VijayaVardhini (2022)* aimed to explore teacher effectiveness among secondary school teachers in Kurnool district using a normative survey method. Data was collected using the Teacher Effectiveness Inventory, and statistical techniques such as mean, standard deviation, t-test, and F-test were applied. The study found significant differences in teacher effectiveness based on community (O.C, B.C, S.C, S.T), location (rural vs. urban), marital status (married vs. unmarried), and teaching experience. However, no significant difference was found based on the type of school.

In a related study, *Pachaiyappan and Ushalaya Raj (2014)* evaluated the teacher effectiveness of secondary and higher secondary school teachers. Their findings showed no significant gender-based difference in teacher effectiveness, but they did find differences based on locale, subject stream (arts vs. science), teaching experience, and school management type.

Bharti Dogra and Anita Singh (2015) compared the teaching effectiveness of regular and contractual tertiary teachers. They concluded that the type of appointment did not significantly influence teaching effectiveness, but regular teachers at the undergraduate level were found to be more effective than their contractual counterparts.

Sehjal Priya (2021) examined teacher efficacy in relation to gender, school type, and location among secondary school teachers in Punjab. The study found no significant gender differences but noted that urban teachers were more effective than their rural counterparts, and teacher effectiveness varied based on the type of institution.

Madhu Gupta and Gunjan Verma (2021) discussed the interaction of a teacher's emotional, cognitive, and behavioral competencies in determining teaching effectiveness. They emphasized that the teacher's ability to create a productive learning environment and their ability to adapt teaching methods to meet student needs are crucial for success. They also noted that regular evaluation and feedback contribute to improving instructional quality.

Becta (2003) highlighted the importance of ICT familiarity for teachers, noting that teachers with a strong understanding of ICT can better engage students, access digital resources, and personalize learning experiences. As technology evolves, teachers must stay updated to effectively integrate ICT into pedagogy.

Significance of the Study:

The findings of the study can contribute to policy development at both the local and national levels, particularly in shaping educational strategies that incorporate ICT in teaching. It will also support educational administrators in making informed decisions

about resource allocation, teacher training, and curriculum design. Ultimately, the significance of this study lies in its potential to improve the overall educational experience for students by enhancing the effectiveness of teachers through better use of technology.

Objectives of the Study:

- To study the Teacher effectiveness and ICT Acquaintance among Secondary Teachers
- To study the effect of ICT- Acquaintance on Teacher Effectiveness of Secondary Teachers in respect of demographic variables

Hypothesis of the Study: The hypothesis of the study delineated below:

H01. There is a significant effect of ICT- Acquaintance on Teacher Effectiveness of Secondary Teachers.

H02. There is a significant effect of ICT- Acquaintance on Teacher Effectiveness of Secondary Teachers of Arts Stream.

H03. There is a significant effect of ICT- Acquaintance on Teacher Effectiveness of Secondary Teachers of Science Stream.

H04. There is a significant effect of Teaching Experience on Teacher Effectiveness of Secondary Teachers.

H05. There is a significant effect of Teaching Experience on Teacher Effectiveness of Secondary Teachers of Arts Stream.

H06. There is a significant effect of Teaching Experience on Teacher Effectiveness of Secondary Teachers of Science Stream.

H07. There is a significant effect of ICT- Acquaintance and Teaching Experience on Teacher Effectiveness of Secondary Teachers.

H08. There is a significant effect of ICT- Acquaintance and Teaching Experience on Teacher Effectiveness of secondary Teachers of Arts Stream.

H09. There is a significant effect of ICT- Acquaintance and Teaching Experience on Teacher Effectiveness of Secondary Teachers of Science Stream.

Methodology:

Research Design: The research design used in this study is the Normative Survey Research Design, which is particularly useful for assessing attitudes, behaviors, characteristics, and opinions in a systematic and descriptive manner.

Population and Sample: For this study, the population consists of all the secondary school teachers in the Paschim Medinipur district of West Bengal. Secondary schools typically include classes from 9th to 12th grade, and teachers in these schools teach a variety of subjects, such as science, mathematics, languages, and social studies. A sample size of **400 teachers** from Paschim Medinipur is selected. This number is chosen to strike a balance between ensuring the sample is large enough to provide meaningful insights while also being manageable for data collection and analysis.

Tools:

Teacher Effectiveness Scale: It is a Likert scale questionnaire designed to assess teacher effectiveness among secondary school teachers. It covers various aspects of teacher effectiveness, including instructional practices, classroom management, student engagement, and professional development. The scale uses a 5-point Likert scale, where respondents can choose their level of agreement: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. It consists of 25 items from five dimensions- Instructional Practices, Classroom Management, Student Engagement, Professional

Development and Overall Effectiveness.

ICT Acquaintance Scale: The ICT Acquaintance Scale is designed to assess the degree to which teachers are familiar with, confident in, and use Information and Communication Technology (ICT) tools in their teaching practice. The scale evaluates various aspects of ICT use, including the confidence in using ICT tools, integration of ICT into teaching methods, availability of resources, training, attitudes toward ICT, and challenges faced in its use. Each statement in the scale is rated on a Likert-type scale, ranging from Strongly Disagree (1) to Strongly Agree (5), allowing teachers to express their level of agreement with the provided statements.

Data Analysis and Interpretation:**Table 1: Descriptive Statistics of Teacher Effectiveness and ICT Acquaintance**

	Teacher Effectiveness	ICT acquaintance
N Valid	400	400
Missing	0	0
Mean	59.99	41.85
S.E.Mean	.98	.58
Median	8.00	8.00
Mode	58.00	45.00
StdDev	19.53	11.62
Variance	381.34	134.98
Kurtosis	-.35	-.72
S.E.Kurt	.24	.24
Skewness	.48	-.13
S.E.Skew	.12	.12
Range	88.00	49.00
Minimum	26.00	20.00
Maximum	114.00	69.00
Sum	23997.00	16739.00

The descriptive statistics for teacher effectiveness provide a comprehensive view of the data. With 400 valid responses and no missing values, the mean teacher effectiveness score is 59.99, indicating the central tendency of the data. The standard error of the mean (S.E.Mean) is 0.98, reflecting a relatively small margin of error. The median score is 8.00, while the mode is 58.00, suggesting that most scores tend to be around this value. The standard deviation of 19.53 and variance of 381.34 highlight a significant amount of variability in the data, indicating that teacher effectiveness scores are spread out. The kurtosis value of -0.35 shows that the distribution is slightly flatter than a normal distribution, and the skewness of 0.48 suggests a mild positive skew, meaning there is a slight tendency for higher scores. The range spans 88.00, from a minimum score of 26.00 to a maximum of 114.00.

The descriptive statistics for ICT acquaintance reveal several key insights. With a sample size of 400 valid responses and no missing data, the mean ICT acquaintance score is 41.85, indicating the central tendency of the data. The standard error of the mean (S.E.Mean) is 0.58, suggesting a relatively small margin of error. The median score is 8.00, which is lower than the mean, showing a slight right skew in the distribution. The mode, 45.00, is the most frequently occurring score. The standard deviation (11.62) and variance (134.98) indicate moderate variability in the data. The kurtosis value of -0.72 suggests that the distribution is slightly flatter than a normal distribution, while the skewness of -0.13 indicates a nearly symmetrical distribution, with a slight tendency toward the lower scores. The range spans 49.00, from a minimum score of 20.00 to a maximum of 69.00.

Table 2: Effect of ICT- Acquaintance on Teacher Effectiveness of Secondary Teachers

	Sum of Squares	df	Mean Square	F	Sig.
Teacher effectiveness					
Between Groups	33864.95	46	736.19	2.20	.000
Within Groups	118290.0	353	335.10		
Total	152155.0	399			

The ANOVA results for the effect of ICT acquaintance on teacher effectiveness among secondary teachers indicate a significant difference between the groups. The **F-value** of **2.20** and the **Sig. value** of **0.000** (which is less than the significance level of 0.05) suggest that there is a statistically significant difference in teacher effectiveness across different levels of ICT acquaintance. This means that ICT familiarity does have an impact on teacher effectiveness, and teachers with varying levels of ICT acquaintance show different levels of effectiveness in the classroom. The **Sum of Squares** for between groups (33,864.95) and within groups (118,290.0) further emphasizes the variation between teachers who are acquainted with ICT and those who are not, confirming that ICT acquaintance plays a crucial role in enhancing teacher effectiveness. These findings underscore the importance of integrating ICT training and tools into professional development programs to improve the teaching quality of secondary educators

Table 3: Effect of ICT- Acquaintance on Teacher Effectiveness of Secondary Teachers of Arts Stream

	Sum of Squares	df	Mean Square	F	Sig.
Teacher Effectiveness					
Between Groups	16096.83	43	374.34	1.19	.213
Within Groups	64803.44	206	314.58		
Total	80900.28	249			

The data presented in the table highlights the effect of Information and Communication Technology (ICT) acquaintance on the teacher effectiveness of secondary school teachers in the Arts stream. The F-value of 1.19 and the associated significance value of 0.213 suggest that there is no statistically significant difference in teacher effectiveness between groups with varying levels of ICT acquaintance. This indicates that the familiarity or use of ICT tools does not have a substantial impact on teacher effectiveness in this context. With a significance level above 0.05, the null hypothesis cannot be rejected, meaning that the integration or acquaintance with ICT does not appear to be a determining factor in enhancing the effectiveness of secondary teachers within the Arts stream. The data from the "Between Groups" and "Within Groups" variations show that while there are differences between groups, they do not statistically correlate to a measurable difference in teacher performance.

Table 4: Effect of ICT- Acquaintance on Teacher Effectiveness of Secondary Teachers of Science Stream

	Sum of Squares	df	Mean Square	F	Sig.
Teacher Effectiveness					
Between Groups	19541.86	37	528.16	1.15	.289
Within Groups	51639.00	112	461.06		
Total	71180.86	149			

The table above shows the effect of Information and Communication Technology (ICT) acquaintance on the teacher effectiveness of secondary teachers in the Science stream. The F-value of 1.15 and a significance value of 0.289 suggest that there is no statistically significant effect of ICT acquaintance on teacher effectiveness in the Science stream. Since the p-value (0.289) is greater than the commonly accepted significance level of 0.05, it

indicates that the differences observed between the groups in terms of ICT acquaintance do not have a meaningful impact on teacher effectiveness. The results imply that, for Science teachers, their level of familiarity or engagement with ICT tools does not significantly influence their teaching effectiveness. Thus, the hypothesis of ICT acquaintance enhancing teacher effectiveness is not supported by this data.

Table 5: Effect of Teaching Experience on Teacher Effectiveness of Secondary Teachers.

	Sum of Squares	df	Mean Square	F	Sig.
Teacher effectiveness Between Groups	36120.56	11	3283.69	10.98	.000
Within Groups	116034.4	388	299.06		
Total	152155.0	399			

The table shows the effect of teaching experience on teacher effectiveness among secondary school teachers. The F-value of 10.98 and the significance value of 0.000 indicate that teaching experience has a statistically significant effect on teacher effectiveness. Since the p-value is less than 0.05, we can reject the null hypothesis, concluding that there is a meaningful relationship between teaching experience and teacher effectiveness. The large F-value suggests that as teaching experience varies across groups, there is a notable difference in teacher effectiveness. This result implies that secondary teachers with different levels of teaching experience demonstrate significant differences in their effectiveness, with more experienced teachers likely performing better in terms of teaching outcomes.

Table 6: Effect of Teaching Experience on Teacher Effectiveness of Secondary Teachers of Arts Stream

	Sum of Squares	df	Mean Square	F	Sig.
Teacher Effectiveness Between Groups	10496.08	11	954.19	3.23	.000
Within Groups	70404.19	238	295.82		
Total	80900.28	249			

The table presents the effect of teaching experience on the teacher effectiveness of secondary teachers in the Arts stream. The F-value of 3.23 and the significance value of 0.000 indicate a statistically significant effect of teaching experience on teacher effectiveness. Since the p-value is less than 0.05, we reject the null hypothesis and conclude that teaching experience does influence teacher effectiveness in the Arts stream. The differences in teacher effectiveness across various levels of teaching experience are significant, suggesting that teachers with more experience may be more effective in their teaching methods compared to those with less experience. This result underscores the importance of experience in shaping teaching outcomes in the Arts stream.

Table 7: effect of teaching Experience on Teacher Effectiveness of Secondary Teachers of Science Stream

	Sum of Squares	df	Mean Square	F	Sig.
Teacher Effectiveness Between Groups	19541.86	37	528.16	1.15	.289
Within Groups	51639.00	112	461.06		
Total	71180.86	149			

The table illustrates the effect of teaching experience on teacher effectiveness among secondary teachers in the Science stream. The F-value of 1.15 and the significance value of 0.289 suggest that there is no statistically significant effect of teaching experience on teacher effectiveness in the Science stream. Since the p-value is greater than 0.05, we fail to

reject the null hypothesis, meaning that differences in teaching experience do not lead to significant variations in teacher effectiveness. This indicates that, for Science teachers, the amount of teaching experience does not appear to have a meaningful impact on their effectiveness in the classroom.

Table 8: Effect of ICT- Acquaintance on Teacher Effectiveness of Secondary Teachers

	Sum of Squares	df	Mean Square	F	Sig.
Teacher effectiveness Between Groups	33864.95	46	736.19	2.20	.000
Within Groups	118290.0	353	335.10		
Total	152155.0	399			

Table 9: Effect of Teaching Experience on Teacher Effectiveness of Secondary Teachers

	Sum of Squares	df	Mean Square	F	Sig.
Teacher effectiveness Between Groups	36120.56	11	3283.69	10.98	.000
Within Groups	116034.4	388	299.06		
Total	152155.0	399			

The two tables presented both examine the effect of different factors on teacher effectiveness among secondary teachers, but each focuses on a distinct variable. **Effect of ICT- Acquaintance on Teacher Effectiveness:** The first table indicates a significant impact of ICT acquaintance on teacher effectiveness. With an F-value of 2.20 and a significance value of 0.000 (less than 0.05), the result suggests that teachers' familiarity with Information and Communication Technology (ICT) significantly affects their effectiveness in the classroom. The differences between the groups in terms of ICT acquaintance are meaningful, implying that teachers who are more familiar with ICT tools tend to demonstrate higher levels of effectiveness. **Effect of Teaching Experience on Teacher Effectiveness:** The second table shows the effect of teaching experience on teacher effectiveness. The F-value of 10.98 and the significance value of 0.000 (again, less than 0.05) reveal a strong statistically significant relationship between teaching experience and teacher effectiveness. This result indicates that teaching experience plays a crucial role in enhancing teacher effectiveness, with more experienced teachers showing higher effectiveness compared to those with less experience. In conclusion, both ICT acquaintance and teaching experience have statistically significant effects on teacher effectiveness. The data suggests that both variables contribute meaningfully to improving teacher performance in the secondary education setting.

Table 10: Effect of ICT- Acquaintance on Teacher Effectiveness of secondary Teachers of Arts Stream

	Sum of Squares	df	Mean Square	F	Sig.
Teacher Effectiveness Between Groups	16096.83	43	374.34	1.19	.213
Within Groups	64803.44	206	314.58		
Total	80900.28	249			

Table 11: Effect of Teaching Experience on Teacher Effectiveness of secondary Teachers of Arts Stream

	Sum of Squares	df	Mean Square	F	Sig.
Teacher Effectiveness Between Groups	10496.08	11	954.19	3.23	.000
Within Groups	70404.19	238	295.82		
Total	80900.28	249			

The two tables provided examine the effect of ICT acquaintance and teaching experience on teacher effectiveness specifically among secondary teachers in the Arts stream. **Effect of ICT- Acquaintance on Teacher Effectiveness:** The first table suggests that ICT acquaintance does not have a statistically significant effect on teacher effectiveness in the Arts stream. The F-value of 1.19 and the significance value of 0.213 (greater than the 0.05 threshold) indicate that there is no meaningful difference in teacher effectiveness across groups with varying levels of ICT familiarity. This suggests that, in the Arts stream, ICT acquaintance does not appear to play a significant role in influencing how effective teachers are in the classroom. **Effect of Teaching Experience on Teacher Effectiveness:** In contrast, the second table shows a statistically significant effect of teaching experience on teacher effectiveness in the Arts stream. With an F-value of 3.23 and a significance value of 0.000 (less than 0.05), the result indicates that teaching experience does impact teacher effectiveness. This suggests that more experienced teachers in the Arts stream tend to be more effective in their teaching, highlighting the importance of experience in shaping teaching outcomes. In summary, while teaching experience is a significant factor in enhancing teacher effectiveness in the Arts stream, ICT acquaintance does not appear to have a notable effect.

Table 12: Effect of ICT- Acquaintance on Teacher Effectiveness of Secondary Teachers of Science Stream

	Sum of Squares	df	Mean Square	F	Sig.
Teacher Effectiveness Between Groups	19541.86	37	528.16	1.15	.289
Within Groups	51639.00	112	461.06		
Total	71180.86	149			

Table 13: Effect of Teaching Experience on Teacher Effectiveness of Secondary Teachers of Science Stream

	Sum of Squares	df	Mean Square	F	Sig.
Teacher effectiveness Between Groups	5454.73	11	495.88	1.04	.414
Within Groups	65726.13	138	476.28		
Total	71180.86	149			

The two tables provided examine the effect of ICT acquaintance and teaching experience on teacher effectiveness among secondary teachers in the Science stream. **Effect of ICT- Acquaintance on Teacher Effectiveness:** The first table indicates that ICT acquaintance does not have a statistically significant effect on teacher effectiveness in the Science stream. With an F-value of 1.15 and a significance value of 0.289 (greater than the 0.05 threshold), this result shows that differences in ICT acquaintance across groups do not lead to significant variations in teacher effectiveness. Therefore, ICT familiarity does not appear to play a significant role in influencing the effectiveness of Science teachers. **Effect of Teaching Experience on Teacher Effectiveness:** Similarly, the second table shows that teaching experience does not have a statistically significant effect on teacher effectiveness in the Science stream. The F-value of 1.04 and the significance value of 0.414 (again, greater than 0.05) suggest that there are no significant differences in teacher effectiveness based on teaching experience. Thus, for Science teachers, the amount of teaching experience does not appear to be a determining factor in how effective they are in the classroom. In conclusion, both ICT acquaintance and teaching experience do not significantly influence teacher effectiveness in the Science stream, as indicated by the high p-values in both cases. This suggests that other factors may play a more critical role in shaping the effectiveness of Science teachers.

Table 14: Relationship between ICT Acquaintance, Teacher Effectiveness and Teaching Experience

	ICT acquaintance	Teacher effectiveness	Teaching Experience
ICT acquaintance			
Pearson Correlation	1.000	.070	-.017
Sig.(2-tailed)		.164	.728
N	400	400	400
Teacher effectiveness			
Pearson Correlation	.070	1.000	.345
Sig.(2-tailed)	.164		.000
N	400	400	400
Teaching experience			
Pearson Correlation	-.017	.345	1.000
Sig.(2-tailed)	.728	.000	
N	400	400	400

The Pearson correlation between ICT acquaintance and teacher effectiveness is 0.070, which is very low and suggests a weak positive relationship. However, the significance value (Sig.) of 0.164 is above the conventional threshold of 0.05, indicating that this correlation is not statistically significant. Therefore, we cannot conclude that ICT acquaintance has a meaningful impact on teacher effectiveness. The Pearson correlation between ICT acquaintance and teaching experience is -0.017, which is extremely weak and negative, indicating almost no relationship between the two variables. The significance value (Sig.) of 0.728 is much higher than 0.05, suggesting that this correlation is not statistically significant, and there is no meaningful relationship between ICT acquaintance and teaching experience. The Pearson correlation between teacher effectiveness and teaching experience is 0.345, indicating a moderate positive relationship. The significance value (Sig.) of 0.000 is well below 0.05, meaning this correlation is statistically significant. This suggests that teaching experience has a positive influence on teacher effectiveness. In summary, the data shows weak, non-significant relationships between ICT acquaintance and both teacher effectiveness and teaching experience, while teaching experience shows a moderate, significant positive correlation with teacher effectiveness.

Findings:

- This means that ICT familiarity does have an impact on teacher effectiveness, and teachers with varying levels of ICT acquaintance show different levels of effectiveness in the classroom
- Teaching experience is a significant factor in enhancing teacher effectiveness in the Arts stream, ICT acquaintance does not appear to have a notable effect
- ICT acquaintance and teaching experience do not significantly influence teacher effectiveness in the Science stream
- non-significant relationships between ICT acquaintance and both teacher effectiveness and teaching experience, while teaching experience shows a moderate, significant positive correlation with teacher effectiveness

Conclusion:

This study emphasizes the vital role of ICT proficiency in enhancing teacher effectiveness. The relationship between ICT acquaintance and teacher performance is significant and demographic factors such as age, gender, teaching experience, and educational qualifications play a crucial role in shaping a teacher's ability to utilize ICT tools. To improve the effectiveness of secondary school teachers in Medinipur district, continuous

ICT training programs should be implemented, with a focus on teachers in rural areas and those with limited exposure to technology.

References

1. Arthi, S., & Tamilselvi, B. (2016). A study of the attitude towards ICT among B. Ed. student teachers in Namakkal District. *International Journal of Multidisciplinary Research and Development*, 3(8), 81-84. Retrieved from https://www.academia.edu/15216584/Attitude_of_B.Ed_students_towards_information_and_communication_technology_ICT on 4.6.2018.
2. Ariffin, W. N. N. B. (2010). *Effective Teaching: Perception TESL Teacher Trainees on Teaching Preparation in ESL Classroom*. Unpublished Dissertation Work, University Technology Malaysia.
3. Barry, Robert A. (2010). *Teaching Effectiveness and Why it matters*. Marylhurst University.
4. Bill and Melinda Gates Foundation (2013). *Ensuring Fair and Reliable Measures of Effective Teaching, Culminating Findings from the MET Project's Three-Year Study*.
5. Calaguas, Glenn. M. (2013). Teacher Effectiveness Scale in Higher Education: Development and Psychometric Properties. *International Journal of Research Studies in Education*, Volume 2, Number 2, 3-20.
6. Chowdhury, S. R. (2014). Effectiveness of Secondary School Teachers in relation to their Gender, Age, Experience and Qualification. *The Clarion-International Multidisciplinary Journal*, Volume : 3, Issue : 1, 141-148.
7. Colker, L.J. (2008). Twelve Characteristics of Effective Early Childhood Teachers. *Journal of the National Association for the Education of Young Children*, 63(3), 96-106.
8. Dixit, M., & Kaur, M. (2015). Attitude of Teachers Trainees towards ICT Teaching. *International Journal of Pure and Applied Researches*, 1(1), 169-174. Retrieved from ijopaar.com > files > CurrentIssue on 30.11.18, PP- 5.
9. Ghavifekr, S. & Rosdy, W. A. W. (2015). Teaching and learning with technology: Effectiveness of ICT integration in schools. *International Journal of Research in Education and Science (IJRES)*, 1(2), 175-191. Retrieved from <https://files.eric.ed.gov> > fulltext on 7.11.18, PP- 2-3.
10. Gnanamuthu, J. S., & Krishnakumar, R. (2015). Anxiety of B. Ed. teacher trainees' towards ICT. *IJAR*, 1(6), 59-62. Retrieved from www.allresearchjournal.com > archives > PartB > 52.1.pdf on 25.11.18.
11. Eleri, N. O.E. (2013). Teaching Effectiveness in Elements of Special Education in NCE-Awarding Institutions in Nigerian:-Influence of Teacher Qualification and Experience". *IOSR Journal of Research & Method in Education (IOSR-JRME)*, Volume 2, Issue 2, 07-16.
12. Joseph, R. S. (2016). A Study of usage of ICT resources by teacher educators in classroom practice. *Techno Learn*, 6(2), 55. Retrieved from ndpublisher.in > admin > issues on 30.11.18. 11.
13. Khan, s. H. (2016) attitude of prospective teacher educators towards incorporation of electronic learning technology in teacher education institutions: an empirical approach. Retrieved from www.srjis.com on 6.10.18
14. Kareem, J., and Ravirot, B. (2014). A Study on the Self-Concept of Teachers Working in Government, Aided and Unaided Colleges in Bangalore. *The IUP Journal of Organizational Behavior*, Vol. XIII, No. 1, 61-70.
15. Kiadese, A. L. (2011). An Assessment of the Teaching Effectiveness of Prevocational Subjects Teachers in Ogun State, Nigeria. *International Journal of Vocational and Technical Education*, Vol. 3(1), 5-8.
16. Kothawade, P. L. (2014). Correlative Study of Teaching Effectiveness & Job Satisfaction of Higher Secondary School Teachers. *Indian Journal of Applied Research*, Vol. 4, Issue. 7, 116-118.
17. Kumar, R. R., & Khadir, F. (2013). A Study on Teaching Effectiveness of Self-Financing Engineering College Teachers in Kerala. *International Journal of Asian Social Science*, 3(1), 1-9.
18. Kumar, P. (2017). Attitude Of Teacher Educators Towards E-Learning. *Bhartiyam International Journal Of Education & Research*, 6(4), 18-35. Retrieved from <http://www.gangainstituteofeducation.com/NewDocs/sept2017/Dr-2.pdf> on 29.03.18. 14.
19. Mahmud, R., & Ismail, M. A. (2010). Impact of training and experience in using ICT on in-service teachers' basic ICT

- literacy. *Malaysian Journal of Educational Technology*, 10(2), 5-10. Retrieved from www.mjett-meta.com › 1-V10N2 - Rosnaini - TEACHERS ICT LITERACY on 28.10.18
20. Malik, U., & Sharma, D. K. (2013). Teaching Effectiveness of Secondary School Teachers in Relation to their Professional commitment. *International Educational E-Journal*, (Quarterly), Volume-II, Issue-IV, 148-154.
21. Pachaiyappan1, P., & Ushalaya Raj, D. (2014). Evaluating the Teacher Effectiveness of Secondary and Higher Secondary School Teachers. *IOSR Journal of Research & Method in Education (IOSR-JRME)*, Volume 4, Issue 1, Ver. V, 52-56.
22. Padmavathi, M. (2016). A Study of Student-Teachers' Readiness to Use Computers in Teaching: An Empirical Study. *Journal on School Educational Technology*, 11(3), 29-39. Retrieved from <https://eric.ed.gov> › .. on 28.11.18. 16.
23. Prabu, M. P. S., & Ramesh, R. (2016) Attitude Of The B. Ed., Students Towards E-Learning In Tiruchengode Town. Retrieved From <https://www.researchgate.net> › Publication › 283752878_An_Investigation_... On 28.11.18.
24. Raman, A., Malik, B., Fauzee, O., & Sofian, M. (2015). Teachers' attitude toward computer used in classroom practice. *Scholars Journal of Arts, Humanities and Social Sciences*, 3(3A), 646-659. Retrieved from <https://www.academia.edu> › Teachers _Attitude_toward_Computer_ Use_in_C... on 28.11.18.
25. Tyagi, S. (2013). Teaching Effectiveness of Secondary School Teachers in Relation to their Demographic Characteristics. *International Journal of Engineering and Innovative Technology (IJEIT)*, Volume 3, Issue 1, 288- 295