IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Attitude Of Secondary School Teachers Towards Information Communication Technology

Anjushri Ghorai*

*SACT-1 of Seveyatan Sikshan Mahavidyalaya, Jhargram, India.

ABSTRACT: Everyone involved in education will acknowledge that the use of Information Communication Technology has ushered in a revolution in the field of education. The use of ICT in various aspects of education, such as curriculum development, teaching-learning processes, evaluation, educational administration and management, has made educational activities simpler, more effective and more precise. As a result, the use of ICT is steadily increasing. However, all of this represents the supportive role of ICT in educational activities. So this ICT program is very successful in our school. The purpose of the study was to investigate the attitude towards ICT of secondary schools teachers under West Bengal Board of Secondary Education in West Bengal. Data was collected from 115 secondary schools teachers. The tools used to collect data were 'Teacher's Attitude towards ICT scale' (reliability = 0.753). After analysing the data, it was found that the teachers of secondary schools had almost positive attitude towards ICT.

Key Words: Information and Communication Technology, Teachers.

INTRODUCTION:

Modern civilization is science-based and technology-driven. Consequently, whether we like it or not, science and technology have influenced our way of life. Most people exchange information and communicate with each other through telecommunications. Similarly, radio and television have become essential and integral parts of our lives. Advances in science and technology have improved communication systems, and necessary items for daily life are now easily accessible. In other words, technology has permeated not only leisure and entertainment but also every aspect of human activity in daily life. It is now a reality that in this age of modern mechanical civilization, humans cannot deny the influence of technology. Education is also not immune to this influence; currently, radio, television, tape recorders, OHP, computers, teaching machines, and other devices are being used extensively in the field of education. These devices are very effectively assisting in the preservation, dissemination, and development of human knowledge. In the field of education, that is, in learning and teaching, these mechanical tools are effectively helping to achieve educational goals. The trend of using such devices in education has given rise to information and communication technology (ICT).

On reviewing the various literature it was observed that ICT is facilitating student, teachers and end users and in addition he tried to explore the potential for future growth and development (Zafar, 2019). Singh, Dubey & Sonkar (2022) pointes that the use of ICTs in education, which will benefit us in understanding the ICT aids that can assist stakeholders in delivering high-quality education. Souheyla (2019) observed that how ICT, all through teaching and learning, can promise that the learners have a most favourable learning experience. Ghavifekr & Rosdy (2015) found that ICT integration has a great effectiveness for both teachers and students. Njideka (2015) investigated that there efforts should be made by the universities to make the student-teachers imbibe the culture of integrating ICT into pedagogy and other educational activities. Fred, Musa & Muhammadi (2024) found that students in the study area were not easily accessing the necessary ICT tools and this had a significant relationship with the implementation of the O' Level ICT curriculum. Mandal (2024) observed that The impact of ICT on the performance of teaching and learning process among the D. El. Ed. Institutions with respect to Gender (Male & female), Habitat (Rural & Urban) and Institution type (Government, Government-Aided & Selffinance) was measured by the researcher for administering the present study and it is found that they play a very significant role in ICT based creation.

Objective:

To find out the Teacher's Attitude towards ICT.

Hypothesis:

For objective no.O_1;

$H_0$1: There would be no significant difference between male and female teachers in their attitude towards ICT.

$H_0$2: There would be no significant difference between permanent and para teachers in their attitude towards ICT.

$H_0$3: There would be no significant difference between graduation and post graduation teachers in their attitude towards ICT.

$H_0$4: There would be no significant difference between with B.Ed and without B.Ed teachers in their attitude towards ICT.

$H_0$5: There would be no significant difference between below 35 years, between 36-45 years and above 46 years teachers in their attitude towards ICT.

$H_0$6: There would be no significant difference between language, arts and science teachers in their attitude towards ICT.

$H_0$7: There would be no significant difference between below 5 years, between 6-15 years and above 16 years experience teachers in their attitude towards ICT.

$H_0$8: There would be no significant difference between computer at home mostly used and not computer at home mostly used by the teachers in their attitude towards ICT.

METHOD:

Survey technique had been used in the present study. The present study was quantitative in nature.

Participant:

The present study analysed the secondary school teachers of secondary schools under West Bengal Board of Secondary Education from South 24 Parganas and North 24 Pargana district in West Bengal were selected as the target population.

Sample and sampling Procedures:

The sample was selected randomly. Among the population the researcher selected 115 teachers from 12 schools from South 24 Parganas and North 24 Pargana district in West Bengal.

Table 1: Introduction of sample:

Categorical Variables		No. Of Individuals	Total Sample
Gender	Male	56	115
	Female	59	
Employment Status	Permanent	106	115
	Parateacher	9	
Highest level of Education	Graduation	29	115
	Post Graduation	86	
Professional Qualification	With B. Ed	106	115
	Without B. Ed	9	
Age	Below 35 Years	37	115
	Between 36 to 45 Years	59	
	Above 46 years	19	
Stream of Teaching	Language	33	115
	Arts	34	
	Science	48	
Teaching Experience	Below 5 Years	22	115
	Between 6 to 15 Years	69	
	Above 16 Years	24	
Computer at Home Mostly Used by Teachers	Used	58	115
	Not Used	57	

Measurement Approaches:

Attitude Scale (teacher attitude towards ICT): A scale has been made to measure the attitude of teacher. It is a self made six point Likert's method scale. It has 26 items which are divided into positive and negative.

For scoring of the questionnaire (teacher attitude towards ICT), numerical values were assigned to the six categories of the responses as: Strongly Agree (SA)=6, Moderately Agree (MA)=5, Slightly Agree (Sl. A)=4, Slightly Disagree (Sl.D)=3, Moderately Disagree (MD)=2, Strongly Disagree(SD)=1 for positive items and reverse for negative.

Cronbach's Alpha value of reliability of teacher attitude towards ICT scale was found out to be 0.753. The value suggests that scale is confidently reliable. The reliability statistics of attitude towards ICT scale is presented in table 2.

Table 2: Reliability Statistics of Attitude towards ICTScale.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.733	.753	26

Table 3: Item Statistics of Attitude towards ICT Scale.

Item	Mean	Std. Deviation	N
Item 01	5.59	.700	115
Item 02	3.41	1.680	115
Item 03	3.70	1.601	115
Item 04	5.46	.809	115
Item 05	3.16	1.625	115
Item 06	4.51	1.635	115
Item 07	5.33	1.015	115
Item 08	3.06	1.477	115
Item 09	4.94	.871	115
Item 10	5.23	.909	115
Item 11	5.49	.799	115
Item 12	3.49	1.630	115
Item 13	5.52	.693	115
Item 14	5.19	1.008	115
Item 15	3.05	1.648	115
Item 16	5.17	1.434	115
Item 17	2.94	1.698	115
Item 18	3.14	1.726	115
Item 19	4.01	1.668	115
Item 20	3.97	1.706	115
Item 21	3.23	1.732	115
Item 22	4.64	1.440	115
Item 23	4.71	1.303	115
Item 24	4.71	1.138	115
Item 25	2.63	1.441	115
Item 26	2.55	1.272	115

Table 4: Scale Statistics of Attitude towards ICT.

Mean	Variance	Std. Deviation	N of Items
108.83	167.531	12.943	26

The researcher established the content validity of the attitude towards ICT scale. This scale prepared on the basis of experts checking and experts' opinion or suggestions.

Procedure of Data Collection:

The researcher had collected data from secondary school teachers by one scale (attitude towards ICT). The researcher collected data individually from 115 school teachers by interview and questionnaire.

Procedure of data analysis:

Inferential statistics like 't'-test and ANOVA had been applied to find out the result and inference. Data was analyzed by MS-Excel 2007 and SPSS software both.

RESULTS:

Descriptive Statistics:

Table 5: Descriptive Statistics for the Score on Attitude towards ICT.

	Subject		Statistic	Std. Error
Attitude towards ICT	Mean		108.83	1.207
	95% Confidence Interval for Mean	Lower Bound	106.44	
		Upper Bound	111.22	
	5% Trimmed Mean		108.49	
	Median		108.00	
	Variance		167.531	
	Std. Deviation		12.943	
	Minimum		73	
	Maximum		142	
	Range		69	
	Interquartile Range		18	
	Skewness		.370	.226
	Kurtosis		-.168	.447

From the analysis of descriptive statistics of the 'Attitude towards ICT' (table 5), it can be observed that the mean score is 108.83 with standard deviation of 12.943. Here, the mean score is calculated out of maximum possible total score of 156 (26x6) taking all questionnaire items together, indicating the existence of average Attitude towards ICT among the secondary school teachers.

Testing of $H_0$1:

Table 6: Independent Samples Test of Attitude towards ICT: Gender

Subject	Groups	N	Mean	S.D.	df	t	Sig
Attitude towards ICT	Male	115	109.23	14.691	113	0.326#	0.746
	Female		108.44	11.150			

Not significant at 0.05level

In the table 6, the result of independent samples t-test reveals that the calculated t value for $H_0$1 is not significant at 0.05 level (t_{113}=0.326, P=0.746). So the null hypothesis is not rejected; there is no significant difference between male and female teachers of secondary schools with respect to their attitude towards ICT.

Testing of $H_0$2:

Table 7: Independent Samples Test of Attitude towards ICT: Employment Status

Subject	Groups	N	Mean	S.D.	df	t	Sig
Attitude towards ICT	Permanent	115	109.30	12.909	113	1.358#	0.177
	Para teacher		103.22	12.726			

Not significant at 0.05level

In the table 7, the result of independent samples t-test reveals that the calculated t value for $H_0$2 is not significant at 0.05 level (t_{113}=1.358, P=0.177). So the null hypothesis is not rejected; there is no significant difference between permanent and para teachers of secondary schools with respect to their attitude towards ICT.

Testing of $H_0$3:

Table 8: Independent Samples Test of Attitude towards ICT: Highest Level of Education

Subject	Groups	N	Mean	S.D.	df	t	Sig
Attitude towards ICT	Graduation	115	108.86	14.518	113	0.017#	0.986
	Post Graduation		108.81	12.460			

Not significant at 0.05level

In the table 8, the result of independent samples t-test reveals that the calculated t value for $H_0$3 is not significant at 0.05 level (t_{113}=0.017, P=0. 986). So the null hypothesis is not rejected; there is no significant difference between graduation and post graduation teachers of secondary schools with respect to their attitude towards ICT.

Testing of $H_0$4:

Table 9: Independent Samples Test of Attitude towards ICT: Professional Qualification

Subject	Groups	N	Mean	S.D.	df	t	Sig
Attitude towards ICT	With B.Ed	115	109.22	13.026	113	1.113#	0.268
	Without B.Ed		104.22	11.595			

Not significant at 0.05level

In the table 9, the result of independent samples t-test reveals that the calculated t value for $H_0$4 is not significant at 0.05 level (t_{113}=1.113, P=0.268). So the null hypothesis is not rejected; there is no significant difference between with B.Ed and without B.Ed teachers of secondary schools with respect to their attitude towards ICT.

Testing of $H_0$5:

Table 10: ANOVA result based on Attitude towards ICT: Age

Subject	Groups	N	Mean	S.D.	df	F	Sig
Attitude towards ICT	Below 35 years	115	112.57	12.668	114	2.785#	0.066
	Between 36-45years		106.29	12.188			
	Above 46 years		109.42	14.531			

Not significant at 0.05level

Table 10 indicates that Analysis of Variance (ANOVA) of Attitude towards ICT based on Age. From the table 10 found that the result of the calculated F value is not significant at 0.05 level (F_{114}= 2.785, P= 0. 066). The null hypothesis is not rejected. Thus, from one way single factor ANOVA test, it can be concluded that there is no significant difference present among below 35 years, between 36-45 years and above 46 years age teachers in their attitude towards ICT.

Testing of $H_0$6:

Table 11: ANOVA result based on Attitude towards ICT: Stream of Teaching

Subject	Groups	N	Mean	S.D.	df	F	Sig
Attitude towards ICT	Language	115	108.39	13.421	114	0.475#	0.623
	Arts		107.38	12.262			
	Science		110.15	13.218			

Not significant at 0.05level

Table 11 indicates that Analysis of Variance (ANOVA) of Attitude towards ICT based on Stream of Teaching. From the table 11 found that the result of the calculated F value is not significant at 0.05 level (F_{114}= 0.475, P= 0.623). The null hypothesis is not rejected. Thus, from one way single factor ANOVA test, it can be concluded that there is no significant difference present among language, arts and science teachers in their attitude towards ICT.

Testing of $H_0$7:

Table 12: ANOVA result based on Attitude towards ICT: Experience

Subject	Groups	N	Mean	S.D.	df	F	Sig
Attitude towards ICT	Below 05 years	115	111.82	12.296	114	0.725#	0.487
	Between 6-15 years		108.16	13.027			
	Above 16 years		108.00	13.416			

Not significant at 0.05level

Table 12 indicates that Analysis of Variance (ANOVA) of Attitude towards ICT based on Experience. From the table 12 found that the result of the calculated F value is not significant at 0.05 level (F_{114}=

0.725, P= 0.487). The null hypothesis is not rejected. Thus, from one way single factor ANOVA test, it can be concluded that there is no significant difference present among below 5 years, between 6-15 years and above 16 years experience teachers in their attitude towards ICT.

Testing of $H_0$8:

Table 13: Independent Samples Test of Attitude towards ICT: Computer at Home Mostly used by Teacher.

Subject	Groups	N	Mean	S.D.	df	t	Sig
Attitude towards ICT	Used	115	111.98	13.590	113	2.711*	0.008
	Not Used		105.61	11.500			

*significant at 0.05level

In the table 13, the result of independent samples t-test reveals that the calculated t value for $H_0$8 is significant at 0.05 level (t_{113}=2.711, P=0.008). So the null hypothesis is rejected; there is significant difference between computer at home mostly used and not computer at home mostly used by the teachers in their attitude towards ICT.

DISCUSSION:

The findings of the study by the researcher were- (1) The secondary schools teachers had an average attitude towards ICT. (2)From $H_0$1, $H_0$2, $H_0$3, $H_0$4, $H_0$5, $H_0$6, $H_0$7 it was found that null hypothesis was accepted. (3)But $H_0$8 it was found that null hypothesis was rejected. The present investigation has been done on the attitude of secondary schools teachers towards ICT. The results found that the teachers of secondary schools almost positive attitude towards ICT.

References:

1. Fred, W. M., Musa, M. & Muhammadi, B. S. (2024). Students' Access to ICT Tools and Implementation of the 'O' Level ICT Curriculum in Government Secondary Schools Mbale District, Uganda. International Journal of Social Science and Human Research, 7(9), 6886-6893
2. 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, 1*(2), 175-191.
3. Mandal, A. K. (2024). Impact of ICT on the Performance of Teaching and Learning Process among the D. El. Ed. Institutions. Nsou-Open Journal, 7(1), 18-25.
4. Njideka, A. V. (2015). A Study of the Information and Communication Technology Use among Student-Teachers in Universities in North Central Nigeria. *Information and Knowledge Management, 5*(1), 106-111.
5. Singh, V., Dubey, A. & Sonkar, C. (2022). Role of Information and Communication Technologies in Education Sector in India. *International Journal of Creative Research Thoughts (IJCRT). 10*(1), 131-149.

6. Souheyla, B. (2019). Major Barriers and Challenges to Integrating ICT in Education. *An International Peer-Reviewed Journal on Humanities & Social Sciences, 5*(1), 342-348.

7. Zafar, S. M. (2019). Role of Information Communication Technology in Education and its Relative Impact. *International Journal of Engineering & Technology (IJERT), 7*(4), 1-10.