

# Attitude of teachers towards utilization of Information and Communication Technology (ICT) in secondary schools of Assam with special reference to Kamrup District

Alpana Das<sup>1</sup>, Jonali Chetia<sup>2</sup> & Dr. Gayatree Goswamee<sup>3</sup>

<sup>1</sup>PhD Research Scholar, PQH School of Education, University of Science & Technology, Meghalaya (USTM)

Email- [alpana.maatu@gmail.com](mailto:alpana.maatu@gmail.com)

<sup>2</sup>Professor, PQH School of Education, University of Science & Technology, Meghalaya (USTM)

<sup>3</sup>Professor & Dean PQH School of Education, University of Science & Technology Meghalaya (USTM)

## Abstract

The use of ICT in Secondary schools is a recent dimension. The utilization of ICT has changed the total scenario of the education system. The attitude of teachers plays a vital role in the utilization of ICT in schools and the teaching process as a whole. The present study tries to investigate the attitude of teachers towards the utilization of ICT in secondary schools of Kamrup district Assam. This study is designed to find out the attitude of secondary school teachers in relation to their ages, gender and working area, i/e. urban or rural. A descriptive survey method has been adopted by the researcher for the study. In order to collect the primary data about the attitude of teachers, an attitude scale was developed by the researcher using Likert 5-point scale and it was standardized by following proper standard procedure. The population of the study was comprised of 3329 secondary school teachers teaching in govt provincialized secondary schools, and the sample of the study was 400 teachers, which is above 10 per cent. The study found various attitude levels among male/female, rural/urban, and junior/senior teachers towards the utilization of ICT in teaching in secondary schools of Kamrup district of Assam.

**Keywords:** ICT, Attitude, Attitude Scale, Secondary School

## Introduction

Technology has always influenced the education system from time immemorial but the introduction of computers, the internet, and other ICT tools have influenced in such a way ICT become an integral part of the education system. Broadcasting technology like television, radio etc., have been used in education for a long but presently, mobile, computers, projectors, interactive whiteboards, Satellite-based network systems, e-learning systems etc., have changed the total scenario for the last two decades. It is seen that Information

and Communication Technology (ICT) has played a most prominent role in the development of society in the 21<sup>st</sup> Century. It is beyond doubt that it has added a new dimension to the whole education system. At present, acquiring information is not merely dependent on hard copy books or reports but can be accessed within moments through ICT gadgets. Now the whole world's information is in the palm of our hand. ICT brings changes, developments, opportunities and facilities to teachers, not only in the teaching process but also in the management and administration

of education vastly.

ICT has created such an environment where the teaching process becomes more fruitful, investing less time and less effort. Using ICT tools, teachers can be more competent in delivering information to learners. The requirement is necessary ICT tools and systems and the skill to use ICT in a proper way by the teacher. So, teachers should acquire the knowledge & skill to use the ICT tools. He should possess the right command of when, how and where to use ICT in the teaching process to enhance his teaching quality. Teachers can do best practices of ICT, but it depends on some factors which influence the utilization of ICT in school education by the teachers in the teaching process. Broadly there are two factors, one is external, and the other is internal. The external factors are ICT infrastructure, technical support, financial support, human resource support etc. The internal factor is the attitude of the teachers towards ICT utilization. According to many experts, external factors can be fulfilled in a short period but the attitude of human beings takes time to change.

According to Myers (1996), Severy Brigham and Schlenker (1976) defined attitude as an orientation towards an object in one's environment inferred from behavior. Attitude also can be defined as a predisposition to act in a negative or positive way towards a person, object, idea or event. Here in this research paper, the researcher tried to find out the attitude of teachers towards ICT, whether positive or negative and the difference in attitude in relation to area, gender, and experience among teachers. Many studies show that due to a lack of proper infrastructure and proper training, teachers are not able to use ICT in the teaching process, but on the contrary, in some research, it was also found that teachers are reluctant to use ICT despite having ICT facilities in

schools. So, teachers who do not have a positive attitude are not interested in using ICT in the teaching process. Whereas they are using the internet for social sites and other works.

According to the International computer and Information Literacy Study (ICILS), Farallon et al. (2014) and other studies found that teachers from different countries and areas use ICT in different frequency.

## **Review of Literature**

Dedun (2013) in his research work, "A study of teacher attitude towards the use of ICT in classroom of secondary school of Sabarkantha District", tried to focus on the teacher's attitude. The objective of the study was to compare the attitude towards the use of ICT in secondary schools' classroom teaching depending on gender, medium of instruction, and organization type. The researcher collected data from secondary school teachers and found that there was a significant difference between male and female teachers towards the use of UCT. Male teachers have more positive attitudes than female teachers. There was a significant difference between granted school and self-financed schools teachers. The study also showed that there is no significant difference between the attitude of Gujrati school and English medium school.

Mwila, P. (2018) assessed the attitudes of secondary school teachers toward the integration of ICT in the teaching process in Kilimanjaro, Tanzania, in the work "Assessing the attitudes of secondary school teachers towards the integration of ICT in the teaching process in Kilimanjaro, Tanzania." The study discovered that male and female teachers had favourable attitudes toward incorporating ICT into their teaching processes. Furthermore, it was reported that there is a link

between a teacher's age group and attitudes toward the integration of ICT in the teaching and learning processes. Based on these findings, the study concluded that ICT integration into the teaching process was heavily influenced by teachers' and students' attitudes toward ICT integration; positive ICT attitudes are expected to promote ICT integration in the teaching and learning process. The study recommended that curriculum developers integrate ICT into a curriculum while taking economic, cultural, political, social, educational, and catalytic rationales into account.

Gibson, P. A. et al. (2014), in their work, 'Changing teachers, changing students? The impact of a teacher-focused intervention on student's computer usage, attitudes, and anxiety' found that technology intervention itself had a positive effect on students' attitudes toward and use of computers for educational purposes. The results suggest that it is possible to increase students' attitudes toward computer use through intense interventions aimed at their teachers.

Buabeng, Charls - Andah (2015) in his study "ICT uses in Ghanaian Secondary School", the researcher primarily tried to investigate Secondary School teacher's perspectives towards ICT use. The result shows teachers' low competence in the use of ICT in secondary school. Moreover, the study indicates that male teachers were more competent in ICT than female teachers. Again, the perceived administrative support for women teachers was more than that of male teachers. This study also shows that there is no significant difference in public and private school teachers' access to ICT, administrative support, self-efficiency, competencies and training.

### **Emergence of the problem**

It is found that in different parts of

the world, research was carried out to study the attitude of teacher towards use ICT in teaching (Osodo et.al (2010); Suri and Sharma (2017), Dedun (2013). In Assam, studies have been found to carry out about the attitude of university teachers towards the use of ICT in teaching (Moyuri Sarma (2017); Rahman (2022). It is found that very few studies have been conducted regarding the attitude of secondary school teachers towards the utilization of ICT in school education. The secondary stage is the most important stage where scientific outlook and technological skills should be developed in students. And in Assam, most of the students go to provincialised school, and most of the students are from the lower middle class who goes for vocational course and join new job for livelihood. So, teachers should be willing to use ICT in teaching to make future citizens technologically sound. But the researcher, after visiting the secondary school, came to realize that though minimum ICT facilities are provided to school most of the teachers are not using it. The schools are provided with ICT facilities like 10 computers, laptops, projectors, various software, UPS, generator, computer table-chair and other accessories. The researcher also found that many of the computers are not working properly in most of the schools, both urban and rural schools. It is observed that the computer teacher is using the ICT facility at a regular level. So, the researcher wanted to know whether the teachers have positive or negative attitudes towards the use of ICT in teaching. Whether female and senior teachers have a positive attitude towards it. Considering these, the researcher tried to find out the attitude of secondary school teachers of Assam, with special reference to Kamrup districts.

### **Area of Study**

The area of the study is Kamrup District (both the Kamrup Metropolitan and

Kamrup Rural). Kamrup Metropolitan District has an area of 1528 sq. km and a population of approx. 12,60,419 as per the census of 2011, and Kamrup district has an area of 3105 sq. km and a population of approx. 15,17,542 as per the census of 2011. Kamrup Metropolitan is the most developed district of Assam, where the city of Guwahati and Dispur, the capital of Assam, is situated, and Kamrup Rural district is a rural district similar to another rural district. There is lots of difference between the two districts with respect to the developmental pattern, various facility, amenities, socio-economic conditions of the people etc. So, the researcher found it ideal for the proposed study.

### Objectives of the study

The objectives for the study are as follows:

- i. To study the Attitudinal level of secondary school teachers towards the utilization of ICT in relation to Rural and urban areas
- ii. To study the Attitudinal level of secondary school teachers towards the utilization of ICT in relation to male and female gender
- iii. To study the Attitudinal level of secondary school teachers towards the utilization of ICT in relation to their age

### Research Questions

- i. Is there any comparison of attitudinal level between rural and urban secondary teachers towards utilization of ICT?
- ii. Is there any comparison of attitudinal level between male and female secondary school teachers towards utilization of ICT?
- iii. Is there any comparison of attitudinal level between more experienced and less experienced secondary school teachers towards utilization of ICT?

### Hypothesis of the Study

Three (03) hypotheses were formulated on the basis of the objectives of the study as follows:

- i.  $H_{01}$ : There is no significant difference in the level of attitude towards the utilization of ICT in between urban and rural teachers
- ii.  $H_{02}$ : There is no significant difference in the level of attitude towards the utilization of ICT in between male and female teachers
- iii.  $H_{03}$ : There is no significant difference in the level of attitude towards the utilization of ICT in between junior and senior teachers

### Methodology

**Method:** The researcher has adopted the descriptive survey method.

**Population:** The population of the study is 3329 teachers teaching in 266 provincialized, Assamese medium secondary schools in Kamrup District (Both Urban & Rural) where ICT facilities are provided by the government. All the teachers, both male, female, senior, and junior, teaching different subjects were considered.

**Sample:** Out of 3329 teachers, 400 teachers were selected as the sample of the study. Out of them, 200 were from urban areas and 200 were from rural areas. A simple random sampling technique has been adopted by the researcher.

**Tools:** To collect primary data about the attitude of the teachers, the researcher developed an attitude scale. The researcher followed the 5-point Likert-type scale while arranging the statements of the scale. These 5 points are strongly agree, agree, neutral, disagree and strongly disagree. Initially, 100 statements (62 positive and 38 negative) were considered in the scale in 04 dimensions. Pre-piloting of the scale was done, and as a result, out of 100 items, 63 remained by dropping 43

Items and adding 06 items to the scale. After that, the piloting of the statement was performed by distributing the draft scale to 10 secondary school teachers selected purposively from Assamese medium secondary schools where ICT facilities are provided by the government. It is found that 11 statements were not responded to by many of the teachers, maybe these statements are confusing or not bearing proper meaning or are irrelevant. So, these 11 statements were rejected. Hence, a total of 52 statements remained after the piloting. Try out of the scale was done by administering the scale to 100 teachers of provincialized secondary schools where ICT facilities are provided. Item analysis was done, and the 't' value was calculated, and the item with 't' value greater than 1.96 is only accepted. 42 items were found with a 't' value greater than 1.96. So, the final scale consists of 42 statements (22 positive and 20 Negative). The

reliability of the final scale was tested by split half method and found as 0.8162, and content validity and languages of the scale were checked by experts. The score for responses for positive statements was given as: strongly agree-5, agree-4, neutral-3, disagree-2 and strongly disagree-1 and for negative statement reversed way, i.e., strongly agree-1, agree-2, neutral-3, disagree-4 and strongly disagree-5.

**Procedure of data collection:** The researcher personally visited the school teachers and distributed the hardcopy of the tool (attitude scale), and they were told to select their own feeling against all 42 statements. It was also said that their data would be kept as secret.

**Data Analysis and Interpretation**

**General Information about ICT Teachers:** Personal information about the teachers is given in Table 1.

**Table-1: Personal Information about Teachers**

Particulars	Options	No. of Teachers	%
<b>Gender</b>	Female	197	49.2
	Male	203	50.8
<b>Age in Years</b>	20 - 29	42	10.5
	30 - 39	125	31.2
	40 - 49	134	33.5
	50 - 60	99	24.8
<b>Qualification</b>	B A	75	20.5
	B A, PGDCA	392	15.0
	B Sc	19	15.4
	B.A, B. Ed	7	1.6
	B Sc, PGDCA	31	7.6
	B Sc, B Ed	87	21.4
	BA, BED	3	0.7
	M A	35	8.4
	M Sc	16	3.9
	M Sc, B. Ed	24	5.6
	M.A, B Ed.	61	14.8
	M. Sc, M. Phil	1	.2
MA, PGDCA	1	.2	
MA, PhD	1	.2	

Experience in Years	5 - 9	100	22.3
	10 - 13	117	29.3
	14 - 17	23	6.8
	18 - 21	81	20.2
	22 - 25	26	6.5
	26 - 29	42	10.5
	30 - 33	20	5.0
	34 - 37	2	.5

- a. Around 49.2 per cent of the teacher respondents are female, and nearly 50.8 per cent are male.
- b. The age range varies from 20 to 60 years, and the maximum percentage (58.3) varies from 40 to 60 years of age.
- c. 82.2 per cent of teachers are found to be Graduates, 32.9 per cent are postgraduates and the rest 0.2 per cent PhD holders.
- d. The experience of teachers varies from 5 to 37 years. 58.4 per cent of the teacher's experience ranges between 5 to 17 years.

**Location**

The locational information about the teacher is given in Table 2.

**Table-2: Residing locality of teachers**

Particulars		No. of Teachers	%
Location	Rural	200	50.0
	Urban	200	50.0
	Total	400	100.0
District	Kamrup (M)	200	50.0
	Kamrup Rural	200	50.0

50 per cent of the teachers work in rural areas, and the rest in urban areas. Also, 50 per cent of the teachers are from Kamrup (Metro) and the rest from Kamrup (Rural) district.

**Occupation related information**

The occupation-related information about the teacher is given in table 3.

**Table-3: Occupation-related information about teachers**

Particulars	Nature	No. of Teachers	%
Appointment Mode	Contractual	106	26.5
	Permanent	294	73.5
TET teacher	No	251	62.8
	Yes	147	36.8
ICT Training	No	257	64.2
	Yes	143	35.8

Availability of ICT at home	No	27	6.8
	Yes	372	93.0
Subject taught	Arabic	1	.2
	Assamese	70	17.4
	Assamese, Hindi	1	.2
	Assamese, Social Science	1	.2
	Assamese, Social Studies	1	.2
	Computer Science	70	17.0
	Computer Science, Hindi	4	0.8
	Computer Science, Social Science	3	0.6
	English	10	2.5
	English and Social Science	3	0.6
	English, Assamese	1	.2
	General Science	1	.2
	Hindi	18	4.5
	Mathematics	86	21.4
	Mathematics, Science	4	1.0
	Sanskrit	5	1.2
	Science	45	11.2
	Science, Mathematics	8	1.9
	Social Science	12	2.7
Social Science, English	1	.2	

- 73.5 per cent of teacher respondents are found to be permanent, and 26.5 per cent are on contractual appointment.
- 36.8 per cent of the teachers are found to be TET-qualified teachers.
- 93 per cent of the teacher respondents stated that they either possess a computer/Laptop at home.
- A variety of subjects were found to be taught by the teachers based on their qualifications (vide Table 3).

**Objective (i): To compare the Attitudinal level of secondary school teachers towards the utilization of ICT in relation to Rural and urban areas**

The Attitudinal Level of Rural and urban teachers is given in Table 4.

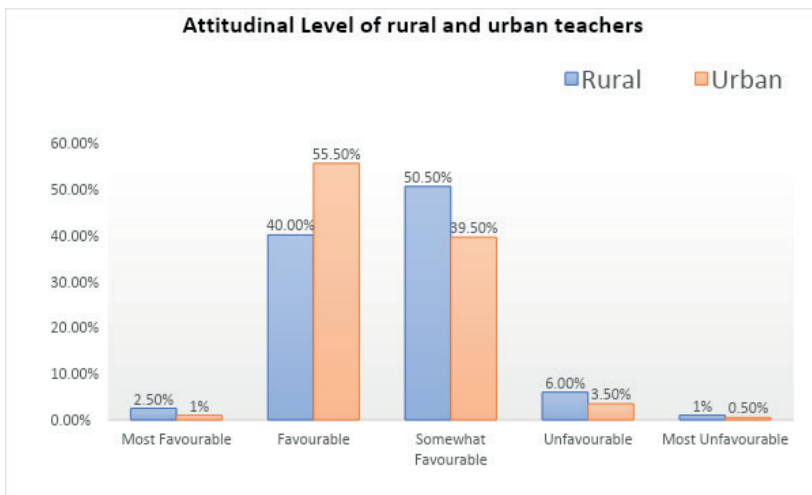
**Table-4: Attitudinal Level of Rural and urban teachers**

Range of Z Scores	Attitudinal Level	Rural		Urban	
		No. of Respondents	%	No. of Respondents	%
+2.68 & above	Most Favourable	5	2.5	2	1.0
+1.38 to +2.67	Favourable	80	40.0	111	55.5
-0.05 to +1.37	Somewhat Favourable	101	50.5	79	39.5
-1.37 to -0.06	Unfavourable	12	6.0	7	3.5
-1.38 & below	Most Unfavourable	2	1.0	1	0.5
		200		200	

It is found that only 2.5 per cent teachers from rural area and 1 per cent of the teachers from urban area have most favourable attitude towards the utilization of ICT. 38.5 per cent from rural areas and 55.5 per cent of the teachers from urban areas have favourable attitudes, and 48.5 per cent from rural areas and 39.5 per cent of the teachers from urban areas have somewhat

favourable attitudes (shown in Table 4). Only 3.5 per cent from rural areas and 9.5 per cent of the teachers from urban areas have unfavourable attitudes, and 0.5 per cent from rural areas and 1 per cent of the teachers from urban areas have the most unfavourable attitudes towards the utilization of ICT. The table depicts the attitudinal Level of rural and urban teachers shown in Fig. 1.

**Figure-1: Attitudinal Level of rural and urban teachers**



**Objective (ii): To compare the Attitudinal level of secondary school teachers towards the utilization of ICT in relation to male and female**

**gender**

Attitudinal Level of female and male teachers is given in Table 5.



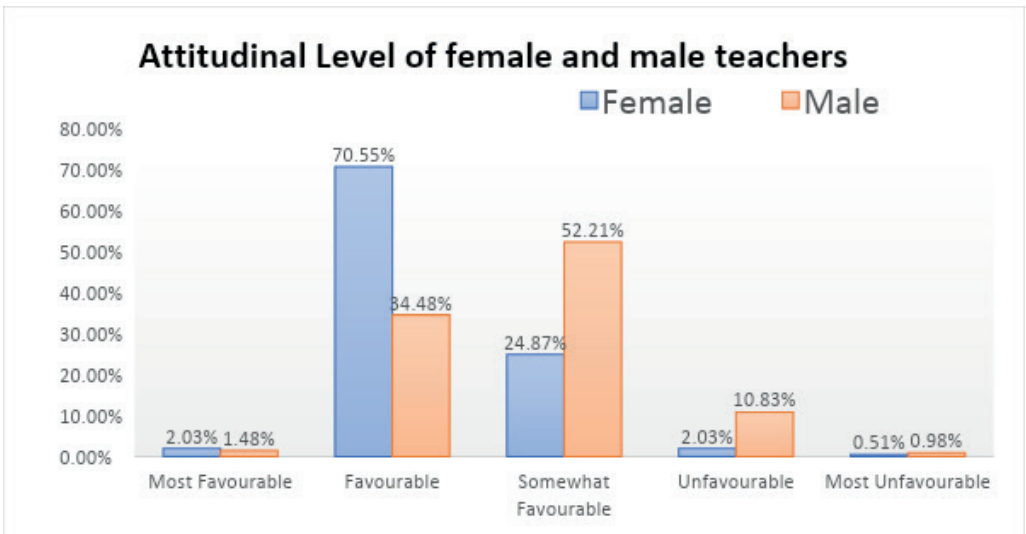
**Table-5: Attitudinal Level of female and male teachers**

Range of Z Scores	Attitudinal Level	Female		Male	
		No. of Respondents	%	No. of Respondents	%
+2.68 & above	Most Favourable	4	2.03	3	1.48
+1.38 to +2.67	Favourable	139	70.55	70	34.48
-0.05 to +1.37	Somewhat Favourable	49	24.87	106	52.21
-1.37 to -0.06	Unfavourable	4	2.03	22	10.83
-1.38 & below	Most Unfavourable	1	0.51	2	0.98
		197		203	

It is found that nearly 2 per cent of the female teachers and around 1.5 per cent of the male teachers have a most favourable attitude towards the utilization of ICT; near about 70.6 per cent of the female teachers and around 34.5 per cent of the male teachers have favourable attitude; and 24.9 per cent of the female teachers and around 52.2 per cent of the male teachers have

somewhat favourable attitude. Only 2 per cent of the female teachers and around 11 per cent of the male teachers have unfavourable attitudes, and 0.5 per cent of the female teachers and around 1.0 per cent of the male teachers have the most unfavourable attitude towards the utilization of ICT. The attitudinal Level of female and male teachers is graphically shown in Fig. 2.

**Figure-2: Attitudinal Level of female and male teachers**



**Objective (iii): To compare the Attitudinal level of secondary school teachers towards the utilization of ICT in relation to their age**

Attitude of senior and junior secondary school teachers towards the utilization of ICT is given in Table 6.

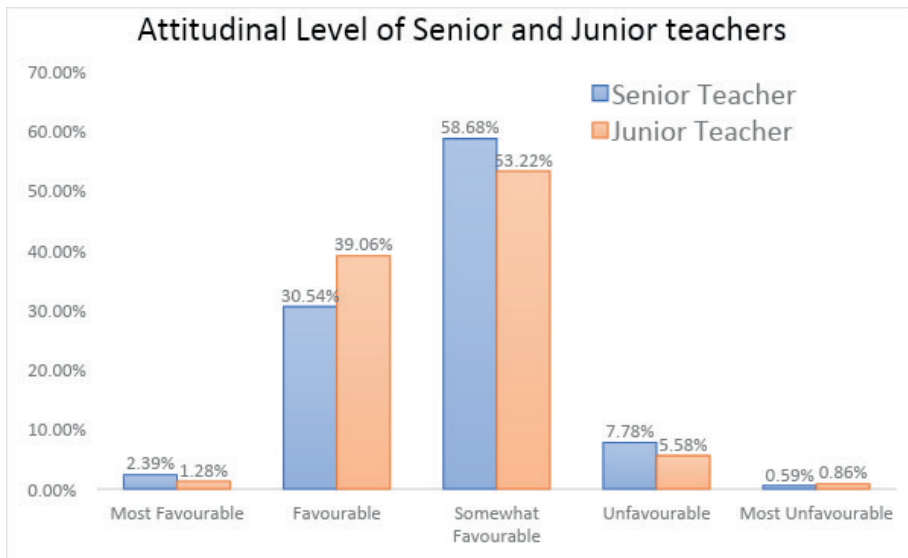
**Table-6: Attitudinal Level of senior and junior teachers**

Range of Z Scores	Attitudinal Level	Senior teachers		Junior teachers	
		No. of Respondents	%	No. of Respondents	%
+2.68 & above	Most Favourable	4	2.39	3	1.28
+1.38 to +2.67	Favourable	51	30.54	91	39.06
-0.05 to +1.37	Somewhat Favourable	98	58.68	124	53.22
-1.37 to -0.06	Unfavourable	13	7.78	13	5.58
-1.38 & below	Most Unfavourable	1	0.59	2	0.86
		167		233	

In the present study the teachers who fall in between 20 to 39 years are considered as junior and in between 40 to 60 years is senior teacher. more than 2 per cent of the senior teachers and around 1.5 per cent of the junior teachers have the most favourable attitude towards the utilization of ICT; near about 30.5 per cent of the senior teachers and around 39.6 per cent of the junior teachers have a favourable attitude; and 58.6 per cent of the senior

teachers and around 53.2 per cent of the junior teachers have somewhat favourable attitude. Nearly 8 per cent of the senior teachers and around 6 per cent of the junior teachers have an unfavourable attitude, and 0.6 per cent of the senior teachers and around 0.9 per cent of the junior teachers have most unfavourable attitude towards the utilization of ICT. Graphically it is shown in Fig 3.

**Figure-3: Attitudinal Level of Senior and junior teachers**



**Hypothesis (i):  $H_{01}$ : There is no significant difference between the attitude of urban and rural teachers towards the utilization of ICT in secondary schools.**

In order to justify this hypothesis, collected data are subjected to statistical analysis to test the significance. 't'-test is conducted with the available information put forward in Table 7.

**Table-7: Attitude of urban and rural teachers towards the utilization of ICT**

Category	N	Mean	Standard Deviation	df	't' value	Significance
Rural	200	150.51	15.503	398	0.501	Not Significant
Urban	200	149.86	10.102			

The calculated value of 0.501 is less than the tabulated value of 1.96 at 0.05 level, the null hypothesis is accepted. Thus, it follows that there exists no significant difference between the attitude of urban and rural teachers towards the utilization of ICT in secondary schools.

**attitude of male and female teachers towards the utilization of ICT in secondary schools of Kamrup district.**

In order to justify this hypothesis, collected data are subjected to statistical analysis to test the significance. 't'-test is conducted with the available information put forward in Table 8.

**Hypothesis (ii):  $H_{02}$ : There is no significant difference between the**

**Table-8: Attitude of male and female teachers towards the utilization of ICT**

Category	N	Mean	Standard Deviation	df	't' value	Significance
Female	197	145.27	10.587	398	7.966	Significant at 0.01 level
Male	203	154.95	13.507			

As the calculated value of 7.966 is greater than the tabulated value of 2.58 at 0.01 level, the null hypothesis is rejected. Thus, it follows that there is a significant difference between the attitude of male and female teachers towards the utilization of ICT in secondary schools of Kamrup district.

**the attitude of senior and junior teachers towards the utilization of ICT in secondary schools of Kamrup district.**

In order to justify this hypothesis, collected data are subjected to statistical analysis to test the significance. 't'-test is conducted with the available information put forward in Table 9.

**Hypothesis (iii):  $H_{03}$ : There is no significant difference between**

**Table-9: Attitude of senior and junior teachers towards the utilization of ICT**

Category	N	Mean	Standard Deviation	df	't' value	Significance
Senior teachers	167	151.05	13.140	398	1.124	Not Significant
Junior teachers	233	149.56	13.015			

As the calculated value of 1.124 is less than the tabulated value of 1.96 at 0.05 level, the null hypothesis is accepted. Thus, it follows that there exists no significant difference between the attitude of senior and junior teachers towards the utilization of ICT in secondary schools.

## Findings

Following are the findings of the present study

- a. Attitudinal level of rural teachers found to be favorable among 93 per cent, and in urban areas, it is 96 per cent.
- b. Among the female teacher's attitudinal level is favorable at 97.45 per cent, and that of male teachers is 88.17 per cent.
- c. 91.61 per cent of senior teachers and 93.56 per cent of junior teachers have favorable attitude towards the utilization of ICT
- d. There exists no significant difference between the attitude of urban and rural teachers towards the utilization of ICT in secondary schools of Kamrup district
- e. There exists a significant difference between the attitude of male and female teachers towards the utilization of ICT in secondary schools of Kamrup district.
- f. There exists no significant difference between the attitude of senior and junior teachers towards the utilization of ICT in secondary schools.

## Discussion

The study shows that all the teachers from the rural and urban areas of Kamrup District have favorable attitudes towards the utilization of ICT

in secondary schools. The findings of the present study are supported by findings of different studies as learned from the review of the literature. The findings of the present study that there exists no significant difference between the attitude of urban and rural teachers towards utilization of ICT in secondary school teachers are supported by Aggarwal and Ahuja (2013) in their research study, "Attitude of students – teachers towards the use of ICT and its impact on academic achievement". The findings of the present study that no difference exists between the attitude of the junior (unexperienced) and senior (experienced) teachers is supported by the study done by Ahmed Showkat (2014) in "A study of secondary school teachers' attitude towards information and communication technology (ICT) in Jammu and Kashmir". Again, a significant difference between the attitude of male and female secondary school teachers is found in the study. Female teachers are having more favourable attitude than males as found. This is supported by a research study in Arunachal Pradesh done by Ms. Ligang Suniya (2018). It is also supported by the findings of Angadi (2014), Dedun (2013), Sadik (2006). But on the contrary, the studies like Parmar (2015), Yusuf & Balogun (2011), Tesci (2014) found that there is no gender difference in attitude towards the utilization of ICT in education. It is observed that though ICT facilities are not adequate to meet the needs of students but still the teachers were showing a positive attitude towards the utilization of ICT in secondary schools of Kamrup district in Assam in different dimensions including teaching-learning process, school administration, school-related communication, and personal development.

## Conclusion

This study reveals that the attitude of the teacher about the use of ICT in

school education depends on how much they are confident about using it in school. And also depend on to what extent teachers are using ICT in their day-to-day life and professional life. From the study, it has been clear that a maximum number of teachers are having computers or laptops for personal use. They are aware of the fact that by using ICT, they can transfer the information to the students in a fruitful manner. And ICT become beneficial for school administration and communicating people too. It is a good sign that teachers from rural areas and senior teachers are also having positive attitudes toward ICT use. It is found that female teachers have a more positive attitude towards the utilization of ICT. As Assam is a state where women are also given priority for all school activities, and it was found during data collection most of the computer teachers were female and were in view that they should be given proper training to use ICT and they use ICT facilities whatever available with the help of other teachers if needed. The result of the study also showed that senior teachers or aged teachers had positive attitudes and there was no significant difference between both groups of teachers. It

may be the result of the pandemic situation. Because during the pandemic lockdown, they used online tools and made the best use of ICT to maintain the continuity of course, and the same may be the reason exist no difference in the attitude of rural and urban teachers. During data collection, the researcher got an opportunity to talk to the teachers, and most of the senior teachers, both in urban and rural areas had a view that due to the situation created by Covid19 pandemic, they had to learn how to use ICT tools for teaching purpose. And teachers have a positive attitude to continue the online classes to overcome the natural challenges and maintain the continuity of regular classes. It has been found from the observation during the data collection that most of the computers are not in working condition and not well-maintained too. But it is a good sign that the teachers have a positive attitude, and if proper facilities are provided and improves the maintenance of provided facilities by the concerned authority and proper training is provided to teachers, they can use the best of ICT facilities for teaching as well as for other school activities.

## Reference

- Dedun S K (2013). A study of teacher attitude towards the use of ICT in classroom of secondary school of Sabarkantha District. *Global Research Analysis*, 2(3), 63-64. ISSN 2217-8160
- Gibson, P. A. et al. (2014). Changing teachers, changing students? The impact of a teacher-focused intervention on students' computer usage, attitudes, and anxiety. *Computer & Education*, 71, 165-174.
- Mwila, P. (2018). Assessing the attitudes of secondary school teachers towards the integration of ICT in the teaching process in Kilimanjaro, Tanzania. *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 14 (3), 223-238
- Buabeng, C.A. (2015). ICT uses in Ghanaian Secondary School. *International Journal of Information and Learning Technology*, 32, 300-312
- Ndibalema, P. (2014). Teachers' Attitudes towards the Use of Information Communication Technology (ICT) as a Pedagogical Tool in Secondary Schools in Tanzania: The Case of Kondo District", *International Journal of Education and Research*, 2(2), 1-16
- Payal, Kanvaris, V.K. (2018). Learning with ICT: Use & barriers from Teachers' perception. *International Journal of Recent Scientific Research*, 9(1), 23545-23548

Mingaine, L (2013). Skill Challenges in Adoption and Use of ICT in Public Secondary Schools, Kenya. *International Journal of Humanities and Social Science* 3(13), <http://kerd.ku.ac.ke/123456789/932>

Kundu, A., Dey, K N (2018). Barriers to utilization of ICT in Education in India with a special focus on rural area. *International Journal of Scientific Research and Reviews*, 7(2), 341-359, ISSN:2279-0543

Mndzebele, N. (2013). Challenges faced by the school when introducing ICT in developing countries. *International Journal of Humanities and Social Science Invention*, 2(9), 01-04, ISSN Online: 2319-7722 & Print: 23197714

Kumari, S.N.V., D'souza F. (2016). Secondary School Teachers' Digital Literacy and use of ICT in Teaching and Learning. *International Journal of Computational Research and Development*, 1(1), 141-146. ISSN: 2456 – 3137

Minikutty, A., Sandhya R. M, (2015). ICT literacy: A study among Higher Secondary school students. *Paripex - Indian Journal of Research*, 4(4), 4-6. ISSN 2250-1991

Ranjan, B.K (2017). A study on status of ICT uses in the various teachers training Institution of tribal areas. *International journal of Advance Educational Research*, 2(6), 375-379. ISSN:

Asfar, N., Zainuddin, Z. (2015). Secondary student's perceptions of Information, Communication and Technology (ICT) use in promoting self-directed learning in Malaysia. *The Online Journal of Distance Education and e-Learning*, 3(4). [www.tojdel.net](http://www.tojdel.net)

Fanai, L., Chhangte, R. (2016). Computer Usage among Secondary School Teachers of Aizawl District, Mizoram. *Imperial journal of interdisciplinary research*, 2.

**Annexure**

**(This is for information only to the reviewer. Not a part of the paper)**

**Attitude Scale—Statement (42) and Responses**

Sl. No.	Statement	Response (Kindy tick one)				
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.	ICT tools helps in classroom management					
2.	ICT tools improve the standard of teaching					
3.	Use of ICT tools in classroom would help me to be a better teacher					
4.	I like to encourage my students to use computer					
5.	I do not feel more confident using ICT tools in my classroom					

6.	I can teach better without the help of ICT tools					
7.	Use of ICT has increased my good relation with fellow teachers					
8.	I got easily bored while teaching with ICT tools					
9.	I feel, student get bored when ICT tools are used in classroom					
10.	I feel use of ICT provide better access to information for teaching					
11.	ICT use can make classroom teaching more interesting					
12.	I think ICT can take the place of teacher					
13.	I think ICT cannot replace teacher					
14.	ICT has brought positive changes in education system					
15.	ICT tools can motivate the students to learn					
16.	Use of ICT can make teaching more enjoyable					
17.	I feel use of ICT has no influence in my teaching process					
18.	I can teach better without using ICT tools					
19.	Use of ICT in school is just wastage of time					
20.	I do not get time to use ICT tools due to my work load in school timing					

21.	ICT provide new information to teachers for teaching purpose					
22.	One can become better teacher after using ICT tools in classroom teaching					
23.	ICT makes education accessible to all					
24.	Only trained teachers can use ICT properly in school					
25.	ICT based education in the secondary schools is not a matter of importance					
26.	Using ICT, the teachers can be more enthusiastic					
27.	ICT has decreased the book reading habit of students					
28.	ICT has reduced the writing skill of students					
29.	ICT encourage self-learning among students					
30.	It is difficult for me to use ICT tools in my classroom					
31.	Using ICT tools, one can teach more in less time					
32.	ICT is main factor of modernization					
33.	Our future generation should be skilled in use of ICT					
34.	It is not easy to incorporate ICT in secondary schools of Assam					



35.	Use of ICT can increase communication among teachers and students					
36.	Use of ICT can decrease communication between teachers and students					
37.	ICT do not fulfill the intellectual needs of students of secondary school in proper way					
38.	School administration can be more organized by using ICT					
39.	ICT can be used to impart quality education					
40.	Use of ICT tools does not help me in my teaching process					
41.	Training for operation of ICT tools is not important for me to teach in a better way					
42.	Use of ICT increases laziness among students getting all information easily					