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A Study of the Attitude of Secondary School Teachers towards Information and Communication Technology (ICT) in School of Arunachal Pradesh

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***Abstract**: The present study examined the attitude of secondary school teachers towards ICT in school of Arunachal Pradesh with reference of three selected districts. A descriptive cum survey method was adopted with a sample of 304 secondary school teachers selected using random sampling technique from government and private secondary schools of Papum Pare, Lower Subansiri and Upper Subansiri districts of Arunachal Pradesh. Attitude Scale towards Information Technology for Teachers was used to collect the data. The data collected were analyzed using the mean, standard deviation and't' test. The finding revealed that secondary school teachers have a favorable attitude towards ICT in school. Similarly, a significant gender difference was observed in their attitudes towards ICT. However, the results further showed no significant difference in the secondary school teachers' attitudes towards ICT in relation to race and type of school management.*
Keywords: Information and Communication Technology, secondary school teachers' attitude, gender, race, management of school.

I. INTRODUCTION

The greatest challenge for society in which we live today is keeping face with knowledge and technological expertise necessary for finding, applying and evaluating information. Emergence of Information and Communication Technology has ushered in a new era in our civilization in which digitization has almost become a better alternative, because it has influenced every facet of human life including education [13]. The introduction of Information and Communication Technology (ICT) in school, education will encourage and motivate the students as well as teachers to explore new areas of advancement with reference to its latest developments in various subjects[15]. Dawes (2001) is also of the view that new technologies have the potential to support education across the curriculum and provide opportunities for effective communication between teachers and students in way that have not been possible before. ICT in education has the potential to be influential in bringing about changes in way of teaching. ICT enabled education is the application of technologies for the communication of information in academic environment that permits delivery of education to those individuals who are desirous of educating themselves to enhance the prospects of their employability and furtherance of their professional carriers through lifelong learning (Tiwari, Dikshit& Power,2002).The knowledge of Information and Communication Technology (ICT) and its applications in the educational scene is an essential competency for today and future teachers. The need to know and use the latest information that is pouring in through the most sophisticated communication media is one of the important responsibilities of the teacher. It is integration of ICT in education that one can teach students to be participants in the growth process in this era of rapid change. When used appropriately, different ICTs are said to help expand access to education, strengthen the relevance of education to the increasingly digital work place, and raise educational quality and quality of teachers by, among others, helping make teaching and learning into an engaging, active process connected to real life. Thus, the teachers and the institutions are ready to face this organizational and cultural change by ICTs. In order to use of technology in the classroom effectively, teachers' attitude toward technology should be positive and they should be trained in using the modern technologies in the field of education. To understand attitudes and their affect on teachers, it is important to understand that concerns form a major part of attitudes. Concerns can be classified as the perceptions, attitudes, motivations, and feelings that teachers experience when implementing an innovation, in this case technology integration. Researcher[8] suggests handling ICT planning together with attitudes because attitudes allow us to understand and make inferences from individuals' behaviors towards an object or event and to identify how his/her behaviors are affected [1]. Therefore, information is required about teacher's attitudes for plans about and future investments in ICT.This phenomenon has been concerned by researcher and put forward worthy outcome and consideration to know the attitude of secondary school teachers' towards ICT in school of Arunachal Pradesh with reference of three selected districts.

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II. OBJECTIVES OF THE STUDY

The present study is based on the following objectives

A. To study the attitude of secondary school teachers towards ICT in school.
B. To compare the attitude of male and female secondary school teachers towards ICT in school.
C. To compare the attitude of APST (Arunachal Pradesh Schedule Tribe) and Non-APST secondary school teachers towards ICT in school.
D. To compare the attitude of government and private secondary school teachers towards ICT in school.

III. HYPOTHESES OF THE STUDY

In the view of the above stated objectives, the following null hypotheses were formulated:

A. There is no significant difference between the attitude mean scores of male and female secondary school teachers towards ICT in school.
B. There is no significant difference between the attitude mean scores of APST and Non-APST secondary school teachers towards ICT in school.
C. There is no significant difference between the attitude mean scores of government and private secondary school teachers towards ICT in school.

IV. METHODOLOGY

In order to achieve the objectives of the study, the descriptive survey method was used. The sample for the study consists of 304 secondary school teachers of Papum Pare, Lower Subansiri and Upper Subansiri districts. The random sampling technique was used to draw the sample. The researcher was used "Attitude Scale towards Information Technology for Teachers by Nasrin and Fatima Islahi (2012) to collect the required data. The scale has 30 statements based on 5 point scale. There are 18 positive and 12 negative statements. The scale was administered to the teachers who teach at secondary school stage in various schools of Papum Pare, Lower Subansiri and Upper Subansiri districts of Arunachal Pradesh. The filled in scale was collected back and subjected to analysis to arrive at valid interpretations. The statistical technique like mean, standard deviation, t-test and percentage are used to analyze and interpret the data obtained from secondary school teachers.

V. DELIMITATIONS OF THE STUDY

The present study has been delimited to the following conditions

A. 24 secondary schools selected from three selected districts namely, Papum Pare, Lower Subansiri and Upper Subansiri districts in Arunachal Pradesh as the sample of the study.
B. The teacher sample confined to 304 teachers from the selected 24 secondary schools.

VI. ANALYSIS AND INTERPRETATION OF DATA

The statement of the problem is concerned there are three independent variables which are gender, race and management. In order to achieve these objectives and hypotheses, the mean, standard deviation and 't' test were used.

A. Objective 1

To study the attitude of secondary school teachers towards ICT in school.

Table-I:Showing the frequency distribution table of attitude scores of secondary school teachers towards ICT in school.

Particular	N	M	SD
Teacher	304	112.6	11.9

The table 1 indicates that the attitude mean score of secondary school teachers towards ICT came out to be 112.6 which is greater than the mean score (90) of the attitude scale. Therefore, it is interpreted that the most of (98.3%) of secondary school teachers had shown favourable attitude and a very few (1.7%) secondary school teacher have shown unfavourable attitude towards ICT in school. The computed standard deviation (11.9) is indicative of wide variations of attitude scores among the secondary school teachers. Thus,

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it is concluded that the teacher had favourable attitude towards ICT in Secondary Schools of Papum Pare, Lower Subansiri and Upper Subansiri Districts of Arunachal Pradesh.

B. Objective- 2

To compare the attitude of male and female secondary school teachers towards ICT in school.

There is no significant difference between the attitude mean scores of male and female secondary school teachers towards ICT in school.

Table-II:Showing the frequency distribution table of attitude scores of male and female secondary school teachers towards ICT in school.

Group of Teachers	N	Mean	SD	SE_D	t-value	Remark
Male Teachers	154	114.40	12.72			P> .05
Female Teachers	150	111.41	9.80	1.3	2.3	Significant

The table 2 reveals that the computed t-value established to be 2.3 which is greater than the criterion table t-value (1.97) at .05 level of confidence for 302 df. Therefore, the formulated hypothesis, "There is no significant difference between the attitude mean score of secondary male and female school teachers towards ICT in Papum Pare, Lower Subansiri and Upper Subansiri districts of Arunachal Pradesh" got rejected. From this, it is understood that the secondary male and female school teachers did differ in their attitude towards ICT in three districts of Arunachal Pradesh. Moreover, the above table signifies that the male teachers had more favourable attitude than the female teachers in Papum Pare, Lower Subansiri and Upper Subansiri districts towards ICT so far the mean scores are concerned.

C. Objective 3

To compare the attitude of APST (Arunachal Pradesh Schedule Tribe) and Non-APST secondary school teachers towards ICT in school.

1) *Hypothesis 2:*There is no significant difference between the attitude mean scores of APST and Non-APST secondary school teachers towards ICT in school.

Table-III: Showing the frequency distribution table of attitude scores of APST and Non-APST secondary school teachers towards ICT in school.

Group of Teachers	N	Mean	SD	SE_D	t-value	Remark
APST Teachers	165	112.41	11.75			P< .05
Non-APST Teachers	139	113.01	11.12	1.32	0.45	Not Significant

The table 3 depicts that the computed t-value established to be 0.45 which is lesser than the criterion t-value (1.97) at .05 level of confidence for 302 df. So, the computed t-value (0.45) has not been considered significant and the formulated hypothesis, "There is no significant difference between the attitude mean score of secondary APST and Non-APST school teachers towards ICT in Papum Pare, Lower Subansiri and Upper Subansiri districts of Arunachal Pradesh" gets retained. From this, it is interpreted that secondary APST and Non-APST school teachers did not differ in their attitude towards ICT in three selected district of Arunachal Pradesh. But the mean score of Non-APST teachers (113.01) is slight higher than the APST teachers (112.41). Therefore, it signifies that the Non-APST teacher possessed a bit more favourable attitude than the APST teachers towards ICT.

D. Objective 4

To compare the attitude of government and private secondary school teachers towards ICT in school.

1) *Hypothesis 3:*There is no significant difference between the attitude mean scores of government and private secondary school teachers towards ICT in school.

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Table-IV**:**Showing the frequency distribution table of attitude scores ofgovernment and private secondary school teachers towards ICT in school.

Group of Teachers	N	Mean	SD	SE_D	t-value	Remark
Govt. Teachers	165	114.27	11.92	1.06	1.88	P< .05 Not Significant
Private Teachers	139	110.78	11.62			

An examination into the table- 4 reveals that the computed t-value found out to be 1.88 which is lesser than the criterion t-value (1.97) at .05 level for 302 df. Hence, the formulated hypothesis, " There is no significant difference between the attitude mean scores of government and private secondary school teachers towards ICT in Papum Pare, Lower Subansiri and Upper Subansiri districts of Arunachal Pradesh" got retained. From this, it is interpreted that the secondary school teachers of government and private secondary schools did not differ in their attitude towards ICT. Further, it shows that the government secondary school teachers had more favourable attitude than the private secondary school teachers towards ICT.

VII. DISCUSSION AND CONCLUSION

In the new technology era, the role of teacher has changed and continues to change from being an instructor to a constructor, facilitator, coach and creator of learning situations [22]. The result of present study indicated that secondary school teachers had favourable attitude towards ICT in three selected districts of Arunachal Pradesh as supported by the findings of [14], [18], [2], [16], [17], [12],[7] and [6]. While some studies like [9], [25], [24], [26] and [10]have found no gender differences in attitudes towards ICT. Moreover, the male and female secondary school teacher did differ significantly in their attitudes towards ICT as shown in the findings of [20]and [3]. It was also signified that the male teachers had more favourable attitude than the female teachers so far the mean scores are concerned. The finding is consistent with the findings of previous studies that showed that male students are likely to be more competent than female students are in the use of ICT [5]. The results of other studies found that females had higher level of attitude than males [20] and [22]. According to North & Noyes (2002), using ICT tools is widely perceived as a masculine activity and their research provided evidence for a linkage between gender and technophobia [22]. Female teachers have been found to be more anxious and less confident computer users in most of the studies. In addition, male teachers have been found to have more prior experience with computers and to be much more likely to implement computer use in their classroom than female teachers[4].Thus, female teachers should be encouraged and motivated for utilization of ICT in school. The study found that there were no difference of attitudes between APST and Non APST teachers and also in government and private secondary school teachers towards ICT. The findings of no significant difference on relation to type of management of this study share similarities with findings of [19] and [11]. Therefore, the findings of this study will be useful to the educational administrator, planners and policy makers for taking constructive decisions. The favourable attitude towards use of ICT usually foretells future computer use. Hence, the teachers' favourable attitude towards ICT can make use to prepare them better for incorporation ICT into their teaching and learning.

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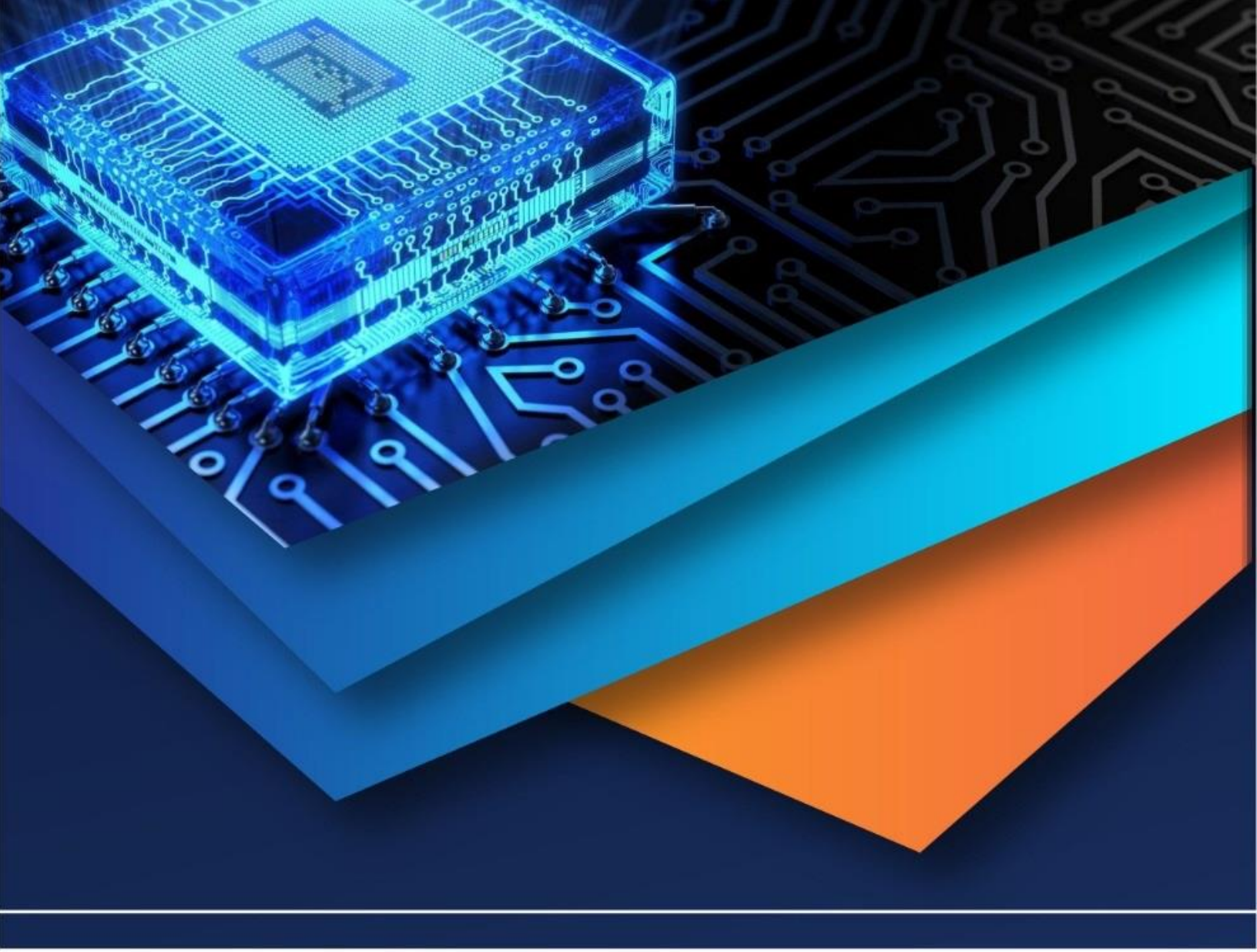

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