A Study on Use of ICT among Higher Secondary School Students in North 24 Parganas District, West Bengal

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Abstract : The purpose of the study determines the status of ICT resources availability and usage of ICT at the time of teaching-learning process in higher secondary schools in West Bengal. For this purpose a questionnaire which is prepared in three dimensions (availability of resources, uses by students and uses by teachers) are applied to 144 students. This study is conducted with descriptive type research and survey method. The data is analyzed through two types of statistic, one is descriptive statistic where is follow mean, standard deviation, correlation and the other is inferential statistic where is used 't' test, besides to find which area is available of ICT resources and which group maximum usage the ICT resources. At the end of the study it is determined that ICT resources available in urban area than rural, there is a difference to use of ICT between male and female students and here is low correlation to use of ICT resources between teacher and students at the time of teaching learning process. It is recommend that future studies focus on investigation to use of ICT at different level of education and different state.

Key words: Information Communication Technology (ICT); Computer uses in Education; Internet.

❖ INTRODUCTION

Today, we are living in knowledge-based society and knowledge-based global world where knowledge is a great power, economy and strength of an individual, and the asset of nation. It is also true that these are in tremendous explosion in its quality as well as growth. We are in need of new technologies to have access and proper use of this fact growing knowledge. Moreover, a mere acquisition of knowledge is not enough; we have a complete access and mastery over the knowledge getting process. It can only happen with the assistance of the science of information and communication technology.

The NCERT (National Council of Educational Research and Training) and EMRC'S is the major centre of activities in the area of educational technology in India. Through it the department like CIET and the department of education kits the NCERT and has taken up of programmers. Its programmers involve upliftment of innovations in education, training of teachers, communicators and administrators, evaluation of materials and programmers are setting news bank of educational technology. It is also idea to improve of curriculum and concoction of basis scripts for films, radio and television as well as with the creation of multipurpose kits, models and other instructional material.

The past two decades, Information Technology has amplified to become Information and Communication Technology (ICT), and has become better foundation schools (Abbott, 2001). Many claims have been made about its potential contribution to pupils' learning (Pachler, 1999) and official rhetoric has presented it as set to 'transform education' (Blair, 1997). Much current policy and practice reflects a technocratic determinism in which technology is seen un-problematically as take steps relatively forthright tools for teachers and students, and it apply as calling primarily for development of technical skills. However, others see successful educational applications of the computer as involving a depth interplay of context, people, activities, machines and available software within particular settings(Noss & Pachler, 1999, Leach & Moon, 2000). While quality and level of ICT resource continue to improve in many schools, provision of materials alone is likely to be of narrow value unless more is understood about the interactions and processes generated by using technology in different settings, and how pedagogical strategies to improve students' learning might be developed effectively through them.

Students form a significant group within this social system, and their perspectives game a major part in construct the activity that takes place in school settings. Indeed, it has been considered that young people should be seen as active participants in implementation social and educational processes rather than observed as passive recipients of them (Pollard & Tann, 1993). Research has shown that, from an early age, young people are capable of insightful and constructive analysis of their experience of learning in school and are able to comment on teaching approaches and contexts that are helpful in their learning (Brown & Mclntyre, 1993; Harris et al, 1995; McCallum et al, 2000; Rudduck & Flutter, 2000). A key component in acquiring such understanding may be attention to the 'pupil voice' (Keys & Fernandes, 1993; Blatchford, 1996; Rudduck et al., 1996). Rudduck and Flutter (*op cit*) maintain that 'we need to tune in to what pupils can tell us about their experiences and what they think will make a difference to their commitment to learning and, in turn, to their progress' (p. 75). Recent research on pupils' perspectives in the UK has been linked either to the development of school-based strategies based on consultation with pupils on effective classroom practice, or to aspects of curricular evaluation (see Lord and Harland (2000) for a review) but few studies have focused specifically on secondary pupils' views on their current classroom use of ICT in teaching and learning. Where students' perspectives have provided the focus for such inquiry in other educational settings (for example the Canadian technology-enhanced Secondary Science instruction (TESSI) project), pupils' enhanced participation in learning activities and their development of successful learning strategies were attributed to the combined influences of – and interactions between – the technologies employed and the pedagogical and social milieu of the classroom (Pedretti et al., 1998).

The popular image of young people – the 'scroungers' referred to by Rushkuff (1997)– growing up in an increasingly technology-dependent society, connected by sophisticated telecommunication networks in a culture mediated by television and computer, is that of natural computer users from a 'digital generation'. Recent studies (Holloway & Valentine, 1999; Becta, 2001; Facer et al, 2001; Wellington, 2001) have begun to examine the nature and extent of young people's use of ICT outside school and the influence that it may have upon their learning with ICT in school. Whilst results indicate that some children (often those who use computers extensively

at home) are capable of integrating their use of ICT in balanced and sophisticated ways (Furlong et al, 2000). In school, however, the locus of control lies on the other hand; emphasis is on learning activities led by the teacher, metered by timetable obedience's, designed to assemble curriculum criteria and attainment targets and incorporate the mandatory use of ICTs.

❖ **OPERATIONAL DEFINITION OF THE STUDY**
(ICT) means Information and Communication Technology. "ICT covers only product that will store, retrieve, manipulate, transmit or receive information electronically in digital from". In this study ICT means using technologies like mobile, computer and internet only.

❖ **OBJECTIVES OF THE STUDY**
The following objectives were considered for the study:
1. To study the availability of ICT resources in Higher Secondary schools in North 24 Parganas district.
2. To study the uses of ICT during teaching – learning process by H.S. school students in North 24 Parganas.
3. The relation uses of ICT during teaching learning process by teachers and students in H.S school of North 24 Parganas.

❖ **HYPOTHESIS**
$H_{0.1}$: There is no significance difference between availability of ICT resources in urban and rural higher secondary school in North 24 Parganas district.
$H_{0.2}$: There is no significant difference in use of ICT between urban and rural students in H.S school of North 24 Parganas.
$H_{0.3}$: There is no significant difference between male and female students in use of ICT during their teaching learning process in H.S school of North 24 Parganas.
$H_{0.4}$: There is no significant relationship between use of ICT by teacher during teaching and use of ICT by H.S students in school.

❖ **RESEARCH METHODOLOGY**
The study is of descriptive type research and technique followed on Survey method. This method was used by the researcher to study the vivid description of the application and uses of ICT among the students of higher secondary level in North 24 Parganas district.
Sample and Sampling

Researcher selected 5 Higher Secondary schools in North 24 Parganas district randomly. Hence total sample of this study consisted 144 students. These samples are selected by using random sample method.
Tools Used
In order to carry out the present investigation, the necessary tools were developed and employed by the researcher, which is given bellow-

Questionnaire (to be filled by the student):
A questionnaire was prepared. It was included 30 items. Here are three major dimensions (availability of ICT resources, uses of ICT by Students and uses of Teachers).

1. To study the availability of ICT resources in Higher Secondary schools in North 24 Parganas district.
 For the first objective, the researcher will use the questionnaire tool and observation to find out the availability of ICT in the higher secondary schools of North 24 Parganas district. Here is use two point scale (Yes and No).
2. To study the uses of ICT by teacher during teaching.
 For the second objective, the researcher will use the questionnaire tools will be used to study the teacher's use of ICT in H.S. classroom programme. Here is use three point scale (Yes, some times and No).
3. To study the uses of ICT by H.S. students in school.
 For the third objective, the researcher will use the questionnaire tools will be used to study the student's use of ICT during their teaching-learning process. Here is use three point scale (Yes, some times and No).

Statics Used

| Descriptive Statistic	Inferential Statistic
Mean, S.D and Correlation	T test

❖ **ANALYSIS OF THE RESULTS**
$H_{0.1}$: There is no significance difference between availability of ICT resources in urban and rural higher secondary school in North 24 Parganas district.
Table -1 Shows the number of samples, mean, standard deviation and 't' value of different schools different location i.e. Urban, Rural school.

Table - 1: The result of the analysis can be founded at a glance the table given blow –

Group	N	Mean	Standard Deviation	df	't' value	Table Value	Results
Urban	44	7.340909	1.010254			1.98 at 0.05 level	
				142	10.7924		Significant
Rural	100	4.47	2.180978			2.61 at 0.01 level	
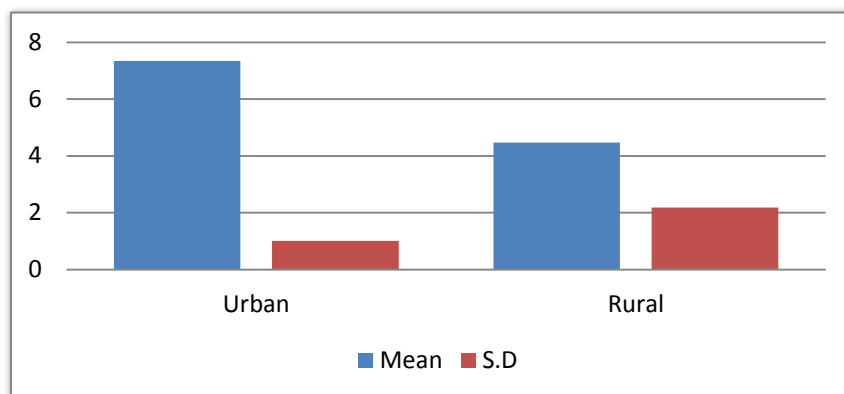
Results

From the above table it finds out that the necessary value for judging significance with a degree of freedom 142 is 1.98 at 0.05 level of significance. Since our calculate 't' value that is 10.7924 which is lordly than the table value. So reject the null hypothesis at 0.05 level of confidence. Though there is difference in the mean of two groups apparent in the above table. So we can say that there is significance difference between availability of ICT resources in urban and rural higher secondary school in North 24 Parganas district.

Discussion

Above results it finds out that there is a significant difference between availability of ICT resources in urban and rural secondary schools. It is related to **Neeraj and Anitha** (2010) study. They study on "Computer and Internet awareness in school going students". The study is invention that the required balance of awareness about computer and the internet is not there. The real power of the computer is disclosed in the internet. But the infiltration of computer and internet is still far from desired.

$H_{0.2}$:   There is no significant difference in use of ICT between urban and rural students in H.S school of North 24 Parganas.

Table - 2 shows the number of Samples, Mean, Standard Deviation and 't' value of different students in different location i.e. urban, rural areas students.

Table - 2: The result of the analysis can be founded at a glance the table given blow –

| Group	N	Mean	Standard Deviation	df	't' value	Table Value	Results
Urban	44	18.18	2.80591342			1.98 at 0.05 level	
				113	3.3718		Significant
Rural	100	16.23	3.951358288			2.62 at 0.01 level	
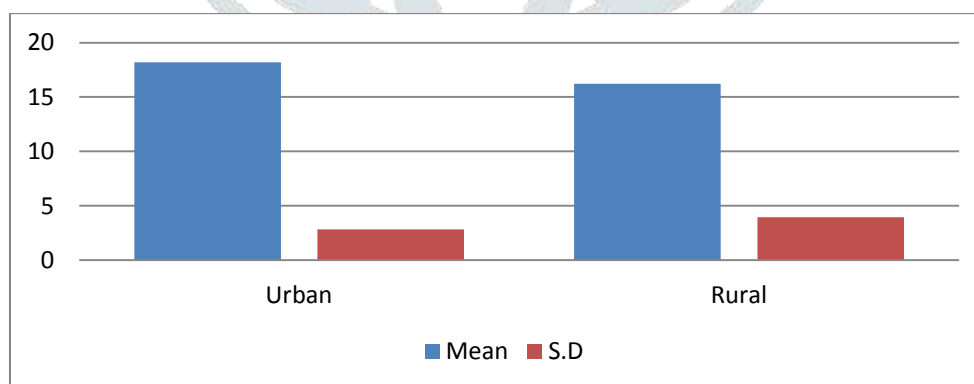
Results

From the table it finds out that the necessary value for judging significance with a degree of freedom 113 is 1.98 at 0.05 level of significance. Since our calculate t-value that is 3.3718 which is lordly than the table value. So the null hypothesis is reject at 0.05 level of confidence. Though there is difference in the mean of two groups apparent in the above table. So we can say that there is significance difference between use of ICT between rural and urban students of higher secondary school in North 24 Parganas district.

$H_{0.3}$:   There is no significance difference between male and female students in use of ICT during their teaching-learning process in higher secondary school of North 24 Parganas district.

Table - 3 Shows the number of Samples, Mean, Standard Deviation and 't' value of different students in different gender i.e. Male, Female students.

Table - 3: The result of the analysis can be founded at a glance the table given blow –

Group	N	Mean	Standard Deviation	df	't' value	Table Value	Results
Male	75	17	2.950034	116	0.5699108	1.98 at 0.05 level	Not Significant
Female	69	16.63768	4.458868			2.62 at 0.01 level	
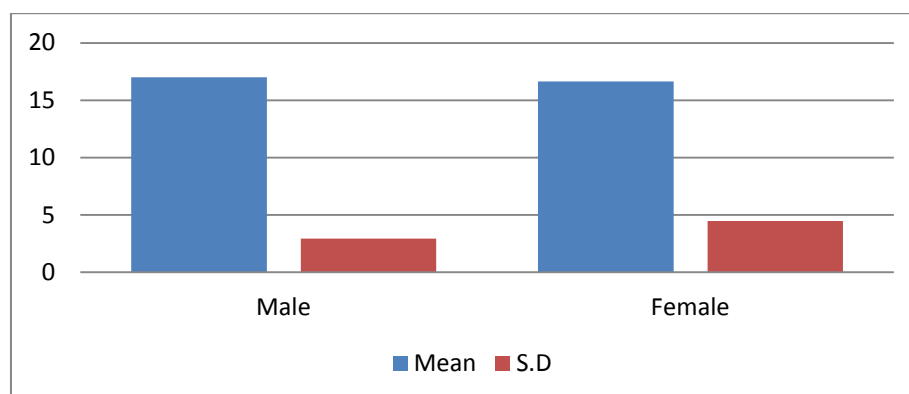
Results

From the table it finds out that the necessary value for judging significance with a degree of freedom 116 is 1.98 at 0.05 level of not significance. Since it calculate 't' value that is 0.5699108 which is less than the table value. So the null hypothesis cannot rejected at 0.05 level of confidence. Therefore, the hypothesis is accepted. Though there is slight difference in the mean of two groups apparent in the above table. Yet it is not significant at any standard level of significance. So we can say that the two group namely male and female students are not differ significantly with regard to the use of ICT during teaching learning process in higher secondary school of North 24 Parganas district.

Discussion

The above results related to **Eid Alharbi (2014)** "A Study on the Use of ICT in Teaching in Secondary Schools in Kuwait'' in his study Research Question: Are there any differences between male and female students' teaching and learning process in terms of their use of ICT in the classroom? Most of the outcomes associated with the analysis by students' gender do not show any significant change in the means of the two groups. The only real point of interest is where students are called to evaluate their confidence in ICT use. Here, surprisingly probably, we see a significant change in favour of females. This is ambivalent to most research from the past twenty years, and it possible signals a trend moving towards progressive female confidence in ICT use.

H$_{0.4}$: There is no significance relationship between uses of ICT by teachers during teaching and uses of ICT by higher secondary students in school of North 24 Parganas.

Table - 4 shows the number of samples, mean, standard deviation and correlation of Teachers and students.

Table - 4: The result of the analysis can be founded at a glance the table given blow –

Group	N	Mean	Standard Deviation	df	Correlation	Table Value	Results
Teacher	144	15.45139	2.842804	142	0.242862095	0.159 at 0.05 level	Low correlation
Student	144	16.82639	3.740405			0.208 at 0.01 level	
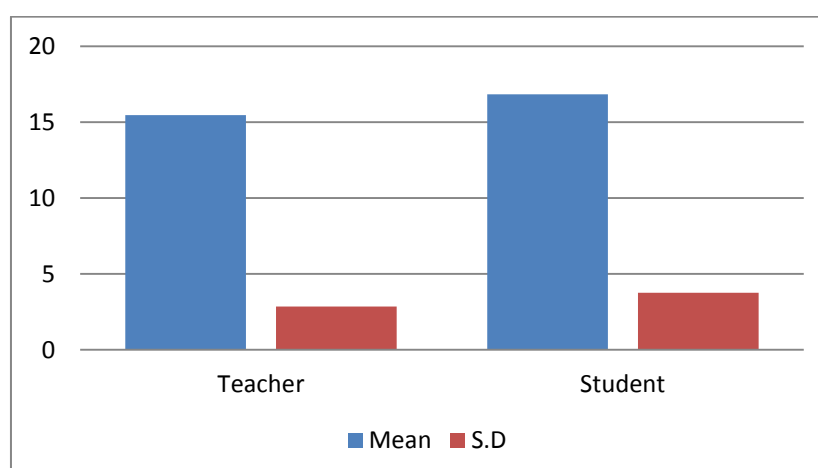
Results

From the table it finds out that the necessary value for judging significance with a degree of freedom 142 is 0.159 at 0.05 level of significance. Since it calculated correlation value is 0.242862095 which is lordly than the table value. So it can reject the null hypothesis at 0.05 level of confidence and also reject in 0.01 level of significance. Though there is difference in the mean of two groups apparent in the above table. Yet it is significant at any standard level of significant. So we can say that the two group namely teacher and students are low correlation with regard to the use of ICT during teaching learning process in higher secondary school of North 24 Parganas district.

Discussion

Now we can see that above result is related to **Mrs. V. H. Sasikala (2010)** conducted a study on ''ICT awareness of B.Ed. trainees ''. She holds the hypothesis that there is no significant difference between male and female B.Ed. students in their ICT awareness. In her study, low positive correlation between ICT awareness and teaching skill of B.Ed. students. In this study I get low correlation with regard to use of ICT.

❖ LIMITATIONS OF THE STUDY

The present research has some limitation-
1. Due to the shortage of time the study was restricted of North 24 Parganas district.
2. Only Five Higher Secondary schools were selected for the study.
3. The researcher can't use stratified sampling technique.

❖ SOCIAL CONTRIBUTION OF THE STUDY

In the 21st century, where technology is the essential of the day the cast down fact is that majority of the students and the teachers were use of ICT tools. This study indirectly emphasis the need to brace up to new challenges and systems of education through the increasing and use of ICT in Higher Secondary schools. The necessity to be technologically application and worthy as well as the knowledgeable about how to use new technologies practically in teaching and learning, is increasing important. The use of ICT develops reflection, assistance and autonomy amongst learners. This is turn, would propulsion to quality in education and continues self development.

❖ CONCLUSIONS

Among the 144 Higher Secondary school students taken for the study majority of the students were used of ICT tools. The necessary infrastructures for ICT were not available in most of the schools in North 24 Parganas district. Among the visited H.S school of in North 24 Parganas district, urban area schools was equipped with some infrastructures for ICT but rural schools was equipped with less infrastructures for ICT. There was a well organized ICT laboratory in Urban schools but yet the ICT laboratory teacher not appointed in the school.
Most of the schools in North 24 Parganas district lack in the use of ICT. We can see form this study that it is differs to use of ICT resources among urban and rural students and also male and female students. There is low correlation among teachers and students to use of ICT in teaching learning process.

The teacher should be in a location to pair the technology with new teaching learning approaches so as to improve the learning of students. ICT can develop the standard of education and learning of students. The challenge envisaging our education system is how to transform the curriculum and teaching processes so that students can act effectively in progressive, information affluent and continuously changing environment. ICT can transfer the traditional concept of learning process and improved new processes based on digital technology. It can clearly create information-rich society. It is necessary to redefine the role and duty of teachers to meet the challenges of ICT in 21st century. Successful integration of ICT into teacher education is the elaborate to which teacher educators have the knowledge and skill for modelling the application of ICT in their practices in developing countries like India.

❖ SUGGESTIONS

➢ The teachers should benefit the use of ICT for content transaction, making of the teaching-learning materials, project work and making presentations as these are the elements directly related to the teaching-learning process.
➢ The management and the higher authority should foster and support the schools to develop language laboratory and apply it for the teaching of languages.
➢ The teachers should motivate students to use ICT for the teaching-learning process by providing the fillips and constructing the policies at the institute.
➢ Teachers associating workshops and seminars on "The benefit of ICT in the teaching-learning process" should enhancement.

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