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## A Study on Usage of ICT among Higher Secondary School Students in Howrah District

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### ABSTRACT:

In the 21<sup>st</sup> century, Information and Communication Technology (ICT) takes a major role to change the learning strategy and enhance students' achievement motivation. The National Curriculum Framework 2005 (NCF) has highlighted the importance of ICT in school education. Now ICT is an integral part of school education and it helps students as well as teachers to update their knowledge depending on the needs of society. This study indirectly stresses the need to brace up to new challenges and systems of education through the development and present status of ICT use in Higher Secondary institution. The need to be technologically sound and competent as well as the knowledgeable about how to use new technologies effectively in teaching and learning, is increasing important. The use of ICT develops reflection, collaboration and autonomy amongst learners. This in turn, would lead to quality education and continues self-development.

**Keywords:** ICT.

### INTRODUCTION:

Our society needs to be aware on technology and competent as well as to be knowledgeable about to use new technologies effectively, in teaching and learning in increasingly important systems and educational thought, the deployment and use of Information and Communication Technology (ICT) in Higher secondary level in West Bengal. ICT skill is a major factor for enabling students to be confident, creative and independent learners. At present knowledge may be regarded as power and skill. The term of Educational Technology was unknown in India before sixty years ago and was used as a synonymous to audio - visual teaching aids. But, new technology of teaching has been accepted as an important component of the system of education in India. One can say that the use of ICT develops reflection, collaboration and autonomy amongst learners in turn would lead to quality in education and continuous self development. The year 1972-1973 is a landmark in the history of educational technology in India. Faced with the problem of huge expansion and the need for improvement of the quality of education, the government of India lunched an educational technology project which broadly envisages the stimulation and promotion of an integrated use of mass media and instructional technology at the levels of education.

The NCERT (National Council of Educational Research and Training) and EMRC'S is the main centre of activities in the field of educational technology in India. Through it the department like CIET and the department of education kits the NCERT and has taken up a number of programmers. Its programmers include

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development of innovations in education, training of teachers, communicators and administrators, evaluation of materials and programmers are building an information bank of educational technology. It is also concern with the development of curriculum and preparation of basis scripts for films, radio and television as well as with the production of multipurpose kits, models and other instructional material.

**SIGNIFICANCE OF THE STUDY:**

Information and communication technology based teaching learning process may lead to effectiveness and efficiency of educational system. The effective usage of ICT's in the Higher Secondary classroom bring positive academic outcomes. ICT can bring the change in the present educational system in true sense.

**REVIEW OF RELATED LITERATURE:**

McClelland, J. (2011) studied on "ICT infrastructure in the public sector in Scotland" the strategic management of investment in Scottish public sector and communication technology infrastructure, reporting on how best to deliver improved value for money and support multi agency working and shared services.

Sasikala, V.H. (2010) also studied on "ICT awareness of B.Ed. trainees" with a sample of 50 B.ED students and found out that there was no significant difference between male and female B.ED students in their teaching skills and there was no significant difference between male and female B.Ed. students in their ICT awareness. The researcher also found that there was low positive correlation between ICT awareness and teaching skill of B.Ed. students.

Sangra, A., Gonzalez, M. (2010) conducted a study on "The role of ICT in improving teaching and learning processes in primary and secondary school." The researcher showed that the contribution of ICT to the improvement of teaching and learning processes is higher in the schools that have integrated ICT as an innovation factor.

Rajakumaran, Soureche & Viswanathan (2010) examined a study to assess the "Role of ICT in teaching and learning Mathematics". It was found that ICT enable the students to manipulate diagrams dynamically and it encouraged them to visualize the geometry as they generate their own mental images. It enhanced opportunity for students to be introduced to interesting problems and associated mathematical subject matter much earlier than before possible.

Neeraj & Anitha (2010) did a study on "Computer and Internet awareness in school going students". The study found that the required level of awareness about computer and the internet was not there and the real power of the computer was revealed in the internet. But the penetration of computer and internet was still far from desired.

Krishnaveni & Meenakumari (2010) focused on "Usage of ICT for information administration in higher education institutions". Results revealed that a comprehensive set of functional areas of information administration. It was found that current level of usage indicated a clear integration of ICT for managerial or information based administration in higher education institutions.

Ambasana, A. (2009) conducted a research on "Utilization of computer technology in remedial instruction". Results concluded that computer – assisted instruction programme in remediation task was found to be successful as the students were able to overcome the difficult points in the content.

**OBJECTIVES OF THE STUDY:**

O<sub>1</sub>: To study the availability of ICT resources in Higher Secondary schools in Howrah district.

O<sub>2</sub>: To study the measurement of uses of ICT by teacher during teaching Higher Secondary schools in Howrah district.

O<sub>3</sub>: To study the measurement of uses of ICT by Higher Secondary schools in Howrah district.

**RESEARCH QUESTIONS:**

1. To what extent the necessary infrastructures of ICT are present in Higher Secondary schools in Howrah district?
2. How far the teachers use the ICT in H.S. school during teaching learning programme?
3. How far the higher secondary school students use ICT during their teaching-learning process?

**DELIMITATION OF THE STUDY:**

The present study is delimited to-

- Five higher secondary schools only.
- The data was collected from Howrah district only.
- Sample was collected from 144 students of West Bengal Board only.

**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 usages of ICT among the students of Higher Secondary level in Howrah district.

**POPULATION:**

Higher Secondary students of Howrah district in West Bengal was the population of the present study.

**SAMPLE AND SAMPLING:**

Researcher selected 5 Higher Secondary schools in Howrah district randomly. Survey was done among 144 students and these samples were selected by random sample method.

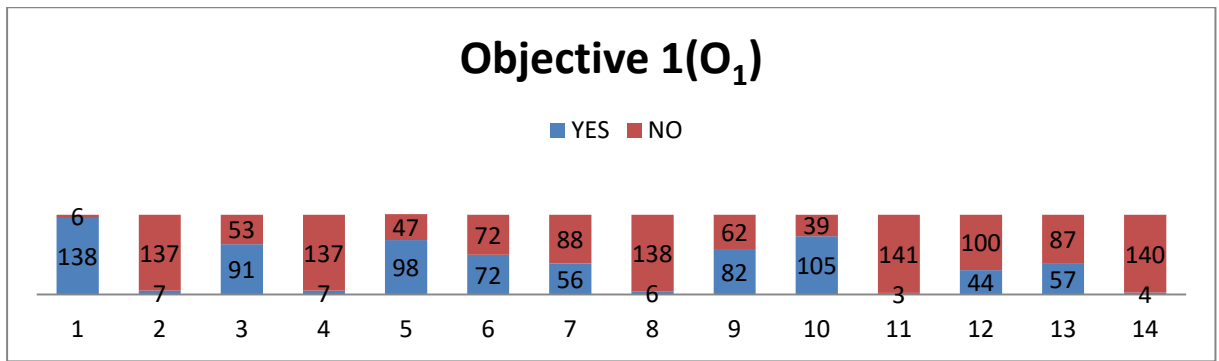
**TOOLS USED:**

In order to carry out the present investigation, a self- made standardised questionnaires were used.

**DATA ANALYSIS AND INTERPRETATION:**

The collected data are analysed by using Percentage (%)

**O<sub>1</sub>: To study the availability of ICT resources in higher secondary schools in Howrah district**



**Fig1: availability of ICT resources**

**Statement 1:** There are ICT Lab or Computer lab in your school.

**Interpretation:** From the percentage calculation, the researcher observes the trend that ICT lab is available in the 96% of the Higher Secondary Schools in Howrah district. So, it can be said that the availability of ICT lab or Computer Lab in H.S. schools of Howrah district is frequent.

**Statement2:** There are free of cost Internet facilities in your school.

**Interpretation:** It is evident from the calculation that only 5% of the schools give the free of cost Internet facilities. So, it can be said that the higher secondary schools of Howrah district is very backward from this perspective of free internet.

**Statement 3:** Projector uses in your classroom during teaching – learning process in school.

**Interpretation:** It is evident from the calculation that 63% schools use the projector during teaching – learning process.

**Statement 4:** There is over-head projector in the classroom in your school.

**Interpretation:** Only 5% of the schools use the overhead projector which is very lower in percentage regarding the availability of O H P in classes.

**Statement 5:** Your school has own website.

**Interpretation:** The calculation reveals that only 68% schools have their own website. So, higher secondary school of Howrah district is good from this perspective of use website.

**Statement 6:** The facilities of computer in your school library.

**Interpretation:** It is evident from the calculation that 50% of the schools have the computer facilitated in library.

**Statement 7:** The uses of white board in your classroom.

**Interpretation:** The calculation shows that 39% schools uses whiteboard in classroom.

**Statement 8:** Availability of Digital library in your school.

**Interpretation:** Only 4% of the higher secondary schools avail digital library.

**Statement 9:** Xerox machine is available in your school.

**Interpretation:** It is evident from the calculation that Xerox machine is available in the 57% of the higher secondary schools of Howrah district conferring a medium range from this perspective of the availability of Xerox machine.

**Statement 10:** Your school have own email id.

**Interpretation:** Only 73% schools avail their email id. So, it can be said that the higher secondary schools of Howrah district are very good from this perspective of the email.

**Statement 11:** Wi-Fi facilities availability in your school.

**Interpretation:** Only in the 2% of the higher secondary schools of Howrah district Wi-Fi is available.

**Statement 12:** Computer is used for your evaluation in school.

**Interpretation:** The calculation reveals that 31% institutions use the computer for student’s evaluation.

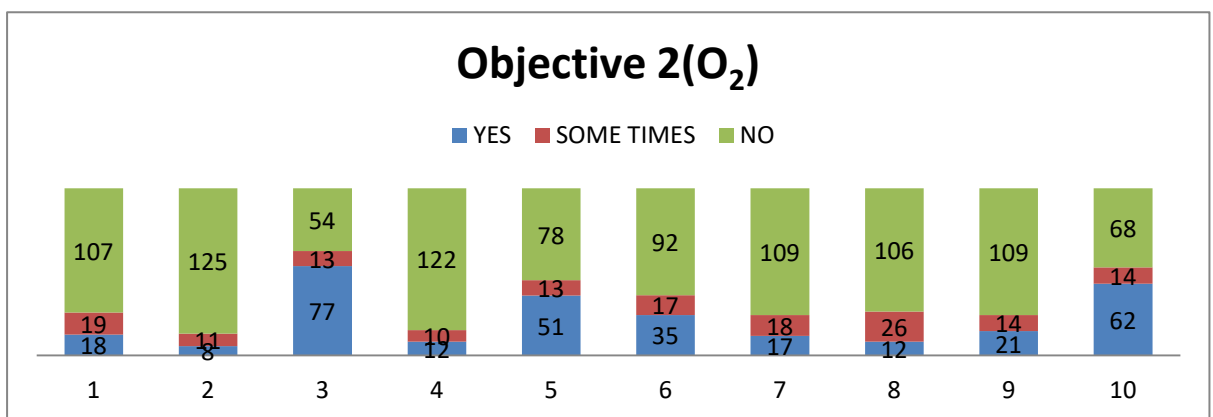
**Statement 13:** Availability of sound-recorder in your school.

**Interpretation:** It is evident from the calculation that 40% institutions of Howrah district use sound recorder.

**Statement 14:** Availability of e-library in your school

**Interpretation:** Only 3% higher secondary schools of Howrah district avail of e-library.

**Objective – 2: To study the measurement of uses of ICT by teachers during teaching**



**Fig2: measurement of uses of ICT by teachers**

**Statement 1:** Teachers use the white board during teaching – learning process in your classroom.

**Interpretation:** The calculation reveals that in 13% of the higher secondary schools white board is used during teaching – learning process while 13% uses sometimes and 74% do not use at all. So, it can be said that the higher secondary school of Howrah district is very backward from this perspective of the white board use.

**Statement 2:** Teachers use the slide projector during teaching – learning process in your classroom.

**Interpretation:** It is evident from the calculation that only 5% of the schools use the slide projector during teaching – learning process while 8% uses sometimes and 87% do not use at all. So, it can be said that the higher secondary schools of Howrah district are very backward from the perspective of the slide projector use.

**Statement 3:** All teachers of your school use computer.

**Interpretation:** 53% teachers of the school use the computer while 9% teachers use it sometimes and 38% teachers do not use. So, it can be said that the higher

secondary school of Howrah district is good from this perspective of the computer use.

**Statement 4:** Teacher shows educational film /subjected related video during class room teaching in your school.

**Interpretation:** The calculation reveals that only 8% teachers use educational film/subject related video during class room teaching while 7% teachers use it sometimes and 85% teachers do not use in higher secondary schools of Howrah district. So, it can be said that the higher secondary school of Howrah district is very poor from this perspective of the film or video use.

**Statement 5:** Teachers use computer for evaluation in your school.

**Interpretation:** It is evident from the calculation that there are 37% teachers who use computer for evaluation in higher secondary school and 9% teachers use sometimes. So, it can be said that the higher secondary school of Howrah district is poor from this perspective of computer use.

**Statement 6:** Teachers use the power point during teaching – learning process in you classroom.

**Interpretation:** The calculation reveals that only 24% teachers use power point during teaching-learning process in higher secondary school while 12% teachers use it sometimes and 64% teachers do not use at all. So, it can be said that the higher secondary school of Howrah district is very poor from this perspective of power point use.

**Statement 7:** Teachers use the sound system during teaching – learning process in your classroom.

**Interpretation:** It is evident from the calculation that 12% teacher use sound system during teaching-learning process in higher secondary school while 12% teachers use sometimes and 76% teachers do not use at all. So, it can be said that the higher secondary school of Howrah district is very poor from this perspective of sound system use.

**Statement 8:** Teachers use the internet during teaching – learning process.

**Interpretation:** It is evident from the calculation that 8% teacher use internet during teaching-learning process while 18% teachers use sometimes and 74% teachers do not use at all. So, it can be said that the higher secondary school of Howrah district is very poor from this perspective of internet use.

**Statement 9:** Teacher provides feedback through ICT in your school.

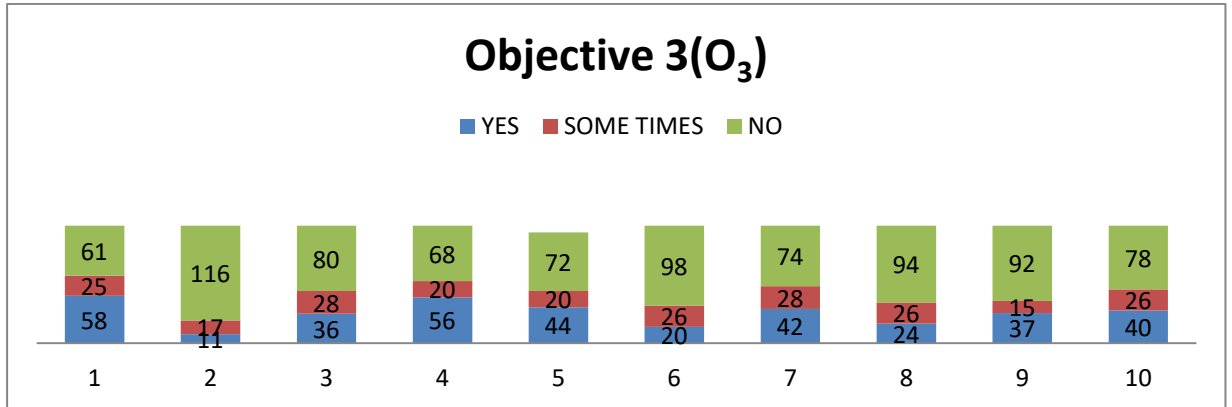
**Interpretation:** It is evident from the calculation that only 14% teacher provides feedback through ICT in school while 10% teachers use sometimes and 76% teachers do not use at all. So, it can be said that the higher secondary school of Howrah district is very poor from this perspective of provides feedback through ICT.

**Statement 10:** Text book content is easy to understand when teachers use the ICT during teaching – learning process.

**Interpretation:** It is evident from the calculation that 43% teachers use ICT during teaching learning process while 10% teachers use it sometimes and 47% teachers do not use at all. So, it can be said that the higher secondary school of Howrah district is good from this perspective of ICT use.



**Objective -3: To study the measurement of uses of ICT by H.S. students in school**



**Fig3: measurement of uses of ICT by H.S. students**

**Statement 1:** All of you use internet.

**Interpretation:** Only 40% students use internet while 17% students use sometimes and 43% students do not use at all. So, it can be said that the higher secondary school of Howrah district is poor from this perspective of internet use.

**Statement 2:** Recorder is used to record the lecture of teacher during teaching.

**Interpretation:** It is evident from the calculation that only 8% students record the lecture of teacher during teaching while 12% students sometimes and 80% students do not record at all. So, it can be said that the higher secondary school of Howrah district is very poor from this perspective of recorder use.

**Statement 3:** You use Information and communication Technology to solve your educational problem and decision making.

**Interpretation:** It is evident from the calculation that 25% students use ICT to solve educational problems and decision making and 19% students use it sometime and

56% students do not use. So, it can be said that the higher secondary school of Howrah district is poor from this perspective of ICT use.

**Statement 4:** All of you use computer.

**Interpretation:** Only 40% students use computer while 14% students use it sometimes and 47% students do not use at all. So, it can be said that the higher secondary school of Howrah district is poor from this perspective of computer use.

**Statement 5:** You get computer training form your school.

**Interpretation:** It is evident from the calculation that 32% students get computer training form their school while 15% students are trained sometimes and 53% students are not trained. So, it can be said that the higher secondary school of Howrah district is poor from this perspective of computer training.

**Statement 6:** You provide feedback through computer during teaching-learning process.

**Interpretation:** It is evident from the calculation that 14% students provide feedback through computer during teaching-learning process and 18% students provide sometimes and 68% students do not provide. So, it can be said that the higher secondary school of Howrah district is very poor from this perspective of provide feedback through computer.

**Statement 7:** You can use power point.

**Interpretation:** Only 29% students use power point and 20% students use sometimes and 51% students do not use. So, it can be said that the higher secondary school of Howrah district is poor from this perspective of power point use.

**Statement 8:** You can use internet and e-library for your text references.

**Interpretation:** It is evident from the calculation that 29% students can use internet and e-library for his text references and 18% students use sometimes and 65% students do not use. So, it can be said that the higher secondary school of Howrah district is poor from this perspective of power point use internet and e-library.

**Statement 9:** You can use email id.

**Interpretation:** It is evident from the calculation that 26% students use email and 10% students use sometimes and 64% students do not use. So, it can be said that the higher secondary school of Howrah district is poor from this perspective of email use.

**Statement 10:** You can use excel sheet.

**Interpretation:** It is evident from the calculation that 28% students use excel sheet and 18% students use sometimes and 54% students do not use. So, it can be said that the higher secondary school of Howrah district is poor from this perspective of excel sheet use.

#### **CONCLUSION:**

From the investigation the researcher can conclude that the necessary infrastructures for ICT are not available in most of the schools in Howrah district. Among the visited five Higher Secondary schools only two urban schools is equipped with some infrastructural facilities for ICT but other three rural schools are not well equipped with ICT facilities. It is also observed that there are well organized ICT laboratory in two schools but the teachers for ICT laboratory are not appointed yet. The researcher also found that most of the schools in Howrah district are not properly blended regarding the use of ICT in their teaching-learning process.

#### **RECOMMENDATIONS FOR FURTHER STUDIES:**

- The present study has been conducted only in Howrah district of west Bengal. It can be further extended to other districts in the state. It can also be conducted globally.
- Similar studies can be conducted by taking larger sample of teachers and students for the study.
- The study could be conducted in all the states of India.
- Similar studies can be done at secondary levels also.
- Similar studies can be done for under graduate, post graduate and B.Ed. level also.

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