



# Attitude of Higher Secondary Students towards the use of Information and Communication Technology in West Bengal

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#### ABSTRACT

Information and Communication Technology (ICT) can be utilized for the all types of education sector. **Objective:** To study the attitude of higher secondary students of science and arts streams towards the use of ICT.

**Methodology:** A quantitative analysis has been undertaken to assess students' attitude towards ICT. 200 higher secondary students were selected as a sample through using stratified random sampling techniques in South 24 Parganas Districts of West Bengal. Computer Attitude Scale (CAS) developed by Khatoon and Sharma, 2011 was used as a tool.

**Results:** Result of the study show that higher secondary students of science and arts streams has positive attitude towards the ICT.

**Conclusion:** Therefore it should pay attention to the ICT implementation in educational system for imparting easily accessible, affordable and quality of higher secondary education.

Keywords: Attitude; Higher Secondary Students; and ICT

#### **INTRODUCTION**

"Information technology is used in the various commercial areas but not in use in the improving quality of education. Information technology (IT) refers to the hardware, software, the methods and know how required or used in acquiring, storing, processing and displaying data and information. After the Second World War many changes and achievements took place in the communication technology sectors. Communication technology means the hardware know how programs and methods used in ensuring that message is transmitted correctly, efficiently and cost effectively. Hence the IT and CT jointly started moving together and a new term as Information and communication technology" (Devi, Rizwaan and Chander, 2012). In the present era we have witnesses of fast growth in the field of information and communication technologies. In everyday life people are using new technologies, making their life so easy able. The potential of the ICT as an effective instructional tool is very important aspects of any developing country likeIndia.

"The young generation of the academic world is faced with the problem how to educate these students who are believed to be so different from the previous generations. It is asserted that they



learn better from discovery and experiments, prefer work in teams, favour audio-visual sources, are capable of multitasking, depend on ICT use and are always connected with others via ICT" (Oblinger & Oblinger, 2005). "Weaknesses of digital technology affecting the process of learning include short-time concentration, lack of self-reflection, frequent uncritical attitude tothe quality of sources and insufficient skills in evaluating information available online" (Mason& Rennie, 2008; Oblinger & Oblinger, 2005). Attitudes refer to one's positive or negative judgment about a concrete subject. Slechtova (2015) worked on attitudes of undergraduatestudents to the use of ICT in education. The result found that: "students' willingness to use ICT for studying and attitudes to e-learning were not homogenous and showed certain relation to theirfield of study and computer skills". The characteristics of digital natives did not apply to everyone, which should be reflected in courses using ICT in higher education institutions. Gross, Garcia & Escofet (2012) focused in their study on preferences and attitudes towards ICT in two groups of university students: face-toface students and online students. "The findings suggested that the teaching methodology and interaction between teacher and students play the decisiverole in the use of ICT by students, whether they belong to the Net generation or not." Another study Sun (2008), observed that some students were anxious about the use of ICT, which affects the level of their satisfaction in elearning courses.

In the recent decades we have been witnesses of a rapid growth in the field of information and communication technologies (ICT) development. New technologies have been infiltrating allparts of everyday life, changing and modifying the ways people communicate, work, spend their leisure time and also study. "The generation of young people who have been surrounded by digital devices since their early childhood is generally considered to differ from the preceding generations in terms of their learning styles preferences, attitudes and approaches to learning requiring from teachers and responsible decision-makers in education to adapt the current educational system to suit their needs and preferences". (Slechtova, 2014).Information andcommunication technology (ICT) are a force that has changed many aspects of the way we live.If one was to compare such fields as medicine, tourism, travel, business, law, banking, engineering and architecture, the impact of ICT across the past two or three decades has been enormous. The way these fields operate today is vastly different from the ways they operated in the past. But when one looks at education, there seems to have been an uncanny lack of influence and far less change than other fields have experienced. A number of people have attempted to explore this lack of activity and influence (e.g. Soloway and Prior,1996).

"ICT is used as a tool for students to determine learning topics, solve problems, and distribute explanations to the antonyms in the learning process. ICT makes expertise acquisition more usable, and concepts in learning areas are appreciated while engaging students in the utilization of ICT. Support student-centered and self-directed learning Students are now more constantly engaged in the purposeful use of computers" (Castro Sanchez and Aleman 2011). "They build new knowledge through penalizing, choosing, codifying, and explication instruction and data. Based on learning through ICT, students are more capable of using instruction and datafrom diverse sources, and critically exacting the quality of the learning materials. Produce a inventive learning environment ICT develops students' new understanding in their areas of learning" (Chai, Koh and Tsai 2010).



Finally, the role of Information and Communication Technology (ICT) in modernistic learning should also be seen in the light of its benefaction to manumission, accreditation and self-fulfillment. "Learning objectives such as social capability, particular thinking, knowledge sharing and vocation techniques will become more and more significant as we move further into the knowledge society. As a result, it is clear that thinking about the future of learning cannot avoid asking the essential questions about the objectives of learning" (Punie& Cabrera 2006).

#### SIGNIFICANCE OF THE STUDY

This 21<sup>st</sup> century is a digital technology area. In this time every learners wanted to use his/her ability to understand, evaluate and apply the available information through using computer. In the present day computer education forms a part of the curricula of every stage of education. The potentialities of computer in education include an efficient storage and translation of information, quick information processing and huge amount of documents saving here. Students can get lots of information through the use of internet than fat references books. Now a day's education is no more limited to classrooms, because through the use of computer technology the distant learners can success their dreams to connect easily to each other. If a teacher delivers his/her information through the audio-video techniques, the process of learning should be interactive and interesting, also computer-aided teaching adds a fun element to education. ICTs in the higher secondary education has profound implications for the whole education process ranging from investment to use of technologies in dealing with key issues of access, equity, management, efficiency, pedagogy, quality, research and innovation. There has been little research related to undergraduate student's attitude towards information communication technology. So the researchers to took up this topic to conduct research. This research would help the education policy builders to make a suitable education policy for the students.

#### **METHODOLOGY OF THE STUDY**

#### **Operational Definition of the Key Terms/Variables:**

**A) Attitude:** An attitude is a hypothetical construct that represents an individual's degree of like or dislike for something. Attitude is a way of thinking about mental disposition of a person towards any object, person, institution etc.

**B)** Information and Communication Technology (ICT): It consists of three words such as information, communication and technology. Information means- the nature of information covers topics such as the meaning and value of information, how information is controlled. Communication means- the electronic data, usually over a distance. Technology means- making, modification, usage and knowledge of tools, machines, techniques, crafts, systems and methods of organizations, in order to solve a problem, improve a pre-existing solution to a problem, achieve a goal, handle an applied input/output relation or perform a specific function.

C) **ICT Attitude**: The positive and negative attitude of the higher secondary students of science and arts streams towards ICT is referred to as ICT attitude.



**D**) **Higher Secondary Students:** Higher secondary students mean classes of XI and XII of both sexes of science and arts streams under the West Bengal Council of Higher Secondary Education.

#### **OBJECTIVE OF THE STUDY**

To study the attitude of higher secondary students of science and arts streams towards the use of Information and Communication Technology (ICT).

#### HYPOTHESIS OF THE STUDY

H<sub>0</sub>1: There is no significant difference in the attitude of higher secondary students of science and arts streams towards the use of Information and Communication Technology (ICT).

#### **RESEARCH DESIGN**

There are various research methods but the nature this investigation led to use of descriptive survey research.

#### POPULATION AND SAMPLE

The population of the study constituted all the higher secondary students of both sexes of science and arts streams under the West Bengal Council of Higher Secondary Education. The sample of the study consists of 200 higher secondary students of both sexes of science and arts streamswere selected using stratified random sampling techniques from Sonarpur Vidyapith, Sundarban Adarsha Vidyamandir High School, Debnagar Mokshoda Dinda Higher Secondary School, Kamrabad Girls' High School in South 24 Parganas Districts, West Bengal. Among the 200 students, 100 students belonged to science stream and 100 students belonged to arts stream.

#### **RESEARCH TOOL**

Computer Attitude Scale (CAS) (Khatoon and Sharma, 2011) was used to collect the required information. Five point likert type scale, consisted 'strongly agree', 'agree', 'undecided', 'disagree', and 'strongly disagree' was used. Reliability of the scale was found 0.86 by Split Half method. For the validity of the scale content validity which was ensured through rational logical analysis of the computer experts and computer teachers in questionnaire construction.

# DATA COLLECTION

Data was collected through data collection questionnaires from South 24 Parganas Districts have been taken into consideration in West Bengal.

# METHOD OF ANALYSIS

In the present study the data collected was subjected to suitable statistical analysis Descriptive Statistics like Mean, Standard Deviation (S.D.) and Inferential Statistics like 't'- test, were used.

#### **RESULT AND DISCUSSION**

H<sub>0</sub>1: There is no significant difference in the attitude of higher secondary students of science and arts streams towards the use of Information and Communication Technology (ICT).



Higher Secondary	Mean	S.D.	t value
Students			
Science stream	85.18	6.65	1.04*
Arts stream	82.72	7.68	

 Table-1: Attitude of higher secondary students of science and arts streams towards the use of ICT

\*p <0.05

The mean scores of higher secondary students of science stream is 85.18 and arts stream is 82.72. This means that the science stream and arts stream showed positive attitude towards the use of ICT (According to Khatoon & Sharma the score of 66-99 belonged to positive attitude). It also means that science stream students are more interested to use the ICT than the arts stream students. The inferential statistics result, that is t-value (t=1.04 p<0.05). It is clearly indicates that the calculate value is less than the table value 1.96 at 0.05 level of significance and hence it isnot significant. Thus, it is clear that the null hypothesis it was interpreted that there is no significant difference between the attitude of higher secondary students of science and arts streams towards the use of Information and Communication Technology (ICT) is accepted.

#### **DELITIMIATION OF THE STUDY**

A) The study is delimited to higher secondary students of both sexes of science and arts streams only.

B) The study is delimited on 200 higher secondary students under the West Bengal Council of Higher Secondary Education only.

# **RECOMMENDATION OF THE STUDY**

One cannot deny to the fact that there are many positive outcomes of ICT in school education and it will be compulsory in near future. Irrespective of several lacunas, there are many advantages of ICT use in school education which depicts the success stories of ICT in education. Based on the findings of the study following recommendations can be suggested to improve ICT based digital learning in school education-

**1. "Providing proper training to the teachers:** Subject teachers are getting only few days training to handle ICT in schools, which is very much insufficient as reported by the teachers. Training should be provided with longer term basis with proper hands on practice.

**2. Outdated Study Material:** One of the main reasons of not getting interest by the teachers is unavailability and non-updated study materials. It should be updated according to the syllabus on timely basis.

**3. Insecure future of ICT:** Most of the ICT aided schools are covered under ICT school scheme. Vendor is taking care of all the ICT related technological problems for 5 years. But nobody is certain what will happen after that. Many schools are on the verge of their five year term but are unaware about the fate.



**4. Integration of Computer in Routine and Progress Report Card:** There is no proof for student which certifies them that they are computer literate. Neither marks of computer tests are placed on report card nor are any certificate given to the literate students which may be significant for any future activity.

**5. Proper use of Internet:** Internet in most of the schools is used only for administrative purposes and not for students. Basically students who are fully dependent on schools for computer basic learning are unable to use it for their study purposes, which pushed off them behind other students who are internet savvy. Therefore use of internet is very much necessary for the students to improve their educational as well as ICT skills.

**6. Improvement of Teachers' awareness and willingness:** Willingness is the first and foremost thing that can change any good school into the best. Any teacher who wants to apply ICT in their classes can download subject matters from their smart phones, which is very easy to access. It will increase the attentiveness among students and help teachers to improve their teaching skills.

**7. Increase the number of computers, with proper software and replace damage / outdated models:** Number of computers along with appropriate software in schools should be increased keeping in mind the students' strength. Also quick repair of damaged equipments and replacement of outdated models are extremely necessary'' (Dutta & Hazra, 2019).

#### CONCLUSION

Higher secondary education institutions are important actors in the society. Higher secondary education should not only critically reflect on learning environments and learning processes for students, they should also reflect on their role in creating an infrastructure that supports and enhances lifelong learning processes. ICT integration in higher secondary education brings a change in student and teacher learning behavior and progress higher setup skills such as association beyond time and place and clarifies complicate genuine world problems. To gain the maximum impact of ICT in education, certain issues: why teachers integrate technology; how ICT implementation could be effective; what the requirements are to achieve effective ICT implementation need to be addressed. Teacher should adapt continuous professional development in the educational uses of technology. There needs to be shared vision among the various stakeholders and a collaborative approach should be adopted. Care should be taken to influence the attitudes and beliefs of all the stakeholders. Also proper controls should be ensured so that accountability, quality assurance, accreditation and consumer protection are taken care of. Information and Communication Technology (ICT) empower education will eventually guide to the constitutionlization of education. For the quality and quantity development of the higher secondary education instructors should revise their lesson plans or prepare technology suitable lesson plans and try to integrate technology into curriculum. To increase the student populations in the higher secondary education, role of ICT is very much important. After the analysis of the study it has found that the needs of the higher secondary students belonging to different streams are not homogeneous and their conveniences requires changes to be made in higher secondary education.



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