

Awareness and Attitude of Students towards Information and Communication Technology in Education: ICT as a Change Agent for Education

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Sangrila Basumatary

Research Scholar,
Dept. of Education,
Gauhati University,
Assam, India

Abstract

Information and Communication and Technology (ICT) has been the phenomenon of the 21st century and its growing rapidly which continue to play a vital role as an ideal tool to acquire, store, disseminate and apply knowledge than ever before. The present study tries to find out the level of awareness and attitude of students towards ICT with respect to gender and type of schools. Total 120 students are selected randomly by applying simple random technique from two numbers of schools located in Kokrajhar, Assam. One self- structured questionnaire to find out awareness level and one- self structured attitude scale towards ICT have been used to collect data. The study reveals that the most of the students have moderate level of awareness towards ICT. It was found that there is no significant difference with respect to their gender in awareness level towards ICT but there is significant difference with respect to their type of school. The study reveals that the students have negative attitude towards ICT. It was found that there is no significant difference with respect to their gender in attitude level towards ICT but there is significant difference with respect to their type of school in attitude level towards ICT.

Keywords: Awareness, Attitude, Information And Communication Technology, Students.

Introduction

21st century is the age of information and communication technology. Every aspects of life are related to science and technology. Huge flow of information is emerging in all fields throughout the world. Now information and technology is popularly using in educational field for making teaching and learning process successful and interesting for students and teachers both. Information and Communication Technology is a powerful tool for problem solving, conceptual development and critical thinking that helps to make the learning process much easier for the students. There is a need to change in each and every sphere of the society according to the tune of information and communication technology. It has the ability to enhance every type of development in the society. Education is the only means to incorporate information and communication technology in the developmental aspects of the society. ICT can also be used as tool to improve the quality of education for preparing the society and its manpower to face the challenge of the future. It requires the proper manpower to handle and use ICT in school in a proper way. Thus, by considering its useful aspects in education, the present study has attempted to find out the level of awareness and attitude of school students towards ICT.

Aim of the study

Information and Communication Technology is one of the recent developments of the 21st century in India. It has changed each and every system around the globe from house related systems to industrial systems. Significantly, it has influenced the educational fields different types of Information and Communication Technology are used to impart education. Radio, T.V, Tape recorder, OHP, LCD projector, Computer and now with advancement in these technologies has changed the scenario. Internet and advanced computers are now being used in education as an instrument of

instruction. This digitalization has made it possible to design, develop, deliver, manage and assess teaching – learning process. It increases the efficiency of the system and makes it more powerful. Hence, the present study was conducted to assess the awareness and attitude level of students towards ICT.

Statement of the problem

The problem under study is stated as- “awareness and attitude of students towards information and communication technology in education: ict as a change agent for education”.

Objectives of the study

1. To study the level of awareness towards ICT of secondary school students.
2. To find out difference in awareness level among secondary school students with respect to their gender.
3. To find out the difference in awareness level towards ICT among secondary school students with respect to their type of school.
4. To study the level of attitude towards ICT of secondary school students.
5. To find out the difference in attitude level towards ICT among secondary school students with respect to their gender.
6. To find out the difference in attitude level ICT among secondary school students with respect to their type of school.

Hypotheses

1. There is no significant difference in awareness level towards ICT among secondary school students with respect to their gender.
2. There is no significant difference in awareness level towards ICT among secondary school students with respect to their type of school.
3. There is no significant difference in attitude level towards ICT among secondary school students with respect to their gender.
4. There is no significant difference in attitude level towards ICT among secondary school students with respect to their type of school.

Delimitation of the study

1. The present study was delimited only to secondary school students of Kokrajhar district, Assam.
2. Total 120 students of XI standard were selected for the present study.

Review of related literature

Ritzhaupt, Liu, Dawson & Barron (2013) examined the students' information and communication technology (ICT) literacy and its relationships to a student's socio- economic status (SES), gender, and ethnicity of middle school students. Data was collected through Student Tool for Technology Literacy (ST2L), a performance- based assessment of ICT literacy skills based on the 2008 National Educational Technology Standards for Students (NETS-S). Results concluded that there was a digital divide between low and high socio- economic status (SES), white and non- white, and female and male students on all measures of the Students Tool for Technology Literacy (ST2L). Specifically, high

socio – economic status (SES), white and female students outperformed their counterparts.

K. Govindarajan and C. Kannaan (2014) found that both students and teachers have high attitude and high competency towards ICT in relation to gender, locality, faculty, institutions type and educational qualifications by applying descriptive analysis. Differential analysis proved that student and teacher has not significant difference towards ICT competency in relation to above cited variables. Similarly they did not find any meaningful difference towards ICT attitude regarding the same. Relational analysis found positive relationship between the attitude and competency towards ICT of students and teachers with respect to their gender, locality, faculty, institution type and educational qualifications.

Bhalachandra S. Deshpande and P. Sarasvathy (2015) have investigated the level of ICT use for educational purposes by students in CBSE secondary schools in Mysore. The sample of the study consisted 806 students (348 boys and 458 girls) selected by random sampling technique from CBSE Higher Secondary School of Mysore. The questionnaire was administered for collecting the data. The data was analyzed with the help of percentage and was represented by the graph. The findings of the study show that the expertise level of students is high in using ICT. It also reveals that the usage of ICT by the students is higher as compared to that of girl students.

Methodology

The methodology adopted in the present study is described as follows:

Method

Descriptive survey method was used to conduct the present study.

Sample

The present study was conducted on 120 secondary school students which were selected randomly from two schools of kokrajhar district. Out of the selected students 60 were from the government school and 60 from the private school.

Tool used-

In the present study one self- structured questionnaire was prepared to assess the awareness level of secondary school students towards ICT containing 25 items in which four options were given where the respondents will be scored 2 (two) points for each correct response and 0 (zero) points for each wrong response.

To measure the attitude of secondary school students towards ICT, a self- constructed Likert's five point attitude scale was used to assess the attitude of secondary school students. The tool consists of 40 items -22 positive items and 18 negative items. For the construction and standardization of the attitude scale, the researcher adopted the procedure as suggested by Likert (1932). This attitude scale is popularly known as Liker's five point scale, because each statement of the scale possesses five options for the respondent i.e. Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (D) and Strongly Disagree (SD).

Analysis and interpretation of results

Objective 1

To study the level of awareness towards ICT of secondary school students.

Table No.1:

Showing Frequency And Percentage Of The Level Of Awareness Towards ICT Of Secondary School Students.

Category	Range	Students	Percentage
Low Ict Awareness	0-16	20	16.67%
Moderate Ict Awareness	17-33	60	50%
High Ict Awareness	34-50	40	33.33%

Interpretation

Table 1 exhibits the result of awareness level of secondary school students towards ICT. According to the table 1- 33.33% of the secondary school students belong to the high level of ICT awareness, 50% of the secondary school students belong to the moderate level of ICT awareness and 16.67% of the secondary school students belong to the low level of ICT awareness. Thus, it can be concluded that the level of awareness towards ICT is not low but they possess moderate level of ICT awareness.

Objective 2

To find out the difference in awareness level towards ICT among secondary school students with respect to their gender.

Hypothesis 1

There is no significant difference in awareness level towards ICT among secondary school students with respect to their gender.

Table No.2

Showing Mean, Standard Deviation And T- Value Between Male And Female Secondary School Students Awareness Level Towards ICT.

Gender	N	Mean	Standard Deviation	'T' Value	Level of Significance
Male	60	25.5	40.96	0.46	Not Significant
Female	60	22.7	22.56		

Interpretation

By calculating 't' value between the mean scores of awareness level towards ICT between male and female students was found to be 0.46 which is not significant at 0.05 and 0.01 levels of significance. Hence, the hypothesis no.1 is accepted. Therefore, it is clear that there is no significant difference between the mean scores of awareness level towards ICT between male and female students.

Objective 3

To find out the difference in awareness level towards ICT among secondary school students with respect to their type of school.

Hypothesis 2

There is no significant difference in awareness level towards ICT among secondary school students with respect to their type of school.

Table no. 3

Showing Mean, Standard Deviation and 't' value between Government and Private secondary school students awareness level towards ICT.

Type of School	N	Mean	Standard Deviation	'T' Value	Level of Significance
Government	60	3.135	1.389	2.976	Significant
Private	60	4.806	1.267		

Interpretation

By calculating 't' value between the mean scores of awareness towards ICT of government and private secondary school students was found to be 2.97 which is significant at 0.05 and 0.01 levels of significance. Hence, the hypothesis no. 2 is rejected. Therefore, it is clear that there is significant difference between the mean scores of awareness level towards ICT between government and private secondary school students. The students of private school were found to be more aware than the students of government school towards ICT.

Objective 4

To study the level of attitude of secondary school students towards ICT.

Table no. 4

Showing frequency and percentage of attitude level of Secondary School Students towards ICT

Class	Category	Frequency	Percentage
120-200	Positive	41	34.17%
81-120	Uncertain	31	25.83%
0-81	Negative	48	40%

Interpretation

Table no. 4 exhibits the result of attitude level of secondary school students towards ICT. According to the table no. 4- 34.17% of the students showed positive attitude, 25.83% of the students showed uncertainty in their attitude towards ICT and 40% of the students showed negative attitude towards ICT. Thus, from the data it is very clear that majority of the students have shown a negative attitude towards ICT. This may be because of the initial resistance of the teachers towards the usage of new technology.

Objective 5

To find out the difference in attitude level towards ICT among secondary school students with respect to their gender.

Hypothesis 3

There is no significant difference in attitude level towards ICT among secondary school students with respect to their gender.

Table No.5

Showing Mean, Standard Deviation and 't' value between male and female secondary school students attitude level towards ICT

Gender	N	Mean	Standard Deviation	't' value	Level of Significance
Male	60	113.73	38.55	1.547	Not Significant
Female	60	103.05	37.08		

Interpretation

By calculating 't' value between the mean scores of attitude level towards ICT between male and female students was found to be 1.547 which is not significant at 0.05 and 0.01 levels of significance.

Hence, the hypothesis no. 3 is rejected. Therefore, it is clear that there is no significant difference between the mean scores of attitude level towards ICT between male and female students.

Objective 6

To find out the difference in attitude level towards ICT among secondary school students with respect to their type of school.

Hypothesis 4

There is no significant difference among secondary school students with respect to their type of school.

Table no. 6

Showing Mean, Standard Deviation, and 't' value between government and private secondary school students attitude level towards ICT.

Type of School	N	Mean	Standard Deviation	't' value	Level of Significance
Government	60	96.05	33.34	3.743	Significant
Private	60	120.73	38.69		

Interpretation

By calculating 't' value between the mean scores of attitude level towards ICT between government and private students was found to be 3.743 which is significant at 0.05 and 0.01 levels of significance. Hence, the hypothesis no.4 is rejected. Therefore, it is clear that there is significant difference between the mean score of attitude level towards ICT between government and private students.

Major Findings of the Study

1. Awareness level of secondary school students towards ICT is not low but they possess moderate level i.e. 50% of ICT awareness.
2. There exists no significant difference in awareness level towards ICT among secondary school students with respect to their gender that is male (mean value= 25.5) and female (mean value= 22.7).
3. There exists significant difference in awareness level towards ICT among secondary school students with respect to their type of school where it is found that private students (mean value= 4.806) found to be more aware than the government students (mean value= 3.135).
4. Majority of the secondary school students have shown a negative attitude (40%) towards ICT.
5. There exists no significant difference in attitude level towards ICT among secondary school students with respect to their gender that is male (mean value=113.73) and female (mean value= 103.05).
6. There exists significant difference in attitude level towards ICT among secondary school students with respect to their type of school where it is found that private students (mean value= 120.73) have shown positive attitude towards ICT compared to government students (mean value= 96.05).

Conclusion

The above research indicates the awareness and attitude level of secondary school students towards ICT. After the analysis of the above outcome it is clear that the secondary school students have

moderate level of ICT awareness. On the other hand, no significant difference has been found in awareness level towards ICT among secondary school students with respect to their gender but a significant difference has been found in awareness level towards ICT among secondary school students with respect to their type of school. And secondary school students have shown a negative attitude towards ICT. On the other hand, no significant difference has been found in attitude level towards ICT among secondary school students with respect to their gender but a significant difference has been found in attitude level towards ICT among secondary school students with respect to their type of school.

The study recommended that there is a need to improve the access to the student to ICT. The study recommended that there should be providing smart classrooms using projectors/ interactive boards/ internet/ PowerPoint Presentation and mandatory to teach and learn through these resources in order to promote ICT bases quality education. In these way students curiosity can be increased. By organizing seminars/ workshops and training by institutions in order to make them user friendly ICT tools and software. ICT need to be used in education to keep the pace with this fast changes. The present study throws some lights on awareness and attitude towards ICT of secondary school students.

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