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Higher secondary students' perception of information and communication technology (ICT)

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Abstract---In the present study the investigators have an attempted to gauge the higher secondary students' perception of information and communication technology at school level. The sample for the study consisted of 200 plus one students from various higher secondary schools in Salem district. The investigators developed and validator a tool to measure the higher secondary students' perception of information and communication technology. The data collected from the respondents were analysed by using standard deviation and t test. The findings reveals that the students studying in rural and urban schools are significantly different in their perception of Information and Communication Technology..

Keywords---perception, information communication technology, higher secondary school students.

Introduction

Information and Communication Technology is defined as the combination of informatics technology with other interconnected technologies, particularly communication technology. Information and Communication Technologies are the most important factor in shaping the new overall economy and producing quick changes in society. They also have the potential to transform the nature of education-where and how learning takes place and the roles of students and teachers in the learning process. Information and Communication Technology has become one of the basic building blocks of modern society within a very short time. Many countries understand Information and Communication Technology and have mastering the basic skills and concepts of Information and Communication Technology as part of the core of mathematics education, alongside reading, writing and numeracy.

In a broader sense, Information and Communication Technology is taken to refer to the whole set of enabling Technology concerned with communication, manipulation of information, networking, data storage, transmission - encompassing data, voice and video. The problem is that the growth of newer information and Communication Technology as an instructional tool influence the students learning and their acquisition of knowledge maybe raised at certain extent as possible. Hands the integration of all types of Technology into the classroom is viewed as an effective instructional strategy for improving the standard of education at higher secondary schools. Higher secondary students perception of Information and Communication Technology can influence them towards they are effective use of Information and Communication Technology. To fill the gap between the students' perception of Information and Communication Technology and the teaching learning situation in the classroom the study was undertaken.

Review of Related Literature

Nurjahan Khatun Keya & Muhammad Kamal Uddin. (2019) analysed Perception of Secondary School Students towards ICT Education. Findings of study showed a significant difference between rural and urban areas in students' perceptions towards ICT education. The F-test showed that grade nine students had a more positive perception towards ICT education than grades seven and eight.

Saraswathy, R.(2015) analysed technological pedagogical content knowledge in the mathematics classroom. Findings of the study reported that the working technology knowledge of a mathematics teacher using graphing calculators, computer software programs, and computer-based laboratories to deeply explore a mathematical topic is vastly different than that of an English teacher using the Internet and software programs to investigate and prepare literary documents. Each content area has specific instructional goals and needs that technology can address in a variety of ways.

Significance of the Study

Communication is Education and Education is knowledge. This is an age of knowledge explosion and exploration through Information and Communication Technology. Rapid progress in in Information and Communication Technology has invaded the arena of education. Technology has had a significant effect on the educational system for many years. In the classroom teachers have moved from the days of chalks and talk to the use of overhead projectors and more recently to the use of software and multimedia presentation techniques. Information and Communication Technology is widely recognized as a tool and modern education should aim at creating a relevant insight into its nature for the development of useful skills. The advent of Information Technology has had a profound and commanding global influence on the matrix of socio-economic activity the world over. Information Communication Technology is the latest development and program for improving the teaching learning process in schools. It is an urgent need to study the higher secondary student's perception and utilisation of Information and Communication Technology in their schools.

If India could attend world recognition in computer software and information technology today, it is because of our past investment in education. If it is to maintain this lead and become globally competitive in other emerging areas of Technology also, it must continue to strength and our educational system to suite the changing needs. Information and Communication Technology modifies students' environment and their perception through the variety techniques of presentation and arrangement of learning activities. Quantitative expansion and Qualitative improvement of education could be facilitated and accelerated with the help of Information and Communication Technology.

Objectives of the Study

- To find the difference between male and female students in respect of their perception of Information and Communication Technology.
- To investigate the differences between rural and urban school students in respect of their perception of Information and Communication Technology.
- To find the differences between Government and self- financing school students in respect of their perception of Information and Communication Technology.
- To investigate the differences between Arts and Science group students in respect of their perception of Information and Communication Technology.

Hypothesis of the Study

- There is no significant difference between male and female students in respect of their perception of Information and Communication Technology.
- There is no significant differences between rural and urban school students in respect of their perception of Information and Communication Technology.
- There is no significant differences between Government and self- financing school students in respect of their perception of Information and Communication Technology.
- There is no significant differences between Arts and Science group students in respect of their perception of Information and Communication Technology.

Methodology

Investigator followed the survey method in the present study. Railway station developed and used a standardized questionnaire. The items given in the questionnaire verified and the pulled with the help of the guide and the subject experts. The tool was administrated to the sample selected from Salem District. The data where character from the students and where analysed by adopting appropriate statistical techniques for measuring the Higher Secondary Students perception of Information and Communication Technology.

Sample

A sample of 200 students from higher secondary schools in Salem District was chosen as sample for the study by using the simple random sampling technique.

Data Analysis

Hypothesis 1

There is no significant difference between male and female students in respect of their perception of Information and Communication Technology.

Table 1
Significance Difference in Perception Mean Scores of Male and Female Students

S.No	Gender	N	Mean	Standard Deviation	t-Value	S / NS
1	Male	101	20.21	4.92	1.47	NS
2	Female	99	21.65	4.21		

Critical value for 0.05 level = 1.96 NS- Not significant

From the above table the calculate t value 1.47 is less than the critical value of 1.96 corresponding to the 0.05 level of significance. Hence the null hypothesis is accepted. Therefore it is concluded that male and female students do not differ significantly in respect of their perception of Information and Communication Technology.

Hypothesis 2

There is no significant differences between rural and urban school students in respect of their perception of Information and Communication Technology.

Table 2
Significance difference in Perception mean scores of rural and urban school students

S.no	Variable	N	Mean	Standard deviation	t –value	S / NS
1	Rural	88	24.67	5.09	2.65**	S
2	Urban	112	27.80	6.01		

Critical value for 0.05=1.96 Significant at 0.05 level

The calculated t value 2.65 is higher than the critical value of 1.96 corresponding to 0.05 level of significance. Hence the null hypothesis is rejected. Therefore it is concluded that the higher secondary students from rural and urban schools differ significantly in respect of their perception of Information and Communication Technology. Further higher means course of the urban school students indicate better perception of Information and a Communication Technology than in the case of rural school students.

Hypothesis 3

There is no significant difference between the students of government and itself financing schools in respect of their perception of Information and Communication Technology.

Table 3
Significance of Difference in Perception Mean Scores of Government and Self
Financing School Students

S.no	Variable	N	Mean	Standard deviation	t-value	S / NS
1	Government	98	18.69	4.08	2.34**	S
2	Self-financing	102	20.85	4.56		

Critical value for 0.05= 1.96 Significant at 0.05 level

From the above table the calculated t value 2.34 is greater than the critical value of 1.96 corresponding to 0.05 level of significance. Hence the null hypothesis is rejected. Therefore it is concluded that government and self-financing school students refers significantly in respect of their perception of Information and Communication Technology. Further the high mean score of the students of self-financing schools indicates better perception of Information and Communication Technology than in the case of government school students.

Hypothesis 4

There is no significant differences between Arts and Science group students in respect of their perception of Information and Communication Technology.

Table 4
Significance of Difference in Perception Mean Scores of the Students of Arts and
Sciences

S.No	Variable	N	Mean	Standard Deviation	t-Value	S / NS
1	Government	103	30.64	5.84	2.65**	S
2	Self-financing	97	25.69	5.53		

Critical value for 0.05 = 1.96 Significant at 0.05 level

From the above table that the calculated t value 2.65 is greater than the critical value of 1.96 corresponding to 0.05 level of significance. Hence the null hypothesis is rejected. Therefore it is concluded that the students of Arts and Science differ significantly in respect of their perception of Information and Communication Technology. Further the high mean score of the students of Science indicates better perception of Information and Communication Technology than in the case of Arts students.

Summary of the Findings

- Higher secondary students Salem District have better perception of Information and Communication Technology.
- Both male and female students are similar in their perception of Information and Communication Technology.

- Higher secondary school students from different types of schools referred significantly in respect of their perception of Information and Communication Technology. Students of government schools have a lesser perception than the students of self-financing school.
- Students studying in rural and urban schools are significantly different in their perception of Information and Communication Technology.
- Science group students have better perception of Information and Communication Technology than Arts group students.

Recommendations of the study

All the higher secondary education institutions should improve their infrastructure and switch to smart classrooms, virtual learning and equip with needed devices and gadgets so that the teachers and learners may be technocrats and bridge the digital divide that exists and create awareness for any time learning a reality with the latest technologies.

Conclusion

The problem of the present study is higher secondary students' perception of information and communication technology. It was found that higher secondary school students from different types of schools referred significantly in respect of their perception of Information and Communication Technology.

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