

A COMPARATIVE STUDY OF INFORMATION AND COMMUNICATION TECHNOLOGY LITERACY AMONG SCIENCE AND NON SCIENCE STUDENTS

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Abstract :

This research is an attempt to make a comparative study of Information and Communication Technology (ICT) literacy among science and non- science students. For this study 200 students belonging to science and non- science (males and females) streams were taken up. A self- prepared questionnaire reflecting the understanding of ICT . literacy was used. T- test was used to study the difference in ICT literacy among science and non- science, science and non- science male and science and non- science, science and non- science male and science and non- science female students did not differ in ICT literacy.

Key Word: ICT, Science and Non Science Students.

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Introduction:

Information Technology (IT) covers technology used in the collection, processing & transmission of information. IT is changing every aspect of human life including communication, trade, manufacturing, services, culture, entertainment, education, research, national defense and global security. It is today become the chief determinant of the progress of nations, communities and individuals.

IT also helps in communicating through different sources such as receiving and sending e-mails , Voice-mails, instant messaging, information within a local network through LAN etc. and for this reason, it is also called “ Information” & Communication Technology – (ICT)” .

Basically, the term “ Information and Communication Technology” (ICT) is comprised of three words.

1. Information
2. Communication
3. Technology

Information:

It is processed form of data which is used for decision

making. A message or data received or sent by us can be termed as information only when it can be utilized for arriving at some conclusion or decision.

Communication: Through the process of communication, a person reaches the other person with his ideas, thoughts, values etc. Communication is an interpersonal process in which verbal symbols (e.g. body posture, facial expression) are shared and understood by two more people.

Technology : It is the branch of advanced scientific study which deals with the application of knowledge for practical ends. It involves highly designed and sophisticated engineering software and hardware.

Information & Communication Technology (ICT) literacy implies using technology, communication tools and / or networks to access, manage, integrate; evaluate and create information in order to function in a society. It is an important tool that can change the present isolated, teacher- created and book- created environment into student- created and interactive learning environment. It helps in professional development of the teachers as well as the students

Thus, ICT is a major factor for producing global rapid change in the society.

United Nations Educational, Scientific and Cultural Organization (UNESCO) 2008 quotes that by combining Information & Communication Technology (ICT) skills with emerging views in pedagogy, curriculum and school organization, the standards are designed for the professional development of the teachers.

Watts and Llyod (2004) found that pupils using ICT skills definitely enhance their literacy skills.

Significance of the Study:

This is the age of science and technology. Humanity is witnessing an explosion of knowledge as never before. We are now living in the ‘Electronic Era’ and facing the ‘Information Technology’. It basically means that the way information is handled, the way it is generated, stored and managed- all this is going through a sea change. In order to keep pace with the fast technology, Information & Communication Technology (ICT) is introduced in the education sector. This literacy is a new aspect of literacy.

METHOD:

Sample : In the present study, the sample consisted of 200 Students belonging to science and non-science streams (males and females) selected by random sampling method.

200 students

Science students

N = 100



M= 50 F=50

M = Male, F = Female

Non- Science Students

N= 100



M= 50 F = 50

Tool Used : After determining the core connotation of each dimension of Information and Communication Technology (ICT) concepts, the investigator proceeded to frame the items of the tool in the form of questions the responses to which could truly reflect the understanding of ICT literacy and a self – prepared questionnaire was used by the investigator. In all 50 questions were framed having two responses each.

Results: To arrive at the conclusions regarding the hypotheses advanced in the present investigation. Mean, Standard deviation, t- test were computed The results have been presented in Table 1 to 3



Table 1 : M, SD, and t- test of science and non-science students.

Group	Sample	Mean	Standard Deviation	Difference betw Mean	Error difference Betw Means	t-value
Science Student	100	29.29	7.98	0.87	1.15	0.756 N.S.
Non-Science Student	100	28.42	8.36			

Alook at table 1 reveals the mean values of science students to be 29.29 as against 28.42 of non-science students. The t-value comes out to .756 which is not significant. This clearly indicates that Information and Communication Technology (ICT) literacy has nothing to do with the stream of students. The students may be science or non-science, their ICT literacy does not change.

Table 2 : M.SD and t-test of science and non-science Male students.

Group	Sample	Mean	Standard Deviation	Difference betw Mean	Error difference Betw Means	t-value
Science Student	50	29.29	9.05	1.00	1.65	0.606 NS
Non-Science Student	50	28.42	7.45			

A look at Table 2 reveals the mean values of science male students to be 29.29 as against 28.24 of non-science male students. The t-value comes out to be .606 which is not significant. This clearly shows that the male students may be science or non-science students, this does not affect their ICT literacy.

Table 3 : M.SD and t-test of science and non-science Female students.

Group	Sample	Mean	Standard Deviation	Difference betw Mean	Error difference Betw Means	t-value
Science Student	50	29.24	5.70	0.74	1.53	0.483 NS
Non-Science Student	50	28.06	9.26			

A look at Table 3 reveals the mean values of science female students to be 29.34 as against 28.06 of non-science female students. The t-value comes out to be .483 which is not significant. This clearly point out that the female students may be science or non-science students, their ICT literacy does not change.

Conclusions:

1. Science and non-science students do not differ in ICT literacy.
2. Science and non-science male students do not differ in ICT literacy.
3. Science and non-science female students do not differ in ICT literacy.

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