# INTERNET KNOWLEDGE OF POST-GRADUATE STUDENTS IN THE ARTS AND SCIENCES

By

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## ABSTRACT

*Internet occupies a significant place in every individual's life. For the students particularly at post graduation level, internet plays vital role in gathering more and more information related to their academics work. Internet enables the student to search any job, course available in the institution organization and help to apply any form and to take admission in any institution online. The common notion envisages the message that the PG students are aware of the modern technologies (ICT) for academic purpose. But in reality it differs in some extent, the present study has made an effort to study the internet knowledge of P.G. student and their level of usage. The present study was undertaken in Ravenshaw University with a view to know the extent to which the post graduate students were having knowledge, skills in use of internet and whether there was any factor such as socio economic status of their family, stream, responsible for development of internet knowledge among these students. The findings revealed that the gender, stream of study and socio economic statuses of the family were not the responsible factors for development of internet knowledge.*

*Keywords: Internet Knowledge, Post Graduate Students, Arts and Sciences, Socio-Economic Status, Gender.*

## INTRODUCTION

Information and Communication Technology (ICT) is convergence of computers and communication technology which makes processing, storage, and its retrieval very faster instant and effective. The Internet is one of the most important and complex innovations of mankind. It is a powerful means of communication, dissemination and retrieval of information. It is a network of network connecting thousands of smaller computer networks together so that other networks may share information present in one network. It is one of the powerful / effective tools or technologies ever produced for getting information on fingertips from any part of the world even sitting at one's own location. (Sinha, 2012). The internet links are computer networks all over the world so that users can share resources and communicate with each other. Some computers have direct access to all the facilities on the internet such as the universities and other computers, e.g. privately-owned ones, have indirect links through a commercial service provider, who offers some or all of the internet facilities.

The Internet has provided universal access to information.

Technological innovation has dramatically increased the rate of conversion of knowledge, information and data into electronic format. Developments in the software arena have generated powerful knowledge management software which has transformed the way knowledge is organized, stored, accessed and retrieved (Sharma, Chawla and Madaan, 2011). In order to be connected to internet, you must go through service suppliers. Many options are offered with monthly rates. Depending on the option chosen, access time may vary. The internet is what we call a Meta network, that is, a network of networks that spans the globe. It's impossible to give an exact count of the number of networks or users that comprise the Internet, but it is easily in the thousands and millions respectively. The internet employs a set of standardized protocols which allow for the sharing of resources among different kinds of computers that communicate with each other on the network. These standards, sometimes referred to as the Internet Protocol Suite, are the rules that developers adhere to when creating new functions for the internet.

Some of the things that one can do via the Internet are E-Mail; Access Information; Shopping; Online Chat;

Downloading Software and many more where as it has many disadvantages too. The disadvantages of the Internet are to lose personal information; pornography and spamming (Sharma et al, 2011).

With over 60 million Internet user populations, in India being in age group of 18-35, educational related search queries are exploding on Google. The impact of internet is having on this young population with regard to education related decision making by the students (Anandan from Google, 2012). India has been identified as the fastest growing online market during the 2011-2012, with a 41% rise. This is much higher than China (05%), Brazil (06%) and Russia (20%). With most online categories in Indian exhibiting an average reach below the global figures, the potential seems to be high. (http://www.comscore.com, 2012). It highlights that the worldwide online audience has jumped seven percent with Asia-Pacific markets adding more than 40 million users (Figure 1).

The internet is also what we call a distributed system; there are no central archives. Technically, no one runs the internet. Rather, the internet is made up of thousands of smaller networks. The internet thrives and develops as its many users find new ways to create, display and retrieve the information that constitutes the Internet.

## Literature Review

The investigator reviewed the related studies and the findings were analyzed with their strengths and weaknesses with its relevance to the present study. Zakaria, Watson & Edwards (2010) conducted their research on the use of Web 2.0 technology by Malaysian students. The integration of Web 2.0 tools into learning was positive. Students preferred using e-mail to disseminate and share digital contents. Similarly it was also found that for finding information related to education, students prefer to use



Figure 1. Source: www.comscore.com

search engines instead of asking friends or teachers. It was evident; the students of the state were skilled in computer and internet usage. Cheung and Huang (2005) suggested in their study, that the Universities should provide students with the necessary resources and facilities; instructors need to encourage and support internet use in their course teaching; and internet technical support should be available and be effective. All of these elements may encourage positive beliefs and attitudes in students, which in turn could result in more internet use. Maheshwari, Reddy & Gyanmudra (2010) conducted a study on assessment of ICT literacy among high school students of Warangal District, Andhra Pradesh. The ICT literacy of students of private schools (22.58) is significantly better than that of government school students (16.07). Bebetsos & Antoniou (2009) found that majority of U.G. & P.G. students of Greek University had positive attitude with lot of confidence and spend more time to use computers and internet for educational purposes. Dange (2010) in a study examined that students entering university have a mediocre knowledge and confidence of computing skills. The findings revealed that students consider themselves more knowledgeable and confident. No doubt, this confidence gets reinforced by their use of the Internet and all it has to offer. The results suggested that they are not more competent at using Office applications. Sanjay and Vijendrasingh (2006) studied Internet usage by research scholars and faculty in sciences; the study found that 96.55% research scholars and faculty used the internet; fifty six out of fifty eight respondents have the basic knowledge of computers and use internet. Choudhury and Sethi (2009) analyzed the computer literacy of library professionals in the university libraries of Orissa. The study showed that majority of the professionals were computer literates and majority of them opined that they should be provided orientation. Dhamija and Panda (2007) identified that the attitude of post-graduate students also plays an important role towards the usage of internet. Nowadays post graduate students are also likely to be dependent on computer with internet for collection of relevant information for learning, conducting research as well as teaching in their future life. Chinwe (2006) found from the study that majority of the students in the university use the internet for
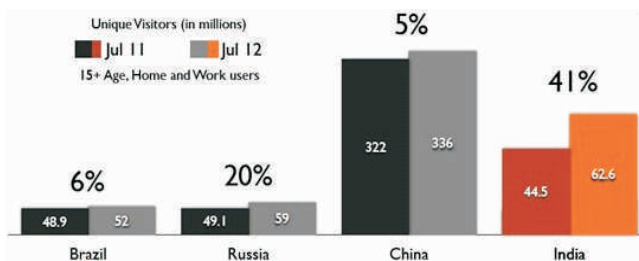
academic purposes in spite of the location of the facilities.

It was felt necessary to conduct a study on the literacy in ICT with regard to internet skill, internet knowledge or awareness of PG students of Ravenshaw University, as this university running at infancy stage and students of all corners of the state get admission for higher study. The common notion envisages the message that the PG students are aware of the modern technologies (ICT) for academic purpose. But in reality it differs in some extent, the present study has made an effort to study the internet knowledge of P.G. student and their level of usage and whether gender, stream, socio economic status of the family play any role for internet knowledge, skill etc. created the base purpose for the study.

## Objectives of the Study

The study was undertaken with the following objectives

- To study the internet knowledge of post-graduate students with reference to gender.

- To study the internet knowledge of post-graduate students with reference to their socio-economic status.

- To study the internet knowledge of post-graduate students with reference to stream of study.

- To study the relationship, if any, between internet knowledge and socio economic status of post-graduate students.

- To study the impact of socio economic status upon internet knowledge of post-graduate students.

## Hypotheses of the Study

Based on the above stated objectives, the null hypotheses were formulated as follow:

$HO_1$: There is no significant difference between mean scores of male and female post graduate students in Internet Knowledge.

$HO_2$: There is no significant difference between arts and science post graduate students in Internet Knowledge with reference to gender.

$HO_3$: Socio-Economic Status has no impact on the Internet knowledge of the Post-Graduate Student.

$HO_4$: There is no positive correlation between Socio Economic Status and Internet Knowledge of post graduate students.

## Delimitation of the Study

The present study was delimited to the following areas:

- It was limited to study Internet knowledge and Socio Economic Status of Post-Graduate students.

- The sample of the study was limited to Post-Graduate students of Ravenshaw University, Cuttack, India.

- The sample of the study was limited to 100 Post-Graduate student (N=100).

## Methods of the Study

The research method of the study was descriptive survey in nature. Descriptive research gives description of the present situations. Its main focus was on the prevailing conditions in which the students behaved. In the study, an attempt was made to find out what extend post graduate students were having internet knowledge and whether gender, stream of study and socio economic status played any discriminating role and whether there was any relationship between socio economic status and internet knowledge. Thus the study came under descriptive study of ex-post-facto type.

## Population and Sample

The population of the study comprised all the post graduate students (N=1500) of Ravenshaw University, Cuttack, India and the sample of the study constituted both male and female post graduate students from Arts and Science Stream of the same University. Due to time constraint, the investigator selected one hundred (n=100) post graduate students purposively keeping in view of the factors like gender (male and female) and stream of study (Arts and Science). The sample distribution of the study was as follows

- Male: 50 (Arts-28, Science-22)

- Female: 50 (Arts-27, Science-23)

## Tools Used

Two tools were used for collection of data for the study as following

- Self prepared test i.e., Internet Knowledge Test (IKT) to collect the data on internet knowledge based on the dimensions of computer that is Fundamental, DOS, MS-

Word, MS-Excel, MS-PowerPoint. Usefulness of Internet.

- Self prepared scale i.e., Socio Economic Status Scale (SESC) for collection of data on social, financial status of the family or parents of the informants.

## Techniques of Data Analysis

The collected data were tabulated and analyzed by applying statistical methods viz: Mean, SD, t-test, Chi-Square and Correlation.

## The Discussion and Findings

The main purpose of the study was to assess internet knowledge of the post Graduate students of Ravenshaw University. Besides, the objective was to analyze the internet knowledge with reference to the factors such as gender, stream and socio economic status of the informants. In order to achieve the objectives of the study, different statistical techniques were applied such as Mean, SD, t-test, Chi-Square and Correlation. The data were collected from 100 post graduate students which comprised 50 males and 50 females. After collection of data the investigator followed the scoring key as prepared during the time of preparation of tools. The data were analyzed and interpreted on the basis of the statistical results obtained. The main variables such as stream (Arts & Science), Socio Economic Status (high, moderate and low) and the intra variable such as gender (male & female) were analyzed.

## Internet Knowledge of Post Graduate Students with Reference to Gender

The data were analyzed by using both descriptive and inferential statistics such as Mean, SD and t-test. The details of such analysis can be seen from Table 1.

From the Table 1, it was evident that mean and S.D of male post graduate students were 16.46 and 2.01 respectively and mean and SD of female students were 16.74 and 2.56 respectively. For finding out the significance difference between two means of male and female students, t- test was calculated. The calculated 't'value 0.61 was found to be less than the table value (Table of t, Garrett &

| Gender | N | Mean | SD | df | t-Value | Remarks |
|---|---|---|---|---|---|---|
| Total Male | 50 | 16.46 | 2.01 | 98 | 0.61 | Not Significant |
| Total Female | 50 | 16.74 | 2.56 | | | |

Table 1. Significance Difference Between Means Scores in Internet Knowledge with Reference to Gender

Woodworth, 1981, Pp.461), hence it was not significant. The table value was observed at 0.05 level of significant as 1.98 with df = 98. Thus the null hypothesis ($H0_1$) stated "There is no significant difference between mean scores of male and female post graduate students in Internet Knowledge" was accepted and it was concluded that there was no significant difference between male and female post graduates students in Internet Knowledge.

## Internet Knowledge of Post Graduate Students with Reference to Stream and Gender

The data collected through the internet knowledge test from the post graduate students of Ravenshaw University, with regard to their stream of study i.e., Arts and Science analyzed statistically as per Table 2.

From the Table 2, it was evident that Mean and SD of total Arts students were 17.07 and 2.23 respectively and Mean and SD of total Science students were 16.47 and 1.98 respectively. The calculated, t-value was 1.59. It was found to be not significant as it was less than the table value (1.98) at 0.05 level of significant with df =98 (Table of t, Garrett & Woodworth, 1981, Pp.461). The null hypothesis ($H0_2$) stated" There is no significant difference between arts and science post graduate students in Internet Knowledge with reference to gender" was accepted. There was no significant difference between total Arts and total Science post graduates students on Internet Knowledge.

From the Table 2 it was revealed that Mean and SD of Arts male post graduate students were 15.79 and 1.67 respectively and Mean and SD of female post graduate students were 15.89 and 2.95 respectively. The calculated 't'value 0.04 was not significant as it was less than the table value (2.00) at 0.05 level of significant with df =53 (Table of t, Garrett & Woodworth, 1981, Pp.461). Thus the null hypothesis ($H0_2$) was accepted. There was no significant

| Aspects | N | Mean | SD | df | t-value | Remarks |
|---|---|---|---|---|---|---|
| Arts | 50 | 17.07 | 2.23 | 98 | 1.59 | Not Significant |
| Science | 50 | 16.47 | 1.98 | | | |
| Arts Male | 28 | 15.79 | 1.67 | 53 | 0.04 | Not Significant |
| Arts Female | 27 | 15.89 | 2.95 | | | |
| Science Male | 22 | 15.77 | 2.21 | 48 | 0.73 | Not Significant |
| Science Female | 23 | 16.22 | 1.91 | | | |
| Science Male | 22 | 15.77 | 2.21 | 48 | 0.73 | Not Significant |
| Science Female | 23 | 16.22 | 1.91 | | | |

Table 2. Significance Difference Between Mean Scores in Internet Knowledge with Reference To Stream

difference between arts male and female post graduates students in internet knowledge.

In the Table 2, the mean and SD of science male students were 15.77 and 2.21 respectively; mean and SD of science female students were 16.22 and 1.91 respectively. The calculated 't'value 0.73 was not significant to be less than the table value (2.02) at 0.05 level of significant with df =43. Thus, the null hypothesis ($HO_2$) was accepted. The difference could not be observed between science male and science female post graduates students in internet knowledge.

### Internet Knowledge and Socio Economic Status

The data collected through the internet knowledge test and socio economic scale from the post graduate students of Ravenshaw University, were analyzed statistically as per Table 3.

In the Table 3, the computed value of $x^2 = 5.34$ was less than the critical value, 5.99 and 9.21 and therefore, it was not significant. Consequently, the null hypothesis ($HO_3$) stated "Socio-Economic Status has no impact on the Internet knowledge of the Post-Graduate Student" was accepted. Therefore, it was concluded, Socio Economic Status has no bearing upon internet knowledge of post graduate students.

### Relationship between Internet Knowledge and Socio Economic Status

The data collected through the internet knowledge test and socio economic scale from the post graduate students of Ravenshaw University, were analyzed for finding out the correlation between two groups of score obtained through the two tools. This statistical analysis was done as per Table 4.

From the Table 4, it was evident that Mean and Standard Deviation in Internet Knowledge of under graduate

| Aspects | High | Moderate | Low | Total |
|---|---|---|---|---|
| Internet Knowledge | 14 (20.5) | 76 (71.5) | 10 (8.5) | 100 |
| Socio Economic Status | 27(20.5) | 66 (71.5) | 7 (8.5) | 100 |
| Total | 41 | 143 | 17 | 200 |

Critical value of $x^2 = 5.99$ at 0.05 level of significance
Critical value of $x^2 = 9.21$ at 0.01 level of significance
($x^2$ table, Garrett,1981, Pp.462)

Table 3. Chi-Square ($x^2$) test between Internet Knowledge and Socio Economic Status

| Aspects | Mean | SD | 'r' value | Remarks |
|---|---|---|---|---|
| Internet Knowledge | 16.68 | 2.30 | 0.30 | Positive but very negligible |
| Socio Economic Status | 22.59 | 4.27 | | |

Table 4. Correlation between Internet Knowledge and the SES of Post Graduate Students

students is 16.68 and 2.30 respectively. Mean and Standard Deviation in Socio Economic Status are 22.59 and 4.27. The r value is 0.30. Thus the null hypothesis ($HO_4$) stated "There is no positive correlation between Socio Economic Status and Internet Knowledge of post graduate students" was rejected and it was concluded that there was positive correlation between internet knowledge and Socio Economic Status but the it was very negligible.

### Major Findings

Based on the analysis of data collected from the post graduate students pertaining to internet knowledge with reference to socio economic status the following major conclusions were derived

• The male post graduate students did not differ significantly in Internet knowledge with regard to female Post graduate students. Thus the male and female postgraduate students were having equal level of internet knowledge. Gender was not the discriminating factor for Internet Knowledge (Table-1). (t= 0.61, $M_1$=16.46 & $M_2$=16.74 $SD_1$ = 2.01 &, $S.D_2$=2.56, p< at 0.05 level)

• The Arts post graduate students did not differ significantly in Internet Knowledge with regard to Science post graduate students. Thus the Arts and Science post graduate students were having equal level of internet knowledge. Thus, it was clear that the stream was not the discriminating factor for internet Knowledge (Table 2). (t= 1.59, $M_1$=17.07 & $M_2$=16.47, $SD_1$=2.23 & $SD_2$=1.98, p< at 0.05 level)

• The Socio Economic Status did not have any impact on internet knowledge of post graduate students as observed in Table 3. ($x^2$=5.34, df =2, p<0.05 level).

• The relationship between socio economic status and internet knowledge among post graduate students found to be positive but negligible correlation. (r =0.30)

### Implications and Recommendations

We are living in a knowledge based society, where the

internet knowledge has made an increasing and powerful impact upon every area and especially at work place like office, industry, institution, home, school, ATM, computerized card catalogue in library banks, research, hospitals etc. It has shown great impact in the field of education. The teachers and students should be motivated to get trained, to improve their internet knowledge in order to participate actively in this knowledge based society. The investigator found that the genders, stream of study, socio economic status are not the discriminating factors for development of internet knowledge among the post graduate students. It was also found socio economic status of the family is related to internet knowledge but the relationship is negligible. It is assumed that the development of internet awareness or knowledge is influenced by the peer groups and the academic environment in the college/university campus. The college/university campuses are becoming Wi-Fi and the library is made digitalized based on internet access. Thus, the educational planners should give a thought to improve the internet knowledge among the teachers and students so that they can have more benefit and utilize in academic, research purpose.

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