

Assessment of Virtual Knowledge of Under Graduate Students to their Academic Discipline

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ABSTRACT

Now it is the day of 21st century, where revolutionary changes at both the teaching and learning have taken place. Teaching has been shifted to learners self learning. The internet strengthened the process of self study. In higher education level the usage of internet has been growing in remarkable rate and as a source of information and communication has taken a vital place for research. It is assumed that the use of internet among the students of various disciplines i.e. Arts, Science are varied. Also the scope of use of internet among the students is not same due to different causes i.e. cost, internet literacy, lack of availability in rural and urban, negative attitudes of guardian etc. In this paper researcher tried to empirical study to assess of virtual knowledge of UG students in relation to Arts and Science discipline in respect of gender and locality. For this purpose author developed a scale for measuring status of internet knowledge. As a sample 210 UG students and statistical analysis both descriptive and inferential were employed. The author found the significant difference among the students academic discipline and localities and no gender difference in internet knowledge.

Key words: Assessment, virtual knowledge, under graduate, academic.

Introduction

According to the internet live status, estimated for 1st July 2014, around 40% of the world population has an internet connection. The number of internet users in India has been growing and it was 8.33% in the year of 2014 and such statistics is two times more of the year 2009. The use of internet at present days is common to all section of the people i.e. male and female, rural and urban. The traditional face to face oral, bookish and the textual information based teaching gradually is losing the popularity among the modern age. Students taught through software package significantly did better than those taught through conventional method (Joshi & Mahapatra, 1995). The use of instructional media indicated the possibility of improvement in methodology of science teaching, raising the

standard of science education in secondary school (Desai, 1985). Among all other technologies, the use of internet has a great potential in teaching –learning process. S. Jones and M. Madden reported the most students agreed that, internet has a positive impact on their college academic experiences. “the use of internet allows for networking among students and teachers, thus facilitating exchange of ideas , sharing of resources and improving teaching learning practices as well as providing opportunity for connecting school to the world as learning is expanded beyond classroom ” (Abolade and Yusuf, 2005). Now due to use of educational technology, the barriers in learning like sex, low socio-economic status, localities etc. have been no way a factor and use of educational technology had changed the classroom

teaching – learning process to a great extent and had also made an attitudinal change among the pupil (Singh, 1980). Fusiller & Durlabhji(2008) suggested that attitude , training and university support were positively related to student’s internet use. The uses of internet are in every space of human business which has influenced personal relationship, socialization process, education, research and leisure activities (Vijayalakshmi and Durgabhavani, 2003). Chinwe(2006) revealed that majority of the students in the university use the internet for academic purpose in spite of the location of the facilities. Now a days post graduate students are also likely to be dependent on computer with internet for collection of relevant information for learning , conducting research as well teaching in their future life (Rajput, 2008; Dhamija & Panda (2007) But still the access of the internet services varies from the section to other sections and students of all categories may not possess the equal knowledge and skills of using the internet for their academic purposes.

Objectives of the study

- To study the variation in internet knowledge among U.G students with reference to Academic Streams.
- To study the variation in internet knowledge among U.G students with reference of Gender.
- To study the variation in internet knowledge among U.G students with reference to Localities.
- To develop the tools for measuring the internet knowledge.
- To recommend the implications.

Rational of the study

The study would be helpful for reducing the negative attitudes of parents, teachers and

authorities in use of internet and expand their big hands providing all type of opportunities to the students studying in higher education. Thereby not only for the purpose of study, students can also enrich their knowledge in different areas through the internet. Internet enable the U.G 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 instrument developed to use for study may provide further information to assess internet knowledge in respect to academic streams, localities, gender and other factor of students. The study of worthwhile, for knowing the effect of such factor of the under graduate students on the use of internet for their academic purpose. Furthermore, then finding of proposed study would be helpful in searching the reasons for differences in the use of interne. The result of present study has made an effort to study the Internet knowledge of U.G. student and their level of usage. The research finding will be useful to research guides and investigator to know about background and level of information seeking behaviour of U.G. students. The finding maybe of more useful for the academicians and administrators and management to organize training and technical support to the U.G. students in order to facilitate maximum use of internet. The result may be helpful to management of colleges and institutions of higher learning to plan and provide ICT infrastructure.

Hypotheses

The following null-hypotheses have been considered for the study.

- H_{01} : There exist no significant differences in Internet Knowledge between arts and science students in U.G level.

- Ho₂: There exist no significant differences in Internet Knowledge between Rural and Urban U.G students.
- Ho₃: There exist no significant differences in Internet Knowledge between male and Female U.G students.

(N=170). Approximately two colleges have been proposed for the sample with the main consideration being that the colleges should be situated in both the rural and urban areas. Two colleges of Paschim Medinipur district in West Bengal have been considered for this purpose.

Methodology of the study

a. Procedure: The major objective of this proposed study is to assess the level of Internet Knowledge in respect to various Academic Streams, Gender and Localities. As such the method of investigation has been confined to a descriptive and analytical approaches, the methodology of the study involves collection, tabulation and meaningful analysis of the data; and drawing our relevant inferences. Hence description of the investigation is obviously proposed to combine with analysis, comparison, contrast, interpretation and evaluation.

b. Population and Sample

Under Graduate students studying at college level under Vidyasagar University of west Bengal was considered as the population of the study. A judgement sampling method has been proposed to consider for selecting the sampling units and it has been proposed by the investigators to take as large as possible the sample size i.e. more than 170

c. Variables to be studied :

As a multivariate approach, the present study comprised of one Dependent variable i.e. Internet Knowledge and three Attribute Variables:

- a. Academic Streams (Arts, science courses)
- b. Gender (Males & Females)
- c. Localities (Rural and Urban).

d. Tools used

For the present study, the researcher reviewed a good number of tools both developed in India and abroad, after through analysis tests developed in India were found to be more suitable to use. Finally, self developed tool was selected to collect the data.

e. Statistical Technique used:

The collected from student have been proposed to the subjected to different statistical techniques. All the statistics proposed to use in the study can be divided - into two major parts, i.e. a. Descriptive Statistics, b. Inferential Statistics.

Table -1 Showing the composition of sample (Academic Stream cum Gender cum Locality)

Stream	Male		Female		Total
	Rural	Urban	Rural	Urban	
Arts	22	25	20	23	90
Science	20	20	20	20	80
Total	42	45	40	43	83
	87		83		170
Rural = 52+50 = 102 , Urban = 55+53 =105 .					

Description of tool

The internet knowledge Scale (IKS) was developed and standardised by investigators. This test was consist of 40 items which measure the internet knowledge of students The IKS consists of 40 items where for each item there was multiple choice answering .Four multiple choice answer for each question are given to subjects and they have to find out appropriate on out of four multiple choices. The right answer is scored as one. Thus, the subject answering right against all 40 items may be offered total 40 score. There is no fixed item for completion of the test. But the time that is taken by the subject for completion of test was recorded. This test can be administrated to single individual or group at a time. The investigators standardized the test and determined the both reliability and validity of the test result.

Reliability of IKS

Table-2 Showing the Co-efficient Reliability of the IKS

Method	N	Inventory	Reliability coefficient by Spearman formula
Test-Retest Method	100	IKS	0.811
Split-half Method	100	IKS	0.828

The coefficient of correlation (r) between the Test - retest and Split - half score was found to be 0.811 and 0.828 respectively. The test - retest and split - half reliability co-efficient of correlation of the IKS were significant at the 0.01 level. Purpose, the test items have been verified by the teacher of Computer Science.

Validity of IKS:

The content validity has been determined for the IKS. For this purpose, the test items have been verified by the teacher of Computer science.

Analysis and interpretation of Data

Descriptive Statistics

The above tabular presentation of descriptive statistics of IKS highlighted that, students of among two academic streams, students obtained the highest mean score and Arts students secured lowest mean score. That variation might be due to the nature of Courses and Academic Streams studied by the UG Students. The mean scores of male and female students are almost same. The urban UG students were better in Internet Knowledge than their rural counterparts. It was perhaps due to the variation of facilities available to the students.

Table 3: Showing the descriptive statistics for the scores of IKS

	Number	Mean(M)	SD	Skewness	Kurtosis
Arts	90	21.32	6.32	-0.127	0.259
Science	80	31.00	5.12	-0.253	0.269
Male	87	29.25	4.11	-0.011	0.220
Female	83	28.62	4.48	-0.053	0.229
Urban	88	32.31	4.16	-0.061	0.232
Rural	82	23.46	5.67	-0.062	0.239
Total	170	28.16	4.92	-0.013	0.241

Inferential Statistics for the scores of IKS

Analysis of Internet Knowledge in respect to Academic Streams

Table-4: showing 't' value of internet knowledge of UG students in respect of academic discipline

Difference between	N	M	SD	t-Value	df
Arts Students	90	21.32	6.32	11.025*	168
Science Students	80	31.00	5.12		

***Significant at both 0.01 level and 0.05 level**

- (a) Analysis of the differences in Internet Knowledge between Arts and Science students at UG Level pertaining to Null-Hypothesis No- 1. The Table-4 showed that the "t"-value between Arts Students and Science Students; in Internet Knowledge were significant at both 0.01 and 0.05 levels. Hence the Null-hypothesis 1 is not retained. Thus it might be concluded that, "between Arts students and science students in Internet Knowledge." Analysis of Internet Knowledge in respect to Gender
- (b) Analysis of the Difference between Rural and Urban UG students in Internet Knowledge pertaining to null-hypothesis No-4 (Ho₂)

Table-5: Showing 't' value of internet knowledge of rural and urban UG students

Difference between	N	M	SD	t-Value	df
Arts Students	82	23.46	5.67	12.744*	168
Science Students	88	32.31	4.16		

***Significant at both 0.01 level and 0.05 level**

A perusal of Table-5 showed that "t" value between Rural and Urban UG students in Internet Knowledge was significant at both 0.01 and 0.05 levels. Thus, the Null-hypothesis (i.e.Ho₂) was rejected. It was established that, "there existed a significant difference between Rural and Urban UG students in Internet Knowledge".

Analysis of Internet Knowledge in respect to Gender

- (c) Analysis of the Difference between Male and Female UG students in Internet Knowledge pertaining to Null-Hypothesis No-3 (Ho₃)

Table-6: Showing 't' value of internet knowledge of male and female UG students

Difference between	N	M	SD	t-Value	df
Male Students	87	29.25	4.11	1.061*	168
Female Students	83	28.62	4.48		

***Significant at both 0.01 level and 0.05 level**

It was evident from the table-6 that, no difference existed in mean scores between UG male and female students with respect to their internet Knowledge (t=1.061, P>0.01 & 0.01). Thus, the Null Hypothesis (i.e. Ho₃) was retained. It had established the fact that,"there existed no significant difference between UG male and female students with respect to their Internet Knowledge."

Major Findings

1. There exists significant difference between Arts and Science UG students in Internet Knowledge. This result revealed that academic discipline might be factor in virtual knowledge.

2. There exists significant difference between Rural and Urban UG students in Internet Knowledge. The urban students were better than rural students in updating and using the internet. The locality of the students is responsible in case of promoting the virtual knowledge among young students. This result revealed that locality discipline might be factor in virtual knowledge.

3. There exists no significant difference between UG male and female students with respect to their in Internet Knowledge.

Implications

The following implications may be recommended for better usage and provision of internet facilities for students of higher education level on the basis of above result:

- i. Internet lab may be established in each college campus and minimum free usage of internet facilities must be provided to the students.
- ii. Project works on internet based must be prescribed.
- iii. Computer science courses must be commenced in each college.
- iv. The process of admission, free payment, result publication etc. may be on online basis.
- v. In rural area the computer or internet terminals must be launched.
- vi. For the students of Arts, the short term computer courses may be offered at free of cost.

Conclusion

In the period of Knowledge and Information Explosions, the students will have to be up to date with new knowledge, information and innovations; and also to have all types of facilities in usage of the computer and internet. This was very necessary for the students who were deprived of many facilities just because they stayed in rural areas and also for students of such stream having very little scope of using the internet. To be number one in science, literature, commerce, management and technology, our students have to be strengthened in computer knowledge and skill.

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