TEACHER'S PERCEPTION ABOUT THE IMPACT OF INTERNET USAGE ON RESEARCH STUDENTS

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ABSTRACT

The Internet is revolutionizing our society, our economy and our technological systems. The Internet, as an integrating force, has melded the technology of communications and computing, providing instant connectivity and global information services to all its users at very low cost. The Internet had become a vital instrument for teaching, research and learning process of the respondents. Teachers were integrating technology in their class's activities. They were found to use a variety of technologies to promote student's learning. Taking into consideration the significance of internet in the life of students specially the research scholars as well as their teachers, the present study was planned with the objectives; to work out the role of teachers towards students to use internet for research work and; to study the perception of teachers about the impact of internet usage on research students. For the purpose of data collection, two separate questionnaires were specially structured for students and teachers. The data from students were collected in the questionnaire through personal interview method, while the data from teachers were collected on a self-developed Teachers Perception Scale. The collected data was analyzed by applying chi-square test and factor analysis. The analysis revealed that majority of the male as well as female students reported that their teachers encouraged them to use internet for research work. The four factors which emerged from the factor analysis of the data from the teachers were; the internet is informative and innovative; source of discipline and confidence; teaches active life style and; internet has adverse effects too. Informative and innovative nature of internet emerged as the most important factor among others.

Keywords: Internet usage; Teacher's perception; Research students; PAU, Ludhiana.

INTRODUCTION:

The Internet is revolutionizing our society, our economy and our technological systems. The Internet, as an integrating force, has melded the technology of communications and computing, providing instant connectivity and global information services to all its users at very low cost. It is a network of networks. The internet has the worldwide broadcasting capability. It is a mechanism for information dissemination and a medium for collaboration and interaction between individuals and their computers in spite of the geographical distances (Leiner, B. M., *et al*., 2009). People started use of the internet also for the purpose of business, entertainment, etc. Many adolescents prefer being online rather than spending time on other media, including the telephone, television and radio (Tewari. 2007). The kind of colossal powers that the internet gives to our computer is mind-boggling. To send or receive data within a matter of seconds to someone placed beyond the pacific was unthinkable before the advent of the internet (Sethi,. 2006). The Internet had become a vital instrument for teaching, research and learning process of the respondents (Kaur, A., & Kumar, R. 2005). Teachers were integrating technology in their class's activities. They were found to use a variety of technologies to promote student's learning (Almekhlafi, A. G., & Almeqdadi F. A. 2010).Taking into consideration the significance of internet in the life of students specially the research scholars as well as their teachers, the present study was planned with the following objectives:

1. To work out the role of teachers towards students to use internet for research work.
2. To study the perception of teachers about the impact of internet usage on research students.

REVIEW OF LITERATURE:

Oghenevwogaga, B. A., & Oghenevwogaga, D. T. (2008), conducted a study titled "The impact of the Internet on Research: the Experience of Delta State University, Nigeria," and found that so many staff have no access to the Internet neither at home nor in their offices. They gave the recommendations that the university should set up an Internet center for staff and organize formal training for the staff

Almekhlafi, A. G., & Almeqdadi F. A. (2010), in their research paper entitled, " Teachers' Perceptions of Technology Integration in the United Arab Emirates School Classroom," found that teachers were integrating technology in their class's activities. They were found to use a variety of technologies to promote student's learning.

Bidin, Z., *et al*., (2011), in their study "Determinants of Students' Internet Usage for Academic Purposes," investigated the factors that influence students' use of the Internet for academic purposes. The study applied the underlying theory of planned behavior (TPB). Based on the theory, the original variables of attitudes, subjective norms, perceived behavioral control, and intention were hypothesized to determine Internet usage. The results of multiple regression indicated that attitude, subjective norms, and perceived behavioral control were statistically significant in influencing intention to use the Internet for learning purposes. Meanwhile, the intention was found to significantly influence the Internet usage for academic purpose.

Assan, T., & Thomas, R. (2012), in their study titled, "Information and communication technology Integration into teaching and learning: Opportunities and challenges for commerce educators in South Africa," identified some major opportunities and challenges in integrating ICT into teaching and learning activities. The study recommended relevant and appropriate management and use of ICT by the teachers and

resource to empower schools with ICT infrastructure – physical and human resources, as well as ICT training.

Singh, G., & Pant, R. (2013), in their study under the title, "Use of Internet for Research and Educational Activities by Research Scholars: A Study of D.S.B. Campus of Kumaun University-Nainital," found out that users had generally opined that the internet was more beneficial than conventional documents. Free access to the internet provided by the university had improved the academic efficiency of the researchers to a great extent.

RESEARCH METHODOLOGY:

The sample of the study was based on two-stage purposive-cum-random sampling technique. The study was purposively conducted at Punjab Agricultural University, Ludhiana, which is worldwide known for its contribution to the agrarian economy of India. The students undergoing research work under M.Sc. and Ph.D. streams of Punjab Agricultural University, Ludhiana and their teachers were the population of the study. The sample size was taken as follows:

Students - 200

Teachers - 100

Total - 300

For the purpose of data collection, two separate questionnaires were specially structured for students and teachers. The data from students were collected in the questionnaire through personal interview method, while the data from teachers were collected on a self-developed Teachers Perception Scale. The collected data was analyzed by applying chi-square test and factor analysis.

RESULT AND DISCUSSION:

Role of Teachers:

As per the opinion of students given in Table 1 regarding the role of teachers towards students for using internet for research work, majority i.e. 94.70 percent of male respondents and 94.12 percent of female respondents reported that their teachers encouraged them to use internet for research work.

Table 1: Role of Teachers towards Students to use Internet for Research Work

Role of Teachers	Male		Female	
	No.	%age	No.	%age
Teachers encourage	125	94.70	64	94.12
Not to encourage	7	5.30	4	5.88
chi-square value	0.04			

Source: Author's calculations

Only 5.30 and 5.88 percent of male and female respondents respectively reported that their teachers did not encourage them to use internet for research purposes as they were of the view that students generally make copy-paste of the literature.

Teachers' Perceptions about Internet Usage:

Teachers were asked to register their level of agreement on various statements related to different aspects of internet usage in terms of 'strongly agree', 'agree', 'neutral', 'disagree' and 'strongly disagree'. The attributes were assigned the score in the order of 5, 4, 3, 2 and 1 and mean agreement scores were worked out. Then these mean agreement scores were taken to determine the overall level of agreement among teachers. The results are shown in Table 2.

The highest agreement score came to be 4.10 (agree) on 'Internet is of no use if it is used directionless' followed by 4.07 (agree) each on 'Internet is an authentic/credible source of information' and 'Internet enables the students to obtain information unavailable elsewhere', 3.90 (agree) on 'Internet enables the students to obtain information unavailable elsewhere', 3.78 (agree) on 'Internet instills confidence in students in the field of research', 3.74 (agree) on 'Internet is an innovative/modern technology for research', 3.69 (agree) each on 'Internet develops the ability of students to solve research problems' and 'Internet helps the students to achieve their fullest potential'', 3.61 (agree) on 'Internet helps the students to gain an insight into themselves', 3.59 (agree) on 'Internet gives researchers a feeling of liberation/flexibility', 3.56 (agree) on 'Internet allows students to express their abilities' and 3.52 (agree) on 'Internet makes the students' work organized, not chaotic'. The lowest agreement score was 2.82 (neutral) on 'Internet makes students life static/dull', 2.95 (neutral on 'Internet is wastage of time for the students', 3.02 (neutral) on 'Internet develops a habit of copying among students', 3.14 (neutral) on 'Internet hinders to make students passive', 3.18 (neutral) on 'Internet never causes a boring mood of the students', 3.21 (neutral) on 'Internet helps the students to relieve their feelings of stress, helplessness, guilt, anxiety, depression, etc.', 3.46 (neutral) on 'Internet encourages the students to work as a team' and 3.47 (neutral) on 'Internet gives students constructive information'.

The analysis indicated that teachers agreed on 12 of 20 (60%) statements related to the internet usage and remained neutral on 8 (40%) of the statements. The statements where teachers agreed upon represent the teachers' view that internet to be used under proper guidance, internet a credible source of information, provides information unavailable anywhere else, instills confidence in students, innovative modern technology and helps significantly the students in their research work. The teachers remained could not depict any position on the so called adverse effects of internet usage on students such as use of internet makes student dull, passive and team work, etc. Overall, the teachers were in favour of using internet by the students for their research work.

Table 2: Teachers' perceptions about the impact of internet usage on research work of students

Statement	Mean	SD	Overall
S1	3.46	1.03	N
S2	3.47	0.88	N
S3	3.74	0.72	A
S4	3.14	0.85	N
S5	2.82	0.87	N
S6	3.59	0.60	A
S7	3.52	0.78	A
S8	4.07	0.71	A

Statement	Mean	SD	Overall
S9	3.90	0.83	A
S10	3.69	0.75	A
S11	4.07	0.56	A
S12	3.18	0.74	N
S13	3.56	0.70	A
S14	3.78	0.66	A
S15	3.69	0.73	A
S16	3.61	0.67	A
S17	3.21	0.84	N
S18	2.95	0.77	N
S19	3.02	0.85	N
S20	4.10	0.61	A

Source: Author's calculations

The analysis indicated that teachers agreed on 12 of 20 (60%) statements related to the internet usage and remained neutral on 8 (40%) of the statements. The statements where teachers agreed upon represent the teachers' view that internet to be used under proper guidance, internet a credible source of information, provides information unavailable anywhere else, instills confidence in students, innovative modern technology and helps significantly the students in their research work. The teachers could not depict any position on the so called adverse effects of internet usage on students such as use of internet makes student dull, passive and team work, etc. Overall, the teachers were in favour of using internet by the students for their research work.

Factor Analysis of Teachers' Perceptions:

Factor analysis was employed to find out the factors to be emerging out of 20 statements. This technique is also called data reduction technique. Factor analysis was done through Principal Component Technique. As per the information given in Table 3, the coefficient of KMO-MSA came to be 0.769, significant at one percent level at 190 degree of freedom.

Table 3: KMO-MSA and Bartlett's Test of Sphericity

Particular	Value
KMO-MSA	0.769
Bartlett's Test of Sphericity	1053.11
d.f.	190
Significance	0.000

Source: Author's calculations

Rotated Component Matrix and Communalities:

The analysis given in Table 4 showed that the communalities ranged from 0.45 to 0.86, which were quite high. This revealed that there existed multiple correlations between various statements related to teachers' perceptions about internet.

This showed that the data set was fit for factor analysis. The Eigen value came to be 3.93, 3.46, 2.61 and 1.98 for Factor-1 to Factor-4 respectively. Those factors were

considered where Eigen value was more than or equal to zero. The factor formation was stopped at the stage the eigen value came to be less than unity.

The percent variance explained by the 4 factors was 37.33, 8.52, 7.61 and 6.59 percent by Factor-1 to Factor-4 respectively. In this way, cumulative variance explained by the 4 factors worked at 60.05 percent. The contribution of the 4 factors was found to be significant.

Four factors were emerged out of 20 statements related to teachers' perceptions about usage of internet by students for their research work.

Table 4: Rotated Component Matrix and Communalities for Factor Analysis of Teachers Perceptions

Statement	Factor-1	Factor-2	Factor-3	Factor-4	Communalities
S1	0.447	**0.533**	0.343	0.237	0.66
S2	**0.567**	0.291	0.256	0.234	0.53
S3	**0.519**	0.316	0.267	0.211	0.49
S4	0.262	0.241	**0.548**	0.206	0.47
S5	0.372	0.284	0.198	**0.691**	0.74
S6	0.276	0.187	**0.536**	0.234	0.45
S7	0.398	**0.549**	0.350	0.166	0.61
S8	**0.719**	0.196	0.187	0.131	0.61
S9	0.298	0.168	**0.846**	0.172	0.86
S10	**0.668**	0.287	-0.173	0.164	0.59
S11	**0.658**	0.421	0.237	0.123	0.68
S12	0.334	**0.651**	0.130	-0.025	0.55
S13	**0.621**	0.391	0.343	0.124	0.67
S14	0.352	**0.503**	0.286	0.238	0.52
S15	0.274	**0.725**	0.162	0.213	0.67
S16	0.321	**0.806**	0.165	0.131	0.80
S17	0.381	0.267	**0.597**	-0.114	0.59
S18	0.280	-0.228	0.279	**0.576**	0.54
S19	0.335	-0.121	0.156	**0.581**	0.49
S20	0.275	0.218	0.203	**0.564**	0.48
Eigen Value	3.93	3.46	2.61	1.98	
% Variance	37.33	8.52	7.61	6.59	
% Cumulative Variance	37.33	45.85	53.46	60.05	

Source: Author's calculations

The statements included in different factors were as under:
Factor-1: There were 6 statements included in Factor-1, which are as under:

S. No.	Statement
2	Internet gives students constructive information
3	Internet is an innovative/modern technology for research
8	Internet is an authentic/credible source of information
10	Internet develops the ability of students to solve research problems
11	Internet enables the students to obtain information unavailable elsewhere
13	Internet allows students to express their abilities

Factor-2: There were 6 statements included in Factor-2, which are as under:

S. No.	Statement
1	Internet encourages the students to work as a team
7	Internet makes the students' work organized, not chaotic
12	Internet never causes a boring mood of the students.
14	Internet instils confidence in students in the field of research
15	Internet helps the students to achieve their fullest potential
16	Internet helps the students to gain an insight into themselves

Factor-3: There were 4 statements included in Factor-3, which are as under:

S. No.	Statement
4	Internet hinders to make students passive
6	Internet gives researchers a feeling of liberation/flexibility
9	Internet motivated the students to be an active learners
17	Internet helps the students to relieve their feelings of stress, helplessness, guilt, anxiety, depression, etc.

Factor-4: There were 4 statements included in Factor-4, which are as under:

S. No.	Statement
5	Internet makes students life static/dull
18	Internet is wastage of time for the students
19	Internet develops a habit of copying among students
20	Internet is of no use if it is used directionless

NAMING OF THE FACTORS:

The factors were named as per the nature and message of the statements included in different factors. The naming of the factors is given in Table 5.

Table 5: Naming of factors derived through factor analysis

Factor	Name
Factor-1	Informative and innovative
Factor-2	Source of discipline and confidence
Factor-3	Active life style
Factor-4	Adverse effects

Informative and Innovative:
It included the internet as a source of constructive, authentic and credible information through its innovative and modern technology. It helps the students to express their abilities.

Source of Discipline and Confidence:
Internet is a source of doing organized work, not in a chaotic way. It instills confidence in the students regarding research. Internet also leads work as a team in the field of research.

Active Lifestyle
Internet leads to live a healthy and active lifestyle. It gives the feeling liberation and flexibility. It also helps the students to get relieved of stress, helplessness, guilt, anxiety and depression.

Adverse Effect of Internet
Internet has also some adverse effects on students. It may lead to live a static and dull life. It may also develop the habit of copying in students. That is why internet is called wastage of time. Therefore, it should be used under proper guidance.

SUMMARY:

- Majority i.e. 94.70 percent of male respondents and 94.12 percent of female respondents reported that their teachers encouraged them to use internet for research work.
- Only 5.30 and 5.88 percent of male and female respondents respectively reported that their teachers did not encourage them to use internet for research purposes as they were of the view that students generally make copy-paste of the literature.
- Four factors were emerged out of 20 statements related to teachers' perceptions about usage of internet by students for their research work. The four factors are the internet is informative and innovative, source of discipline and confidence, teaches active life style and internet has adverse effects too.
- Informative and innovative included the internet as a source of constructive, authentic and credible information through its innovative and modern technology. It helps the students to express their abilities.
- Source of discipline and confidence expressed that internet is a source of doing organized work, not in a chaotic way. It instills confidence in the students regarding research. Internet also leads work as a team in the field of research.
- Active lifestyle showed that internet leads to live a healthy and active lifestyle. It gives the feeling liberation and flexibility. It also helps the students to get relieved of stress, helplessness, guilt, anxiety and depression.
- Adverse effects of internet revealed some adverse effects on students. It may lead to live a static and dull life. It may also develop the habit of copying in students. That is

why internet is called wastage of time. Therefore, it should be used under proper guidance.

- Overall, informative and innovative nature of internet emerged as the most important factor for the teachers while its adverse effects, one of which is copying , were the least important for them as the benefits overpower the negative effects.

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