A Study On The Perception Of The Role Played By Internet Applications On Human Abilities

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Abstract:

The internet and its myriad applications like the email, chat, social networking have profoundly impacted our daily lives. The aim of the paper is to study the difference in perceptions of the Indian Military Officers and their Wives on the role of internet applications on human abilities and relationship of the difference in perceptions with regards to gender and age. The method used is quantitative research and the population comprised of Indian Military Officers and their Wives. A random sample had been taken from the said population from various Military establishments throughout India and at the Defence Services Staff College. The survey instrument was a questionnaire through which data were obtained from the sample to seek their inputs on the use and impact of the internet applications on human abilities. Based on literature review it is seen that the internet due to its immense utility has improved our abilities and therefore, it needs to be seen if there exists any difference in perceptions. Thus the hypotheses for the study has been formulated as "The perception of Indian Military Officers and their wives on the role played by internet applications on human abilities is judged similarly by the opposite sexes and by persons from different age groups". The results have supported the hypotheses and show that the perceptions on the role of internet applications are seen similarly by both sexes and different age groups.

Keywords : Internet, abilities, internet applications, convenience, perceptions

Introduction

The internet applications like the e mail, Social networking Services (SNS), online banking, e search and e commerce due to the ease and convenience provided by these applications have made a positive impact on humans and this has been studied and proved by many researchers earlier. The study attempts to know whether there is a similarity in the perceptions of the Indian Military Officers and their Wives on the role played by internet applications on human abilities and whether the perceptions are similar for both sexes and by different age groups.

Review Of Literature

The review of literature shows that not much study has been carried out on this specific topic but there have been studies carried out in related fields of human computer interaction and social sciences. The role of computers and the Internet as a means for socialization, education, information access, entertainment, shopping, and communication is increasing dramatically. Although little research has been conducted on the effects of the Internet on the abilities of humans, a few studies having some bearing on the topic under study has been highlighted to draw certain hypotheses for this study.

As of December 2011, India has the world's third-largest Internet users with over 121 million (http://www.internetworldstats.com/stats3.htm). The increase in the internet usage in India suggest that people perceive the internet to positively impact their abilities mainly due to its convenience. Ability has been defined as a combination of knowledge, skills, attitude and competences. Mayer, Davis and Schoorman (1995, p. 717) define ability as a "(…) group of skills, competences, and characteristics that enable a party to have influence within some domain". As the Internet has become a part of everyday life to most people, communicating online has made it easy for people to begin and develop interpersonal relationships (Hatala, Milewski, & Baack, 1999). According to Amichai-Hamburger, Wainapel, and Fox "social communication is one of the most common reasons for using the Internet." Mckenna and Bargh suggested that that the virtual world provides an environment for participants to create identities and learn and practice social skills specifically for the virtual environment. Also the internet serves as a community-building tool providing information on civic engagement and political participation (Rainie & Horrigan, 2005).

The convenience provide by the internet has been a subject of research with a similarity in the findings. Convenience has been one of the most important factors of consumers' satisfaction with Internet using and is related to speed, easy access to information at low cost (i.e. time, effort and displacement) where everything can be found in a minute without time or geographical restraints. In the consumers' perception, Internet shopping convenience is related to an easy way of shopping and reducing total time spent on purchase (Szymanski & Hise; 2000; Kim & Lim, 2001). Also the ease with which the internet enables information search has improved our learning skill and ability to gain more knowledge due to the global access provided by search engines. It has also promoted cost-effective learning environment and is said to have positive effects on the learning experience. Studies suggest a positive correlation between relationally supportive online environments and cognitive learning (e.g., Gunawardena, 1995; Wegerif, 1998; Rovai, 2002).

The role of internet has been studied differently by different people, in terms of its utility value and its impact on our abilities and skills. Early studies and research on Internet usage focused on gender and age differences. Weiser elaborates that females tended to view the Internet as a tool for "…interpersonal communication and, to a lesser extent, academic assistance; in contrast, male use [was] driven mainly by entertainment and leisure." The above review of literature shows that the internet applications can have a positive impact on our abilities and competencies and that there is a theoretical basis for study to be done on this area. The purpose of the research was to study the perceptions of Indian Military Officers and their wives on the role played by internet applications on human abilities and whether there is a similarity in the perceptions by the opposite sexes, and different age groups and the hypothesis thus formulated.

Hypothesis

"The perception of Indian Military Officers and their wives on the role played by internet applications on human abilities is judged similarly by both sexes and by persons from different age groups."

Research Methodology

Participants

The population under study was the Indian Military Officers and their wives. The participants for this survey were based on a random sampling technique from various

military establishments throughout India and at the Defence Services Staff College. The respondents were Army Officers, Naval Officers, Air Force Officers and the Wives. The representation of the respondents consisted of; Males accounted for 67% and females accounted for 33%. The age distribution of respondents ranged between 20 to 50 years of age, with the largest group of respondents aged between 30 and 34 years.

Measures

The method used was quantitative research. The survey instrument was a questionnaire which comprised 34 questions and assessed the use of internet applications and the impact these applications have had on our abilities like communications, maintaining relationships, convenience etc. A 5 - point Likert-type scale was adopted from Strongly Disagree (1) to Strongly Agree (5) as the response format. The variables under study were gender and the age groups.

The validity of the survey instrument which in this case was a questionnaire was checked. Hair et al. (2007: 8) defined the validity as "the degree to which a measure accurately represents what it is supposed to", and thus validity is concerned with how well the concept is defined by the measure(s). The validity of the questionnaire was addressed by putting the questionnaire through a pilot study. The pre-pilot questionnaire was given to a few respondents who were asked to identify any ambiguities in the questions, comment and suggest changes. The changes were incorporated in the pilot questionnaire and responses received. The responses were compared and changes made to the final questionnaire.The reliability of the questionnaire was also confirmed by statistical analysis. Reliability indicates the extent to which a variable or set of variables is consistent in what it is intended to measure (Hair et al., 2007). A Cronbach alpha with acceptable cutoff point 0.70 demonstrates that all attributes are internally consistent, and as a rule of thumb for describing internal consistency using Cronbach's alpha is acceptable among many researchers (Fujun et al., 2007). The statistical analysis for Reliability gave a Cronbach's alpha value of 0.875 (Table 1) which indicate that the 'alpha value' of all items exceeded Nunnally and Bernstein (1994) recommended criterion of 0.70 for scale reliability and thus the tool was reliable enough to collect the right data.

Cronbach's Alpha	No of Items
0.875	34

Table1: Reliability Statistics

Procedure

Data were obtained by surveying respondents who were internet users through a questionnaire to seek their inputs on the study and a total of 1032 completed questionnaires were received. The questionnaire was distributed and collected through postal means and also by hand from the respondents. This questionnaire administration approach was chosen because it is less expensive to administer and allows respondents time to reflect on the questions thus improving collection of quality data. Of the total 1200 questionnaires, 1032 were fully completed, response rate was 86% which is an acceptable response rate and indicates data is representative enough. The collected data was coded and processed for analysis using SPSS.

Results, Analysis And Interpretation

Descriptive Statistics

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Male**	690	66.9	66.9	66.9
	Female	342	33.1	33.1	100.0
	Total	1032	100.0	100.0	

Table 2: Frequency of Males and Females

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Age group - 20 to 29**	175	17.0	17.0	17.0
	Age group - 30 to 34	476	46.1	46.1	63.1
	Age group - 35 to 39	310	30.0	30.0	93.1
	Age group - 40 to 50	71	6.9	6.9	100.0
	Total	1032	100.0	100.0	

Table 3: Frequency of Age groups

Analysis and Interpretation

<u>Hypothesis</u>

"The perception of Indian Military Officers and their wives on the role played by internet applications   on human abilities is judged similarly by both sexes and by persons from different age groups".

<u>Testing</u>

Perception is similar for both sexes

A 't test' was used to test the hypothesis whether the perception on the role played by internet applications on human abilities is judged similarly by both sexes.

The various statistics obtained on conducting 't test' are given in Tables 4 and 5.

	Sex	N	Mean	Std. Deviation	Std. Error Mean
Abilities	Male	690	3.29	.861	.033
	Female	342	3.37	.890	.048

Table 4: Group Statistics

		Levene's Test for Equalityof Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval	
									Lower	Upper
Abilities	Equal variances assumed	1.003	.317	-1.416	1030	.157	-.082	.058	-.195	.031
	Equal variances not assumed			-1.400	660.47	.162	-.082	.058	-.196	.033

Table 5: Independent Samples Test

A 'T Test' Failed To Reveal A Statistically Reliable Difference Between The Scores Of Military Officers Viz A Viz Their Wives To Ascertain If There Is A Major Difference In

The Way Military Officers Viz A Viz Their Wives Perceive The Role Played By Internet Applications On Human Abilities. Military Officers (M=3.29,   SD=0.861), Wives (M=3.37, SD=0.890); T (1030)=1.416, P = .157, A=.05.

Testing

Perception Is Similar For Persons From Different Age Groups

A 'One Way ANOVA' Was Used To Test The Hypothesis Whether Perception On The Role Played By Internet Applications On Human Abilities Is Judged Similarly By Persons From Different Age Groups.

The Various Statistics Obtained On Conducting ANOVA Are Given In Tables 6, 7 And 8.

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Age group - 20 to 29	175	3.42	.818	.062	3.30	3.54	1	5
Age group - 30 to 34	476	3.34	.893	.041	3.26	3.42	1	5
Age group - 35 to 39	310	3.26	.850	.048	3.16	3.35	1	5
Age group - 40 to 50	71	3.23	.929	.110	3.01	3.45	1	5
Total	1032	3.32	.871	.027	3.27	3.37	1	5

Table 6: Descriptives

Levene Statistic	df1	df2	Sig.
.791	3	1028	.499

Table 7 : Test of homogeneity of variances

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.635	3	1.212	1.599	.188
Within Groups	778.842	1028	.758		
Total	782.477	1031			

Table 8 : ANOVA

A one-way between subjects ANOVA was conducted to compare if there is a similarity in the way Military Officers and their Wives from different age groups perceive the role played by internet applications on human abilities. There was no statistically significant difference between various age groups as determined by the one-way ANOVA $(F(3,1028) = 1.599, p = .188)$.

Findings

Summary Of Findings

The study assessed the use of the internet applications and the impact these applications have had on our abilities like communications, maintaining relationships, convenience etc. The hypothesis was formulated and an effort was made to analyse if the hypothesis formulated has been supported on analysis of the data. The results suggest that in the case of Military Officers and their wives, both sexes perceive similarly, the role played by internet applications on human abilities. Also there is a similarity in the way different age groups of Military Officers and their Wives perceive the role played by internet applications on human abilities. This seems to be so because of the positive impact of the internet applications on abilities and due to the convenience it provides.

Implications And Suggestions

The topic for study was to ascertain if in the case of Military Officers and their wives, whether both sexes and different age groups perceive similarly, the role played by internet applications on human abilities. The importance of this study lies in the fact that an attempt has been made to see how this specific population perceive the internet applications impacting their ability to communicate, maintain relationships and aid convenience and its relationship to human thought and feelings. The main implication of this study is that no special action is required to separately target any specific sex or age group to increase the internet usage as both sexes and people from different age groups perceive similarly, the role played by internet applications on human abilities.

Limitations

This study is not without its limitations. First, subjects of the study came from a population which is diverse and even though was sampled randomly there can still be an element of subjectivity and hence the sample may not be fully representative of the population. The sample is a little biased towards the males as the strength of males in proportionally much larger in the population under study than the females and the majority of the population falls in the age group of 30 to 34 and not spread out. Also even though the sample size is large enough, an increase to include more age groups would give a more generalised result for the study.

Conclusion

The study was carried out to ascertain if the Indian Military Officers and their wives perceive similarly, the role played by internet applications on human abilities. The review of literature in this area had shown that less research has been done on this topic and hence this study was undertaken. It was a questionnaire based study in which the variables were gender and age groups. The importance of this study lies in the fact that an attempt has been made to see how this specific population perceive the internet applications role on improving abilities. The results have shown that the perceptions of Indian Military Officers and their wives on the role played by internet applications are similar for both sexes and different age groups.

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