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Information Seeking Behavior of Undergraduates of Sri Lanka in Digital/ Online Environment

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Abstract:

Undergraduates have to get-up to date, quickly and accurate information mixing with digital/online tools to fulfill their information gap. The aim of this research was to find which factors affect to undergraduate online/digital information seeking behavior of Sri Lanka. The study is compiled with data gathered from questionnaires of 150 undergraduate from three Universities. Research mainly, focused on the models of Information seeking behavior and technology acceptance. Ease of use of technology, Usefulness of technology, Information need and information use were considered as independent variable and all of them are positively correlated and are identified as significant with the behavior of online information seeking. The relationship between Information need and information seeking behavior on digital/online environment shows the highest positive correlation coefficient. Undergraduates seek more information on line information on digital/ online environment. Therefore, traditional universities should provide more online facilities for undergraduates to improve their knowledge and skills.

Keywords: Information seeking behavior, usefulness of technology, Information use, Information need

Introduction

In university system Lectures, undergraduate and nonacademic staff use information for teaching learning and research. So there are many information seeking patterns. Many Librarians and information managers tend to study the information-seeking behavior of the users so that they can identify the information needs and seeking patterns the users maintain and then can design and implement information services to satisfy their requirements. Undergraduates use Digital/Online recourses to their day to day life. According to initial survey 86% undergraduates use personal computers, 80% use personal Internet connection and 60% undergraduates use digital/Online resources for their academic purpose.

The objective of this paper is to explore the nature and patterns of Information Seeking Behavior of Undergraduates of Sri Lanka in Digital/ Online Environment. Attempts are made to investigate the information needs towards the curriculum related activities, research and personal matters. The study also attempts to identify the purpose of information seeking, the satisfaction provided by the information sources and services available in the Digital/ Online, and the problems the users encounter in their information behavior. Emphasis is made on investigating the effectiveness of information services related to undergraduate studies in the university system of Sri Lanka.

Back Ground of the study

Development of the technology impacts on education particularly on university education. Universities around the world Advancement in technology brings major impacts on education and many universities around the world are expanding their investment in information technology (IT), and specifically the Internet, and are actively promoting Internet use in university education.

There are fifteen (15) universities in Sri Lanka. According to UGC (2010) data there are 21815 students have been admitted in the year 2011, 14187 students are in postgraduate studies in year 2010. Today majority of Faculties in the universities have computer networked which connected to the Internet through leased lines. Through an initial survey, it is found that considerable amount students of the universities use online data through these network resources and through other e-resources available.

A number of studies were carried out to find out the information seeking behavior of students in the world. However, a very few studies focused in information seeking behavior in the digital environment, particular in the Sri Lankan context. Therefore, this study will make an attempt to fill this gap by examining the online information seeking behavior of the students of the universities in Sri Lanka and also, identifying the hindrance in seeking the information from e-resources by the students.

Research problem

The university academic community is dealing with higher education that comprises of teaching, learning, and research. Undergraduates are seeking information for their academic activates and day to day purpose. They hardly find time for seeking information from Digital/online sources because of their busy class room environment. On the other hand, Digital/online sources supply plenty of various kind of information, especially on the web based resources. Therefore, the academic community is used to find information through the web. If information seekers desire to use online/Digital sources they can save time.

In literature, separate models available in technology acceptance and information seeking behaviors such as TAM model for technology acceptance by originally Davis in 1986 and later a lot of extended models also, information behavior models like Wilson (1997 and 1999). But, it is hardly to find information seeking behavior models for digital/ on line environment. Therefore, in this paper, make a model combining technology acceptance and information seeking behavior and test it for undergraduates of Sri Lankan universities.

Methodology

The approach for this study will be a quantitative which includes using numerical methods and statistical tools for collecting, analyzing, interpreting, and presenting of data. The scope of the research study is limited to the 150 students of the local University system, selecting three (03) universities and at least fifty (50) students of each university and data will be collected using structured questionnaire. The construction of the questionnaire is basically based on the questions used by past similar research studies. The questionnaire consists with two major parts and out of which the first part is reserved for collecting the demographics of the respondents and the second part for the gathering of data relating to research variables. To ensure the reliability and the validity of the research instrument, a pilot survey was carried out and the questionnaire was adjusted accordingly with correct wording and logical ordering of the questions. The research variables are limited to information need, information use, useful of technology and ease use of technology.

The First part of the questionnaire includes demographic information and facilities of digital/online information. The second part of the questionnaire gathered data of research variable so that use five point scale on the "Likert Model" has been constructed. The SPSS for Windows software program (Version 16.0) was used for the analysis of the collected data and the following statistical analysis were used. The data for the study were analyzed with two stage procedures. Univariate analysis was used to describe the demographic features of the respondents. The multivariate analysis was applied to investigate the relationships exist between and among the selected research variables.

Literature Review

Online/Digital resources have become one of the most important and integral information sources for human lives and work. Online/Digital resources become a key component of information access. Uttor (1999) defined information as data value in

planning, decision making and evaluation of any programmed and further, told that it is a data that have been subjected to some processing functions capable of answering user's query be it recorded, summarized, or simply collected that would help decision making. The researcher concluded that information is required in man's daily activities be it in school, play, or work situation.

Researchers have given various definitions of information behavior. Some defined the term based on the general model of information behavior developed by (Wilson 1997), where he posited that a general model of information behavior needs to include at least three elements: (i) an information need and its drives, the factors that give rise to an individual's perception of need; (ii) the factors that affect the individuals response to the perception of need; and, (iii) the processes or actions involved in that response. According to Taylor (1991) information is the product of certain element of the information use environment. The element according to him are: the assumptions, formerly learned or not, made by a defined set of people concerning the nature of their work; the kinds and structure of the problems deemed important and typical by this set of people; the constraints and opportunities of typical environments within which any group or sub-group of this set of people operates and work; and the conscious perhaps unconscious, assumptions made as to what constitutes a solution, or better said, a resolution of problems, and what makes information useful and valuable in their contexts. He concluded based on this definition that information behavior of different groups of people also is different.

Ikoja-Odongo and Ocholla (2004) described information seeking as a process that requires an information seekers, or what might be called ''personal information structures' 'such as a person's cognitive abilities, his or her knowledge, skills in relation to the problem or task domain, knowledge and skills specific to a system and knowledge and skills regarding information seeking.

Further, we are living in the information age. The term "Information Age" has been used to represent the impacts of Information and Communication Technology (ICT) on every aspect of life. Baby, et al (2000) has mentioned that twentieth century witnessed an "information explosion" owing to the exponential growth of printed material every minute at the global level. The growth rate of publication is greater in science and technology than that of social sciences.

When use of information, seeking information; it is very useful accept the technology for online/ digital environment. Initially, Davis (1986) has introduced the Technology Acceptance Model (TAM) as shown in the Figure 1, and it has been used many ICT related studies. Davis again consider the same model and discussed the parameters perceived usefulness and Perceived ease of use have been discussed and defined by several researches as the "Perceived usefulness referring to the degree to which a person believes that using a particular system would enhance his/her job performance; and Perceived ease of use referring to the degree to which a person believes that using a particular system would be free from effort".

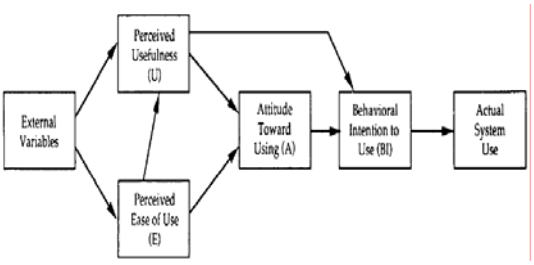

Figure 1 – Technology Acceptance Model (TAM) (Davis, F. D. (1993))

Mainly considering the two theoretical frameworks, Technology Acceptance Models and Information behavior models research evaluated the using only four following independent variables. Independent variables "Ease of use of technology, Usefulness of technology, Information need and information use" were measured with the relationship of information seeking behavior on digital/ online environment and developed the following research model.

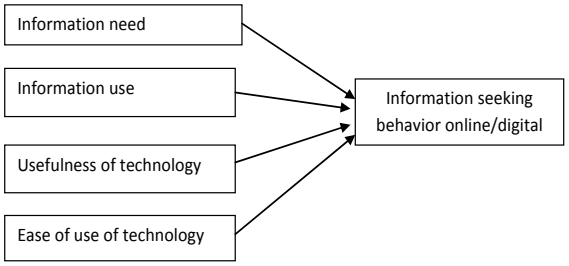

Figure 2: Proposed Research Model

Results and discussion

The results are based on the gathered data from the questionnaires. There are four dependent variable and use information seeking behavior as dependent variable. All the cronbach's coefficient alphas for the different constructs were computed using the reliability procedure in SPSS alpha values for the ariables are greater than seven (07) hence summated scales is good for analysis.

Table 1- Alpha value of variables

Variables	**Alpha Value**
Perceived Ease of Use	.768
Perceived Usefulness/ rewards	.754
Use of Digital/ online information	.702
Need of Digital/ online information	.702
Information Seeking Behavior of Digital/online information	.731

Demographic Distribution of Respondents

Among the respondents, there were 65 males and 85 females representing 43.3% and 56.7% respectively in the total number. Among them 106 are following from special degrees and rest 44 from following general degree programs. 100 undergraduates are having personal computers representing 66.7% and 50 undergraduates representing 33.3% of not possessing their own personal computer. According analysis, 55.3% undergraduates use any kind of online information daily and 36% of undergraduates use one (01) hour per day. Only a 56% of the undergraduates satisfy the Internet availability and 43% of undergraduates are only satisfied the speed of the Internet connection of the Universities.

Table 2–Relationship of the research variables

	Perceived Ease of Use	Perceived Usefulness/ rewards	Information Use	Information need	Digital/ Online Information seeking behavior
Perceived Ease of Use	1	r=0.558** p=0.000	r=0.575** p=0.000	r=0.407** p=0.000	r=0.590** p=0.000
Perceived Usefulness/ rewards	r=0.558** p=0.000	1	r=0.591** p=0.000	r=0.545** P=0.000	r=0.676** p=0.000
Information Use	r=0.575** p=0.000	r=0.591** p=0.000	1	r=0.722* p=0.000	r=0.668** p=0.000
Information need	r=0.407** p=0.000	r=0.545** P=0.000	r=0.722* p=0.000	1	r=0.782** p=0.000
Digital/Online Information seeking behavior	r=0.590** p=0.000	r=0.676* p=0.000	r=0.668** p=0.000	r=0.782** p=0.000	1

**. Correlation is significant at the 0.01 level (2-tailed)

The above Table shows the summary of the correlation coefficients for main relationships of the research variables. According to the table, all the variable relationships are positively correlated and are identified as significant within 0.01 level of confidence. Further, all the independent variables Ease of use, Usefulness, Information use and Information need show the positive relationship with the dependent variable Information seeking behavior of undergraduate of traditional local universities since r values are greater than 0.5 and p values less than 0.05 . The relationship between Information need and information seeking behavior on digital/ online environment shows the highest positive correlation coefficient (r=0.782,

p=0.00). It further explains that, when undergraduate need information he/ she comparatively seek more information on line information on digital/ online environment.

Table 3:Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.858[a]	.736	.728	.29928

Predictors: (Constant), Information Need, Ease of use, Usefulness, Information use

According to the summary table adjusted R square is 0.728 which suggests that predictors, Information Need, Ease of use, Usefulness, information use has explained 72.8% of information seeking behavior on Digital/ Online environment of undergraduates.

Conclusion and recommendation

The focus of this study was to evaluate the Digital/online information seeking behavior of undergraduates of Sri Lanka. So that data collected in three universities. It was expected to identify factors effecting digital/online seeking behavior. According to analysis 66.7% undergraduates use personal computer. The result claimed that 55.3% undergraduates' daily used internet. Within that percent 36% of respondent spend 1 hour per day. 56% satisfied internet availability in the universities.56.7% of respondents dissatisfy internet speed of the university system.

There is significant relationship between Ease of use of technology and Digital/Online Information seeking behavior (p=0.000) as well as positive moderate relationship also has among these variable (r = 0.590). Those result show that easy to learn to use digital/online information, easy to get information from the internet, easy to become skillful internet user, students have to submit assignment digital format and easy to get information from online than getting information from text book.

According to analysis shows that significant relationship between Usefulness of technology and Digital/Online Information seeking behavior (p = 0.000) as well as positive moderate relationship also has among these variables (r = 0.676). Those results show that digital/online information improves undergraduates' knowledge, latest information the quality of assignment and undergraduates can use digital/online information around the clock.

According to analysis shows that significant relationship between information Use from Digital/ online information and Digital/Online Information seeking behavior (p= 0.000) as well as positive moderate relationship also has among these variables (r=0.668). Those results show that undergraduates use digital/online information for their knowledge.

An analysis shows that significant relationship between Need of Digital/ online information and Digital/Online Information seeking behavior (p=0.000) as well as positive moderate relationship also has among these variables (r = 0.782). Those results show that undergraduates need digital/online information for their academic purpose, need keep up to date information.

More, it can conclude that all the independent variables relationships are positively correlated and are identified as significant within 0.01 level of confidence. This means that undergraduates use or having a behavior of seeking information when they want to use needed information. Further, they use above needed information when they perceive it is easy to get find useful information. The relationship between Information need and information seeking behavior on digital/ online environment shows the highest positive correlation coefficient (r=0.782, p=0.00). It further explains that, when undergraduate need information he/ she comparatively seek more information on line information on digital/ online environment.

Finally, it is recommended that universities should motivate researchers to do research section of digital/online information seeking behavior of undergraduates. Day to day update technologies most of universities not provide enough Wi-Fi facility. And also library and computer laborites are closed at six a clock. That also directly affects undergraduate digital/online information

seeking behavior. Government should investment considerable investment to improve computer lab facility. And also should increase internet speed in the universities especially in the Rajarata University.

If can give financial facility to get personal computer/ Laptop to undergraduate, it will reason to motivate use of online/digital information. Considerable undergraduates percentage don't know find relevant information form Internet so if can hold workshops to give knowledge.

References

Baby, et al. (2000). Changing trends in library and information science. Modern Trends In Information Technology.

Davis, F. D., User acceptance of Information Technology: System characteristics, user perceptions and behavioural impacts. Man - Machine Studies. (1993) 38, 475-487

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance information technology.MIS Quarterly, 13 (3), 319–339.

Ikoja-Odogo, R &Ocholla, D.N. (2004).Information-seeking behavior of the informal sector entrepreneurs: The Uganda Experience. Libri 54, pp. 54-66

Taylor, R.S. (1991).Information use environment. In Brebda Dervin & Melvin J. Voigt (Eds).Progress in communication sciences. Norwood, NJ: Ablex 10, 217- 225.

UGC data (2010), From http://www.ugc.ac.lk/downloads/statistics/stat_2010/Chapter3.pdf, Accessed on 27th May, 2012

Uttor, J. (1999).The role of law libraries in a democratic culture. A paper presented at The 1999 NLA National Conference and AGM.Aug.15th-20th.

Wilson, T.D. (1997a).Information behaviour. An interdisciplinary perspective. In P.Vakkari, R. Savolainen & B. Dervin (Eds) Information seeking in context of. Proceeding of an international conference on research in information needs, seeking and use in different contexts 14-15, August, 1996, Tampere, Finland. London: Taylor Graham.

Wilson, T.D. (1999) "Models in information behavior research" Journal of Documentation, **55**(3) 249-270 [Available at http://informationr.net/tdw/publ/papers/1999JDoc.html