UTILISATION PATTERN OF ICT (INFORMATION COMMUNICATION TECHNOLOGY) AMONG UNDERGRADUATE VETERINARY STUDENTS IN SOUTHERN STATES OF INDIA

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ABSTRACT

A study was undertaken with the objective of assessing the utilisation pattern of ICT (Information Communication Technology) among undergraduate veterinary students in southern states of India. Data were collected from 248 final year undergraduate students of 12 veterinary colleges in five southern states of India viz. Tamil Nadu, Kerala, Karnataka Andhra Pradesh and Telangana through pretested questionnaire. The findings of the study revealed that majority of the students studied had 3-4 years of experience in using internet and accessed internet through mobile phone (61.29%). One-third (33.06%) of the students used internet 2-3 days in a week for academic activity while, 30.65% used internet every day for personal activity. The study revealed that students used internet mainly for the preparation of assignments (97.58%). The major problems faced by the students in using ICT tools were slow speed of internet (77.82%) and inadequate number of computers (75.81%) in the institutions. It could be concluded that veterinary students had accessed substantial information technology resources and had knowledge towards computer and internet. Provision of structured information technology training for veterinary students would help them to acquire necessary skills to maximise the utilisation of online veterinary resources.

Key Words*:* ICT, veterinary, students, utilisation, internet, e-learning.

INTRODUCTION

The use of ICT in all spheres of human endeavour has become increasingly evident over the past decade, with people of all ages making use of computers and internet to interact, communicate and do business on a daily basis (Louw and Hanmer, 2002). ICT can create new opportunities to bridge the gap between information have and have not's in the developing countries. Globalisation and technological change process have accelerated in tandem over the past fifteen years and it created a new global economy powered by technology, fuelled by information and driven by knowledge. The emergence of the knowledge driven economy has tremendous influence over

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the educational institutions which has the responsibility to develop human resources for ever increasing demand of the society, country and the world.

All over the world, the higher education institutes are continually undergoing significant changes, mostly in response to the emerging development brought about by the impact of ICT. They have begun to realise how to strategically position the ICT to ensure greatest positive effect on university success (Romaniello *et al*., 2010). Many of the educational institutions have adopted the components of ICT to facilitate the students with access to the maximum resources for curriculum. Veterinary science is not an exception to the above trend. In academic activities, problem and case based learning by using ICTs to aid students in accumulating knowledge and to help them how to think and solve problems. Further, strategies to integrate ICT into veterinary education system must consider their specific utilisation of ICT tools. Against this backdrop, the present study was undertaken to assess the utilisation pattern of ICT among undergraduate veterinary students.

MATERIALS AND METHODS

Exploratory research design was followed in this study. The study was carried out among final year undergraduate students of 12 veterinary colleges in five southern states of India viz. Tamil Nadu, Kerala, Karnataka, Andhra Pradesh and Telangana. A sampling frame was constructed from the students registered for final year from all the selected colleges and the total strength of final year students of all the twelve colleges were 694. From this sampling frame, 248 students were selected using proportionate random sampling method. A well structured and pretested questionnaire was used to elicit the data from the respondents. Data were collected personally from the respondents from January 2014 to April 2014. Appropriate statistical tools were employed to analyse the data and interpretation were made out based on the results of the analysis.

RESULTS AND DISCUSSION

Utilisation pattern of internet

More than two-fifth of the students (43.15%) opined that their knowledge level in internet usage is good followed by very good (21.37%), excellent (13.71%), satisfactory (10.89%), fair (9.27%) and poor (1.61%) (Table 1). This finding contradicts with the finding of Ravi and Isthari (2011) they observed that about half of the research students of Hyderabad University had average knowledge. More than three-fifth (61.29%) of the students acquired internet skills through self learning followed by guidance from friends (53.63%). This finding gains support from the finding of Loan (2011) who reported that the students learned internet by self instruction through trial and error and differs with the finding of Thanuskodi (2013) who observed that more than half of the rural students in India acquired internet skill through training from college.

Table 1. Utilisation pattern of internet (n=248)

S. No	Category	Frequency	Percentage
1	**Knowledge in internet**		
	Excellent	34	13.71
	Very good	53	21.37
	Good	107	43.15
	Fair	23	9.27
	Satisfactory	27	10.89
	Poor	4	1.61
2	**Mode of acquiring internet skills***		
	Self learning	152	61.29
	Training courses	17	6.86
	Guidance from friends	133	53.63
	Guidance from relatives	18	7.26
	Guidance from college staff	13	5.24
	School education	7	2.82
3	**Experience in using internet**		
	Less than one year	11	4.43
	1-2 years	42	16.94
	3-4 years	86	34.68
	5-6 years	53	21.37
	Above 6 years	56	22.58
4	**Source of Internet access***		
	Through mobile phone	152	61.29
	Through personal computer	57	22.98
	Computer centre in the institute	112	45.16
	Through private cyber cafe	41	16.53
	Institution library	90	36.29
	In hostel	17	6.86
5	**Frequency of use for academic activity**		
	Every day	45	18.15
	2-3 days in a week	82	33.06
	Once in a week	52	20.97
	Once in a month	17	6.85
	Occasionally	52	20.97

6	**Frequency of use for personal activity**		
	Every day	76	30.65
	2-3 days in a week	64	25.81
	Once in a week	34	13.71
	Once in a month	17	6.85
	Occasionally	57	22.98
7	**Purpose of using internet***		
	Preparing assignment	242	97.58
	Downloading course materials	219	88.31
	Research project	75	30.24
	For getting information regarding treatment	183	73.79
	Job search	87	35.08
	Mere browsing	87	35.08
	Sending and receiving mails	189	76.21
	Online shopping	121	48.79
	Downloading softwares	139	56.05
	News and sports update	153	61.69
	Playing games	123	49.60
	For watching movies and video songs	164	66.13
	Uploading	111	44.76
	Chatting	160	64.52
	Pornography	69	27.82
8	**Benefit of using internet over conventional learning materials***		
	Time saving	197	79.44
	Time consuming	45	18.15
	Easy to use	204	82.26
	Difficult in use	23	9.27
	More informative	200	80.65
	Less informative	30	12.10
	More expensive	107	43.15
	Less expensive	89	35.89
	More useful	185	74.60
	Less useful	28	11.29
	More preferred	156	62.90
	Less preferred	59	23.79
9	**Usage of computer and internet in veterinary education**		
	Needed	240	96.77
	Not needed	8	3.23

*Multiple response

Just above one-third (34.68%) of the students had experience of 3-4 years in using internet, followed by above 6 years (22.58%), 5-6 years (21.37%), 1-2 years (16.94%) and less than one year (4.43%). This finding contradicts with the finding of Thanuskodi (2013). Most of the students (61.29%) accessed internet through mobile phones followed by institution's computer centre (45.16%), institution library (36.29%), personal computer (22.98%), private cyber cafe (16.53%) and hostel (6.86%). The students informed that mostly they are using mobile phone for accessing social network sites and this might be the reason for using mobile phone as a source of internet access. This finding is in accordance with the finding of Jato and Oresiri (2013) who noticed that 63.12% of Nigerian students accessed internet through mobile phone.

One-third of the students (33.06%) used internet 2-3 days in a week for academic activity but 30.65% used internet every day for personal activity. The main purpose of using internet among students was preparing assignments (97.58%) followed by downloading course materials (88.31%), sending and receiving mails (76.21%), getting information regarding treatment (73.79 %), watching movies and video songs (66.13%), chatting (64.52 %), news and sports update (61.69%) and downloading software's (56.05%).

More than three-fourth of the students opined that internet was easy to use (82.26 %), more informative (80.65%) time saving (79.44%) and more useful (74.60%) than conventional learning materials. Further, overwhelming majority of the students (96.77%) felt that the computer and internet was needed in veterinary education.

The students had good knowledge and experience in using internet and it helps to keep oneself abreast of the latest developments in veterinary education. Hence, introduction of online modules in veterinary education pave the way for excellence in learning among students.

Utilisation pattern of e-books

Friends were the major source of awareness for half of the students (49.60%) in utilisation of e-books. Three-fourth (74.20%) of the respondents were not regularly using e-books. Among the regular users, 46.88% used monthly and occasionally, 34.37% and 18.75% of the students used e-books weekly and daily respectively (Table 2). The major reasons cited by the students for not using e-books were preference for paper books(55.98%), no interest (30.98%) and little knowledge on how to use (29.35%). Ismail and Zainab (2005) also reported that preference for paper books was the major reason for not using e-books.

Table 2. Utilisation pattern of e-books (n = 248)

S. No	Category	Frequency	Percentage
1	**Source of awareness of e-books***		
	Friends	123	49.60
	College staff	71	28.63
	Web sites	61	24.60
	Librarians	50	20.16
	Others	16	6.45
2	**Regularity in use of e-books**		
	Regular	64	25.80
	Not regular	184	74.20
a	**If regularly used, frequency of use**		
	Daily	12	18.75
	Weekly	22	34.37
	Monthly	15	23.44
	Occasionally	15	23.44
b	**If not regular, reasons for not using e-books***		
	Prefer paper books	103	55.98
	No internet connection	38	20.65
	No interest	57	30.98
	Little knowledge on how to use	54	29.35
	Inconvenient	43	23.37
	Difficult to browse and read	49	26.63
	Need special software	43	23.37
	Physical problems	12	6.52

*Multiple response

E-books are the recent addition to paper books and there is an increasing awareness among students on e-books. The less frequent usage of e-books indicates that it has not been fully explored as potential learning tool. The learning materials of veterinary education should be available in the form of e-books and it would encourage the use of e-books among students.

Usage of e-learning vet website

The e-learning vet website was developed by Tami Nadu Veterinary and Animal Sciences University and launched in the year 2009 - 10 to cater the needs of undergraduate veterinary students. The semester wise course contents for all the courses in B.V.Sc & A.H degree is available in text, power point and voice over format. The e-learning vet website was known to 91.53% of the students and the source of awareness was mainly teachers (51.54%) and friends (42.73%). This was rarely used by more than two-fifth of the students (42.73%). Nevertheless, more than one-fourth (28.64%) used it weekly while 18.50 and 9.25% used monthly and daily respectively (Table 3).

Table 3. Usage of e-learningvet website (n= 248)

S. No	Category	Frequency	Percentage
1	**Awareness regarding e-learning vet website**		
	Aware	227	91.53
	Not aware	21	8.47
2	**Source of awareness***		
	Library sources	80	35.24
	Teachers	117	51.54
	Friends / other students	97	42.73
	Accidental browsing in the net	15	6.61
	Any other	3	1.32
3	**Frequency of use**		
	Daily	21	9.25
	Weekly	65	28.64
	Monthly	42	18.50
	Rarely	97	42.73
	Never	2	0.88
4	**Usefulness of material**		
	Greater extent	144	63.44
	Smaller extent	81	35.68
	Not at all useful	2	0.88
5	**Satisfaction**		
	Highly satisfied	29	12.78
	Satisfied	175	77.09
	Less satisfied	22	9.69
	Not satisfied	1	0.44

*Multiple response

Nearly two-third (63.44%) of the students felt that the e-learning materials were useful to a greater extent and 77.09% were satisfied in using e-learning materials. The results indicate that the students' in veterinary education is being benefitted to a greater extent by the e-learning vet materials.

Problems faced by the students in using ICT tools

The problems faced by the students in using ICT tools were analysed and presented in Table 4. The first and foremost problem experienced by the students was very slow internet speed (77.82%). The other important problems faced by the students were inadequate number of PC in lab (75.81%), slow speed of PC (75.00%), unfamiliarity with search strategies (66.13%) and retrieval of specific information difficult (62.10%). Upgrading the processor speed, increasing the bandwidth for internet connection and increasing the numbers of PC would solve the problems of students in using ICT tools. Formal training to students in search strategies and retrieval of specific information would improve the utilisation of ICT and also enhances the students' performance.

Table 4. Problems faced by the students in using ICT tools (n=248)

S. No	Problems	Total		Rank
		Frequency*	Percentage	
1	Slow speed of PC	186	75.00	III
2	Inadequate number of PC in lab	188	75.81	II
3	Lack of time to use e-resources	142	57.26	VII
4	Frequent electricity failure	104	41.94	X
5	No computer lab	20	8.06	XIII
6	No internet connectivity	51	20.56	XII
7	No campus computer network	82	33.06	XI
8	Very slow internet speed	193	77.82	I
9	Restricted hours of usage	139	56.05	VIII
10	Lack of operational skills	117	47.18	IX
11	Limited accessibility to database through use of passwords	146	58.87	VI
12	Unfamiliarity with search strategies	164	66.13	IV
13	Retrieval of specific information difficult	154	62.10	V

*Multiple response

CONCLUSION

Veterinary students had access to substantial information technology resources and had knowledge towards computer and internet. Provision of structured information technology training for veterinary students would help them to acquire necessary skills to maximise the utilisation of online veterinary resources.

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