Usage of ICT by Government Medical College Students in Tamil Nadu: A Study

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Abstract

This paper is an attempt to investigate the Usage of ICTfor Government Medical College students in Tamil Nadu. For this purpose a survey was carried out using questionnaire method. Out of the 1600 Questionnaire the 1250 Questionnaire were collected (78.12%) of the total respondents. While selecting samples, stratified random sampling method has been adopted with a view to give relative weightage to the respondents of different categories. The findings of the category wise distribution of respondent's awareness of ICT based resources and services reveal the fact that, 86.61 percent of the analysis has been made for 1250 respondents, which included 926 male and 324 Female respondents with regard to gender and 800 Graduate Students, 450 Diploma Students with regard to academic status from the selected six Government Medical College in the Southern part of Tamil Nadu.

Keywords

Utilization; ICT-Resource;, ICT services; Medical College; Students

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Introduction

The combination of information and communication technologies has created ICT, possibly one of the most powerful technologies devised by humanity. But disparities exist in access to, and use of ICT between countries and between groups within countries, a phenomenon popularly referred to as the digital divide. The digital divide is not one dimensional it involves a complicated patchwork of varying levels of ICT access, basic ICT usage, and ICT applications among countries and peoples(bridges.org, 2001). Digital divide covers a spectrum of socio-economic factors within countries and it reflects the existing inequalities in society. Income, geographical location, education, age, gender are some of the factors that put people at different ends of the divide. While the impact of ICT on sectors such as banking, tourism, medicine, engineering etc. have been enormous, the uptake of ICT in education is fraught with difficulties (Oliver, 2002).Lack of funding, training among practitioners, motivation and perceived need among teachers to adopt ICT as teaching tools impede the required uptake of ICT in education (Starr, 2001).In India, the need for reforms in education by harnessing new ICTs is increasingly being accepted as essential by universities and cultural organisations across India. The National Policy for ICT in Education, under formulation, highlights the need to integrate ICT as a subject in the curriculum as well as to strengthen the overall teaching learning process. Open and distance education systems in India use EDUSAT and other TV and radio channels for delivering content. But ICT is yet to be used significantly for the delivery of content.

ICT Today

In modern society ICT is ever-present, with over three billion people having access to the Internet. With approximately 8 out of 10 Internet users owning a Smartphone, information and data are increasing by leaps and bounds. This rapid growth, especially in developing countries, has led ICT to become a keystone of everyday life, in which life without some facet of technology renders most of clerical, work and routine tasks dysfunctional. The most recent authoritative data, released in 2014, shows "that Internet use continues to grow steadily, at 6.6% globally in 2014 (3.3% in developed countries, 8.7% in the developing world); the number of Internet users in developing countries has doubled in five

years (2009-2014), with two thirds of all people online now living in the developing world."

However, hurdles are still at large. "Of the 4.3 billion people not yet using the Internet, 90% live in developing countries. In the world's 42 Least Connected Countries (LCCs), which are home to 2.5 billion people, access to ICTs remains largely out of reach, particularly for these countries' large rural populations." ICT has yet to penetrate the remote areas of some countries, with many developing countries dearth of any type of Internet. This also includes the availability of telephone lines, particularly the availability of cellular coverage, and other forms of electronic transmission of data. The latest "Measuring the Information Society Report" cautiously stated that the increase in the aforementioned cellular data coverage is ostensible, as "many users have multiple subscriptions, with global growth figures sometimes translating into little real improvement in the level of connectivity of those at the very bottom of the pyramid; an estimated 450 million people worldwide live in places which are still out of reach of mobile cellular service."

Related Review of Literature

Razaand and Upadhyay (2006) A survey was carried out to examine the usage of ejournals by the researchers at Aligarh Muslim University. They used questionnaire method to find out purpose and place used by research scholars for using e-journals. The survey reveals that all the researchers are aware of e-journals in AMU. Many research scholars are consulting e-journals from their departmental labs and computer centers, not only for research purposes but also to update their own knowledge. Some problems like lack of training and slow downloading has been found and the researchers felt about the need for print journals as well as electronic journals .Asefeh and Nosrat (2007) carried a survey to investigate the relationships between awareness and use of digital resources among students in Isfahan University of Medical Sciences. A questionnaire was design with descriptive method was randomly used for survey. 250 users of the Medical libraries and information centers affiliated to Isfahan university of Medical Sciences were taken for survey. The results were founding the paper titled "Awareness and use of digital resources in the libraries of Isfahan University of Medical Sciences, Iran" that 70 percent of students were aware of digital resources, but 69 percent have used them; 62 percent were aware of offline databases and 19 percent were only using them through Central library LAN network. About 70 percent were aware of online databases, accessible via Central library web site and 53 percent have used them In total 87 percent of students felt that the available data met their information needs. Infrequent periodic orientation and lack of education on use of offline databases and fewer terminals connected to the server in the Central library, due to these factor students had less use offline databases. Users are faced with problems like low speed connectivity and shortage of hardware facilities.

Kanwal, Ameen (2008) studied the "Barriers in Collection Sharing among Libraries of Pakistan: University Library Managers' Viewpoint". A survey method was used to explore the barriers to collection sharing among the well-established chartered university libraries situated in the major cities of Pakistan. The survey followed a qualitative design based on an interview technique of data collection. Twenty chief/head librarians from five major cities of Pakistan were interviewed. In-depth, semi-structured interviews were conducted at the librarians' workplaces during 2003 to 2004. The results of the present study revealed that various technical, procedural, psychological, and behavioural barriers in achieving planned and meaningful collection-sharing (CS) programs still prevail. It suggests analyzing the possibilities, opportunities, and challenges of CS in the emerging paradigm.

Objectives of the Study

- To analyze the awareness of ICT based resources and services among the Graduate Students and the Diploma Students of the selected Government Medical Colleges in the Southern part of Tamil Nadu.
- To determine the level of satisfaction of ICT based resources and services among the Graduate Students and the Diploma Students of the selected Government Medical Colleges in the Southern part of Tamil Nadu.
- To identify the problems faced by the Graduate Students and the Diploma Students of the selected Government Medical Colleges in the Southern part of Tamil Nadu while accessing and using ICT based resources and services.

Methodology

This study attempts to examine the **Usage of ICT for Government Medical College Students in Tamil Nadu: A Study.** It is primarily a fact finding venture. The identified facts are cross-tabulated with the academic status background and gender background of the respondents. Thus it gives analytical orientation to this study and the design of this study is partly exploratory and partly analytical in nature.

Limitations

In Tamilnadu there are around 25 Government Medical colleges. The researcher has selected only 06 Government Medical colleges on the basis of their Geographical Location.ie., the Southern part of Tamil Nadu. The Researcher gave an emphasis on the Government Medical Colleges in the southern region of Tamil Nadu i.e. from Madurai to Kanyakumari. They are

1. Madurai Government Medical College
2. Thirunelveli Government Medical College
3. Thoothkudi Government Medical College
4. Kanayakumari Government Medical College
5. Theni Government Medical College
6. Sivagangai Government Medical College.

The findings of this study are applicable to the Graduate and Diploma students of Six Selected Government Medical Colleges in the Southern Part of Tamil Nadu and it does not represent the students of other institutions. To undertake the study in all institutions is not possible at the level of an individual researcher, due to constraints imposed by money, time, energy and efforts.

Data Analysis and Discussion:

Analysis of data is the ultimate step in research process. It is the link between raw data and significant results leading to conclusions. This process of analysis has to be result oriented.

Table 1: Sample Size of Respondents

Name of the Institutions	No. of Respondents	%
Madurai Government Medical College	375	30.00
Thirunelveli Government Medical College	350	28.00
Thoothkudi Government Medical College	175	14.00
Kanayakumari Government Medical College	121	09.68
Theni Government Medical College	151	12.08
Sivagangai Government Medical College	080	06.24
Total	**1250**	**100.00**

Out of the total 1250 respondents, 30.00 percent of them belong to the Madurai Government Medical College, 28.00 percent of them are selected from Thirunelveli Government Medical College and 14.00 percent of them are from Thoothkudi Government Medical College. Further, 9.68 per cent of the respondents belong to the Kanayakumari Government Medical College and 12.08 percent of them are drawn from Theni Government Medical College and 6.24 percent of them are from Sivagangai Government Medical College.

Table-.2 Distribution of Respondents according to Gender wise

Gender wise	No. of Respondents	Percentage
Male	926	74.08
Female	324	25.92
Total	**1250**	**100.0**

From the above table shows that it is inferred that 74.08 percent of the respondents are male and 25.92 percent of the respondents are female. So that it is concluded the majority of the respondents are male on the basis of gender. It shown in the below graph.

Table 3: Distribution of Respondents according to Age wise

Age wise	No. of Respondents	Percentage
Between 21-25	725	58.0
Between 26-30	105	8.4
Above 30	85	6.8
Total	**1250**	**100**

It is evident from the above table that 26.8 percent of the respondents are in the age group of Less than 20 years of age, 58 percent of the

respondents are in the age group of between 21 to 25 years of age group, 8.4 percent of the respondents are in the age group of between 26-30 years and 6.8 percent of the respondents are above 30 years. So it is concluded that majority of the respondents are between 21-25 age group.

From the above table 4 shows that it is inferred that 36.00 percent of the respondents are Diploma Students and 64.00 percent of the respondents are Graduate Students. So that it is concluded the majority of the respondents are Graduate Students on the basis of Category wise.

Table 4: Distribution of Respondents according to Category wise

Category wise	No. of	Percentage
Diploma Students	450	36.00
Graduate Students	800	64.00
Total	**1250**	**100.0**

Table 5: Category wise Distribution of Respondent's time spend in accessing ICT based resources and services

s No	Time Spend	No. of Respondents				Total	%
		Diploma Students	%	Graduate Students	%		
1	Less than one Hour	36	8.00	62	7.75	**98**	**7.84**
2	One Hour	161	35.78	246	30.75	**407**	**32.56**
3	More than one Hour	120	26.67	248	31.00	**368**	**29.44**
4	Two Hours	91	20.22	136	17.00	**227**	**18.16**
5	More than two Hours	42	9.33	108	13.50	**150**	**12.00**
Total		**450**	**100.00**	**800**	**100.00**	**1250**	**100.00**

A study in table -5 indicates the category wise distribution of respondent's time spend in accessing ICT based resources and services. It could be noted that out of 1250 respondents, 7.84 percent of them spend less than one hour per day, 32.56 percent of them spend one hour per day, 29.44 percent of them spend more then one hour per day, 18.16 percent of them spend two hours per day and 12.00 percent of them spend more than two hours per day.With regard to 450 Diploma Students, 35.78 percent of them spend one hour per day and 8.00 percent of them spend less than one hour per day. Among 800 Graduate Students, 31.00 percent of them spend more than one hour and 30.75 percent of them spend one hour per day for accessing ICT based resources and services.This can also be inferred from the below graph.

Table-5a : Anova Test for Category wise Distribution of Respondent's time spend in accessing ICT based resources and services

ANOVA						
Source of Variation	*SS*	***df***	*MS*	*F*	*P-value*	*F crit*
Rows	36103	4	9025.75	11.71035	0.017596	6.388233
Columns	12250	1	12250	15.89361	0.01631	7.708647
Error	3083	4	770.75			
Total	51436	9				

The F values is 11.71 which is greater than the table value 6.38 and therefore there is significant difference between the Graduate Students and Diploma Students with regarding to the time spend in accessing the ICT based resources and services. Hence the null hypothesis is Accepted with respect to category wise distribution of respondent's time spent in accessing ICT based resources and services.

Table -6: Category wise Distribution of Respondents level of satisfaction on using ICT based resources and services

sNo	User category	Highly satisfied	Satisfied	Some what satisfied	Dissatisfied	Highly Dissatisfied	Total
1	Diploma Students	51 (11.33)	162 (36.00)	214 (47.55)	15 (3.33)	8 (1.78)	450
2	Graduate students	72 (9.00)	322 (4025)	366 (45.75)	28 (3.50)	12 (1.50)	800
Total		123 (9.84)	484 (38.72)	580 (46.40)	43 (3.44)	20 (1.60)	1250

Table-6 shows the category wise distribution of respondent's level of satisfaction on using ICT based resources and services, it could be noted that out of 1250 respondents 123(9.84%) respondents are highly satisfied, 484(38.72%) respondents are satisfied,580(46.40%) respondents are somewhat satisfied,43(3.44%) respondents are dissatisfied and 20(1.60%) respondents are highly dissatisfied. With regard to 450 Diploma Students, 47.55 percent of them are somewhat satisfied and 1.78 percent of them are highly dissatisfied. Among the total number of 800 Graduate Students, 45.75 percent of them are somewhat satisfied and 1.50 percent of them are highly satisfied.

Table 7: Category wise Distribution of Respondent's Expertise Level in Using Computers

S.No	User Category	Complete Novice	To Some Extent	Expert	Total
1	Diploma Students	15(3.33)	361 (80.22)	74 (16.44)	**450**
2	Graduate Students	24 (3.00)	668 (83.50)	108 (13.50)	**800**
Total		39 (3.12)	1029 (82.32)	182 (14.56)	1250

Table-7 portrays the category wise distribution of respondent's expertise level in using computers. It could be noted that out of 1250 respondents from Medical colleges, 39(3.12%) respondents are complete novice, 1029(82.32%) respondents are expert to some extent and 182(14.56%) respondents are expert in using computers.Among the total number of 450 Diploma Students and 800 Graduate Students, 361(80.22%) Diploma Students and 668(83.50%) Graduate Students are experts to some extent and 15(3.33%) Diploma Students and 24(3.00%) Graduate Students are complete novice. It is observed from the above discussion that, 74 (16.44%) Diploma Students and 108 (13.50%) Graduate Students are experts in using computers.

Table -8: Gender wise Distribution of Respondent's Expertise Level in Using Computers.

sNo	Gender	Complete Novice	To Some Extent	Expert	Total
1	Male	12 (1.30)	799	115	**926**
2	Female	**27** (8.33)	230	67	**324**
Total		**39 (3.12)**	**1029**	**182**	**1250**

(Figures in Parentheses denote Percentage)

Table -8 shows the gender wise distribution of respondent's expertise level in using computers. Out of 926 male and 324 female respondents, 12(1.30%) male and 27(8.33%) female respondents are complete novice, 799(86.29%) male and 230(70.99%) female respondents are experts to some extent and 115(12.42%) male and 67(20.68%) female respondents are experts in using computers.

Table -9: Category wise Distribution of Respondents Hindrances faced while accessing ICT based resources and Services

Sl. No	ICT Resources & Services	User Category		Total
		Diploma Students	Graduate Students	
1	Slow access speed	185 (41.11)	283 (35.38)	468 (37.44)
2	Finding relevant information	71 (15.78)	109 (13.63)	180 (14.40)
3	Accessing full text	51 (11.33)	82 (10.25)	133 (10.64)
4	Read from computer	47 (10.44)	93 (11.63)	140 (11.20)
5	Excess retrieved information	52 (11.56)	107 (13.38)	159 (12.72)
6	Limited access	32 (7.11)	98 (12.25)	130 (10.40)

	terminal			
7	Others	12(2.67)	28 (3.50)	40 (3.20)
Total		450	800	1250

Table -9 shows the category wise distribution of respondents hindrances faced while accessing ICT based resources and services. Out of 1250 respondents 468 (37.44%) respondents faced slow access speed, 180 (14.40% respondents faced finding relevant information, 133 (10.64%) respondents faced accessing full text, 140 (11.20%) respondents faced read from computer, 159 (12.72%) respondents faced excess retrieved information, 130 (10.40%) respondents faced limited access terminal and 40 (3.20%) respondents faced other problems.With regard to 450 Diploma Students and 800 Graduate Students, 185 (41.11%) Diploma Students and 283 (35.38%) Graduate Students faced slow access speed and 12 (2.67%) Diploma Students and 28 (3.50%) Graduate Students faced other problems.

Table 9a: Anova Test for Category wise Distribution of Respondents Hindrances faced while accessing ICT based resources and services

ANOVA						
Source of	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Rows	8750	1	8750	24.63632	0.002543	5.987378
Columns	54639.86	6	9106.643	25.64048	0.0005	4.283866
Error	2131	6	355.1667			
Total	65520.86	13				

The F values is 24.63 which is greater than the table value 5.98 and therefore there is significant difference between the Graduate Students and Diploma Students with awareness of ICT based resources and services. Hence the hypothesis is accepted and with respect to category wise distribution of respondent's Hindrances faced while accessing ICT based resources and services.

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