



## **Information and Communication Technology (ICT) Utilisation Pattern by the Post-Graduate Students of Acharya N. G. Ranga Agricultural University**

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### **ABSTRACT**

An exploratory study was conducted with computer and internet applications of ICT. A total of 120 Post-graduate students were sampled for the study. 97.50 per cent of the PG students had their e-mail addresses, 49.17 per cent and 61.67 per cent accessed computer and internet at their hostels respectively, cent percent used google search engine, little more than two third used compact discs (69.17%) to store the data typed in computer or that collected from internet, cent percent of the respondents used Microsoft word for thesis related works, 97.50 per cent used power point slides to present seminars, little less than one fourth of the respondents used Microsoft excel to analyse research data, 94.17 per cent used e-mail to exchange personal information while, world wide web was used to get latest and detailed information on a topic (81.67%). More than half of the respondents expressed satisfaction with the ICT facilities provided by the university.

**Key words :** Computers, ICT, Internet, Post-Graduate, Students.

Information and Communication Technologies (ICTs) can be broadly interpreted as technologies that facilitate communication, processing and transmission of information by electronic means. Griffin (1988) is of the view that the core one and the most promising technology of information age is the computer. Computer with internet keep their users aware and informed. ICT in the present study refers to computer and internet.

Post Graduate (PG) students use computers and internet for various educational purposes. Computers are used for preparing class notes, assignments, seminars, to maintain research database, to analyze the research findings, prepare thesis and project reports. E-mail is used for communication of personal, educational and research information, while World Wide Web (WWW) is used to get latest and detailed information on a topic. Computer with internet keep their users aware and informed. Keeping in view the vast use of ICTs for the PG students, the university has provided a few computers with internet in all the colleges at lower prices of Rs.5/- per hour. University has also provided the PG students with free internet connection at hostels at College of Agriculture, Rajendranagar.

At this juncture an exploratory study was conducted at Acharya N. G. Ranga Agricultural University in the year 2009 to know the utilization pattern of ICTs. The use of computer was studied in terms of Microsoft word, power point slides and

Microsoft excel. The use of internet was studied in terms of e-mail and World Wide Web (WWW).

### **MATERIAL AND METHODS**

An exploratory research design was used for the study. The overall objective of the study was to understand the utilization pattern of ICTs by the PG students of Acharya N. G. Ranga Agricultural University. For the purpose of investigation 'PG student' is operationalised as a bonafide candidate of the university who has completed one year of study in M.Sc(Ag) or Ph.D(Ag). Postgraduate programme is offered at three colleges in the university i.e., College of Agriculture, Rajendranagar ; Agricultural college, Bapatla and S.V. Agricultural college, Tirupati. From the above three colleges, a total sample of 120 PG students comprising 86 M.Sc(Ag) and 34 Ph.D(Ag) students were selected for the study using proportionate random sampling. Data was collected using Questionnaire.

### **RESULTS AND DISCUSSION**

The findings are presented in 8 parts

1. ICT inventory
2. Place of access to ICTs
3. Search engines used by the PG students
4. Storage devices used by the PG students
5. Purpose of using ICTs
6. Satisfaction in using ICT facilities provided by the university
7. Barriers in using ICTs

Table 1. ICT inventory of respondent PG students (N=120)

Sl. No.	ICT inventory	F	%
1	Possess personal computer/laptop	57	47.50
2	Have personal internet connection	42	35.00
3	Have an e-mail ID	117	97.50

\*Multiple responses

F=Frequency

% =Percentage

Table 2. Distribution of respondent PG students based on place of access to ICTs

S.No.	ICT	Place of access					
		College		Hostel		Cyber cafe	
		F	%	F	%	F	%
1	Computer	32	26.67	59	49.17	29	24.17
2	Internet	26	21.67	74	61.67	20	16.67

Table 3. Distribution of respondent PG students based on use of search engines

Sl. No	Search engine	F	%	Rank
1	Yahoo	50	41.67	II
2	Google	120	100.00	I
3	Rediff	39	32.50	III
4	MSN	5	4.17	IV
5	Altavista	2	1.67	V

\*Multiple responses

8. Strategy for improving the ICT facilities in the university

### 1. ICT inventory

The information on inventory was collected in terms of possession of computer or laptop, internet and e-mail address (Table 1). 47.50 per cent possessed personal computers or laptop, 35.00 per cent had internet and 97.50 per cent had an e-mail ID.

### 2. Place of use of ICTs

Table 2 shows that a little less than half of the PG students used computers in the college hostel (49.17%), followed by college (26.67%) and cyber cafe (24.17%). Little more than three-fifth of the PG students used internet in hostel (61.67%), followed by college (21.67%) and cyber café (16.67%).

### 3. Search engines used by the PG students

The rank order of the search engines used by the PG students is depicted in Table 3. Google

search engine, followed by yahoo, rediff, MSN and altavista stood in the top five in the ascending rank order.

#### 4. Storage devices used by the PG students

The rank order of the storage devices used by the PG students is given in Table 4. Compact Discs (CDs), followed by Digital Video Disc (DVD), pen drive, floppy and external hard disc were listed in the top five in the ascending rank order.

#### 5. Purpose of using ICTs

Cent percent of the PG students used Microsoft word for thesis and its related works, followed by assignments and reports (97.50%) and to prepare classnotes (63.33%) as delineated in Table 5. A little less than cent percent of the PG students used power point slides to present seminars (97.50%), followed by assignments (93.33%) and class lessons (2.50%). A little less than one fourth of the students used Microsoft excel to analyse data related to research (23.33%), followed by to prepare charts/graphs from the data (20.00%) and to analyse data related to course work (10.83%).

E-mail was primarily used by many of the respondents to exchange personal information (94.17%), followed by to exchange educational or research information (35.00%) and to send research articles to publish in journals (11.67%). WWW was used to get latest and detailed information on a topic (81.67%), followed by to get research abstracts or reviews (74.17%), to read online journals and books (48.33%), to get photos and pictures of crops and pests (38.33%) and to download related power point slides (31.67%).

#### 6. Satisfaction in using ICTs

A little less than half of the respondents were satisfied (47.50%) with the ICT facilities provided by the university, followed by dis-satisfied (39.17%), undecided (7.50%) and very much dis-satisfied (5.83%) as represented in Table 6.

#### 7. Barriers in using ICTs

The barriers in using ICTs as perceived by PG students were ranked based on percentage. Slow access of internet followed by lack of ICT facility at department level to students, lack of expertise and skill in using ICT, lack of uninterrupted power supply, lack of personal ICT equipment and limited systems in college were the perceived barriers in the ascending rank order as seen in Table 7.

#### 8. Strategy for improving the ICT facilities in the university

With the above findings an attempt was made to develop a strategy to improve the ICT facilities in the university so that, the ICT utilization pattern of the PG students is improved. The university should acquire high-speed internet connection with maximum bandwidth to solve the problem of slow downloading. More number of latest configured computers with internet should be put in college computer centers for students use with extended timings. An attempt should be made by all the departments to provide one or two computers with internet to the PG students.

An e-learning center with necessary ICT equipment with required technical personnel should be established in each college of the University. The e-learning centre should give regular trainings and facilitate round the clock ICT guidance to the students. More efficient technical staff need to be appointed and they should be present in the college computer center as well as in college campuses for expert advice. They should possess hardware skills also.

Uninterrupted Power Supply (UPS) facility should be provided to the computers, so that they could use at times of power failure. University should make arrangements to provide interest free advances to the poor students to purchase personal computers / laptops.

National Agricultural Innovation Project under e-portal scheme is providing funds to Agricultural Colleges to develop and promote ICT in education. National Mission on Education through Information and Communication Technology is to extend computer infrastructure and connectivity to over 18000 colleges in the country. The university should make efforts to utilize the opportunity being provided by the central government.

Right now free internet facility is provided to PG hostel of Rajendranagar only, this facility should be extended to all other PG hostels in the university. Last but not least, there is an urgent need to undertake more studies across in the university covering different dimensions of ICT usage and to know the existing status more clearly. This would help the university administration to plan and organize the ICT facilities in a better way to improve the academic environment in the university. This will ultimately upscale the quality of university students and prepare them for better professionals in the field of agriculture.

Table 4. Distribution of respondent PG students based on use of storage devices.

Sl. No	Storage device	F	%	Rank
1	Compact disc (CD)	83	69.17	I
2	Digital Video Disc (DVD)	66	55.00	II
3	Floppy	10	8.33	IV
4	Pen drive	42	35.00	III
5	External hard disc	2	1.67	V

\*Multiple responses

Table 5. Distribution of respondent PG students based on purpose using ICTs.

Sl. No.	Purpose	F	%
<b>Microsoft word</b>			
1	Class notes	76	63.33
2	Assignments /Reports	117	97.50
3	Thesis and its related works	120	100.00
<b>Power point slides</b>			
1	Class lessons	3	2.50
2	Assignments	112	93.33
3	Seminars	117	97.50
<b>Microsoft excel</b>			
1	To analyse data related to research	28	23.33
2	To analyse data related to course work	13	10.83
3	To prepare charts/graphs from the data	24	20.00
<b>e-mail</b>			
1	To exchange personal information	113	94.17
2	To exchange educational or research information	42	35.00
3	To send research articles to publish in journals	14	11.67
<b>World Wide Web</b>			
1	To get latest and detailed information on a topic	98	81.67
2	To get research abstracts / reviews	89	74.17
3	To read online journals and books	58	48.33
4	To get photo and pictures of crops, pests, etc	46	38.33
5	To download related power point slides	38	31.67

Table 6. Distribution of respondent PG students based on the their satisfaction with the ICT facilities provided by the university

Sl. No	Category	F	%
1	Very much satisfied	-	-
2	Satisfied	57	47.50
3	Undecided	9	7.50
4	Dis-satisfied	47	39.17
5	Very much dis-satisfied	7	5.83

Table 7. Distribution of respondent PG students based on their perceived barriers in using ICTs

Sl. No	Barrier	F	%	Rank
1	Lack of ICT facility at department level to students	102	85.00	II
2	Lack of personal ICT equipment	77	64.17	V
3	Lack of expertise and skill in using ICT	95	79.17	III
4	Lack of uninterrupted power supply	85	70.83	IV
5	Slow access of internet	104	86.67	I
6	Limited systems in college	73	60.83	VI

#### LITERATURE CITED

**Griffin J 1988.** Computer assisted learning innovation as viewed by purchasers of computer software in secondary schools. *Journal of computer assisted learning*, 4(3): 150-161

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