

APPLICATION OF INFORMATION AND COMMUNICATION TECHNOLOGY BY POST GRADUATE STUDENTS FOR RESEARCH AND EDUCATION

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ABSTRACT

The study was conducted Dr. P.D.K.V. Post Graduate Institute, Akala on 150 post graduate students with an objective to find out knowledge, use and perception of the students about ICT. Findings indicated that there was lack of adequate ICT facility in the institute however, majority of the students had high knowledge about ICT and were using it for education and research purposes.

INTRODUCTION

Information and Communication Technology tools play an effective role in educational media. ICT use in the Agricultural Universities has increased and various professional bodies are now aiming at setting ICT standards for students and teachers. This is an important aspect of preparing students for their future in a complex knowledge based world.

The social, economic and employment relevance of the education imparted is helplessly blurred by poor teaching facility, poor infrastructural facility and ineffective teaching learning environment in most of the institutes. There is a serious need to look into these matters to improve agricultural education suiting to the farmers needs keeping in view and global demands. Quite a few institutes have provide ICT facilities for students in general and easy Internet accessibility to students. Presently there are large number of agricultural and allied website of which 44.60 per cent are on marketing, 28.00 per cent, research, 29.30 per cent on career and opportunities and soon. There are 16 search engines for worldwide access to agricultural information (Ingle, 2005).

The study was undertaken with an objective to find out the knowledge level of the students about ICT and extent of use and utility perception of students about ICT.

RESEARCH METHODOLOGY

The present study was conducted at Dr. P.D.K.V. Post Graduate Institute, Akola. There are 14 departments in Post Graduate Institute. The study was carried out in these departments. The students studying in II year for PG programme have been studied. A list of post graduate students was obtained from Post Graduate Institute. 169 students were considered for the study, out of this 150 could be contacted. The students were contacted at their department or at the PG hostel. Interview technique was used for data collection. The data were then tabulated, analysed and interpreted.

RESULTS AND DISCUSSION

(1) Availability of ICT gadgetry

It is expected that availability of ICT facilities is important factor for knowledge and extent of use of ICT. Hence availability of ICT gadgetry was considered for study.

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Table 1. Distribution of respondents according to availability of ICT gadgetry

S. No.	Availability of ICT gadgetry	Respondents	
		Number	Percentage
1.	Low	31	20.67
2.	Moderate	84	54.00
3.	High	35	25.33
Total		150	100.00

Mean = 64.58 SD = 22.49

From Table 1 it is observed that relatively high proportion of the student respondents 54.00 per cent had moderate availability of ICT material

followed by 25.33 per cent respondent students had high availability of ICT gadgetry and 20.67 per cent of the respondent students had low availability of ICT material.

So it is concluded that nearly one fifth of the students had inadequate ICT facilities in their department or elsewhere from where they can use the ICT for their studies. Non-availability of ICT facilities can be rectified by the concerned organizations for better access to education.

Table 2 shows that out of the total 30 facilities identified and needed by the PG students for the study and research, maximum facilities have been

Table 2. Subject wise distribution of respondents according to availability of gadgetry extent of knowledge, use and utility perception of ICT

S. No.	Subject / Department	Availability of gadgetry	Extent of Knowledge	Extent of use	Utility perception
1	Agronomy	48.11	82.33	75.00	10.36
2	ACSS	56.41	84.61	85.00	70.51
3	AHDS	23.02	56.41	50.00	35.89
4	Botany	51.28	89.74	90.00	76.66
5	Agril. Economics	58.97	86.55	85.00	78.73
6	Agril. Entomology	59.84	88.61	90.00	89.73
7	Extension Education	84.67	87.17	85.00	79.10
8	Horticulture	35.89	84.05	35.00	69.48
9	Plant pathology	53.84	78.17	75.00	71.66
10	Renewable Energy Sources	49.48	82.33	75.00	65.41
11	Agril. Processing Engg.	56.41	85.00	80.00	71.66
12	Soil Water Conservation	28.20	76.92	70.00	50.00
13	Farm power machinery	61.53	87.03	85.00	73.33
14	Irrigation Drainage Engineering	25.64	64.10	70.00	65.89

found to be available in the department of Extension Education i.e. 84.67 per cent. It is obvious that because the courses related to ICT and communication are taught in this department. The availability of the facility in other department was relatively less e.g. Farm Power Machinery (61.30%), Agricultural Entomology (59.84%), Agricultural Economics (58.97%), Agril. Processing Engineering and Agril. Chemistry Soil Science (56.41%), Renewable Energy Sources (49.46%) and Horticulture (35.84%). Availability lowest was found of ICT facilities in Animal Husbandry and Dairy

Science (23.2%). As regards extent of knowledge possess by the respondents the students from most of the departments had relatively higher knowledge index ranging from 76.92 to 89.74 per cent. The knowledge index of the students from Department of Irrigation and Drainage Engineering and Animal Husbandry and Dairy Science was relatively less.

Similar results has been obtained with regards to the utility perception of respondent students. The observation indicates the fact that there is a need to enhance the ICT facilities in different department so that the knowledge, extent of use

and perception about utility of ICT can be improved.

Overall Knowledge

Table 3 depicts that most of the students (90.67 %) had high level knowledge about ICT, followed by only 8.00 per cent of students who had moderate knowledge and only 1.33 per cent respondents had poor knowledge about ICT. Although adequate facilities were not available in the institute, therefore, the students gain knowledge by visiting the private cyber cafe and try to learn. It can be concluded that most of the respondents had high level of knowledge about ICT.

Table 3. Distribution of the respondents according to level of extent of knowledge of ICT

S No	Extent of knowledge level	Respondents	
		Number	Percentage
1.	Low	2	1.33
2.	Medium	12	8.00
3.	High	136	90.67
Total		150	100.00

Mean = 85.65

Extent of use of ICT

Table 4 reveals that 76.00 per cent of the respondents had high level of use of ICT for their research and education purpose, followed by 24.00 per cent respondents who had medium level of use of ICT. It is interesting to note that none of the respondents was found to be in low category use of ICT. This is additive of the fact that even if the facilities were not available in the institution students manage to learn and use ICT from private agencies and cyber cafes. Mean extent of use level was found to be 81.53 per cent.

Table 4. Distribution of the respondents according to extent of use of ICT

S No	Extent of use of ICT	Respondents	
		Number	Percentage
1.	Low	00	00.00
2.	Medium	36	24.00
3.	High	114	76.67
Total		150	100.00

Mean = 81.53

From Table 5, it is observed that cent per cent students (100.00 per cent) used ICT for presentation

Table 5. Distribution of respondents according to purpose of use

S. No.	Purpose of use	Frequency	Percentage
1.	For Information Retrieval / data updating	145	98.66
2.	Analysis of data	140	93.33
3.	Communication with other scientists	62	41.33
4.	Communication with other institute	53	35.33
5.	For finding references	135	90.00
6.	For search bibliographical details	135	90.00
7.	For e-mailing	70	46.66
8.	Report writing	65	43.33
9.	Photo printing	63	42.00
10.	Typing	105	70.00
11.	For presentation	150	100.00
12.	For data collection	80	53.33
13.	For correspondence	60	40.00
14.	For planning and designing of assignment	98	65.33
15.	For data storage	110	73.33
16.	For chatting	55	36.66
17.	Hobby	80	53.33
18.	For general knowledge	115	76.66
19.	For entertainment	110	73.33

of their ORW, projects, seminar and thesis presentation. 98.66 per cent of the students used ICT for Information retrieval / data updating followed by 93.33 per cent students used ICT for analysis of data and 90 per cent of students used ICT for finding references and for searching bibliographical details. More than 75 per cent respondents used ICT for general knowledge followed by 73.33 per cent who used it for entertainment and data storage. For typing, planning and designing assignment, data collection and for chatting, e-mailing, reports writing, photo printing, for correspondence, communication with other scientist, communication with other institute, for hobby chatting ICT was used by 70.00, 65.00, 53.33, 46.66, 43.33, 40.00, 41.33, 35.33, 53.33 and 36.66 per cent students, respectively.

So it can be concluded that cent per cent i.e. (100 %) students used ICT for presentation of their ORW, seminar, thesis, projects etc.

From Table 6, it is observed that 40.00 to 20.00 per cent respondents always used computer aided material, 50.00 to 12.00 per cent respondents some time use computer aided instrument i.e. computer, CD's, VCD, LCD, Internet, Website, Scanner, CD Writer, Digital Camera and 44.00 to 23.33 per cent students never used these computer aided instruments. Nearly one fourth of the respondents always used telephone in the department and 50.00 per cent students some time used telephone. 3.33 per cent respondent students always use OHP and 40.00 per cent respondents used sometime. 63.33 to 14.67 per cent respondents always use chalkboard, flannel graphs, photographs, blowups, white

Table 6. Distribution of respondents according to frequency use of ICT gadgetry

S. No.	ICT gadgetry	Frequency of use					
		Always		Sometime		Never	
		No.	%	No.	%	No.	%
1.	Computer	60	40.00	40	26.67	35	23.33
2.	CDs	35	23.33	50	33.33	15	10.00
3.	VCD	22	14.67	24	16.00	19	12.67
4.	LCD	30	20.00	75	50.00	20	13.33
5.	Internet	37	24.57	48	32.00	35	23.33
6.	Web site	15	10.00	18	12.00	17	11.33
7.	Scanner	15	10.00	35	23.33	45	30.00
8.	CD writer	22	14.67	41	27.33	33	22.00
9.	Digital camera	30	20.00	55	36.67	30	20.00
10.	Public address equipment	00	00	33	22.00	30	20.00
11.	Telephone	40	26.67	75	50.00	22	14.67
12.	OHP	05	3.33	60	40.00	30	20.00
13.	Slide projector	00	00.00	10	6.67	30	20.00
14.	Model / specimen	20	16.00	35	23.33	33	22.00
15.	Chalkboard	95	63.30	55	36.67	00	00.00
16.	Flannel graphs	24	16.00	53	35.33	20	13.33
17.	Photographs	13	8.67	33	22	14	9.33
18.	Blowups	22	14.67	67	44.67	29	19.33
19.	White boards	37	24.67	76	50.66	15	10.00
20.	Display boards	22	14.67	67	44.67	15	10.00
21.	Magazines	30	20.00	35	23.33	55	36.67
22.	News / letters	24	16.00	36	24.00	20	13.33
23.	News papers	60	40.00	44	29.33	19	12.67
24.	Journals	25	16.67	50	33.33	25	16.67
25.	Books	27	18.00	45	30.00	18	12.00
26.	Periodicals	20	13.33	29	19.33	46	30.66
27.	Circular letter	20	13.33	29	19.33	46	30.66

boards, display boards. These aids some time use by 50.00 to 22.00 per cent respondent students 22.00 per cent to 9.33 per cent respondent students never use of these non-projected aids.

Further it was found that 40.00 per cent to 13.33 per cent respondent students always use printed material i.e. Newspapers, Books, Magazines, Journals, Periodicals, Circular letters and News letters. 33.33 to 19.33 per cent respondents some time use these printed material whereas 30.66 to 12.67 respondent students never use these printed material i.e. News letter, Circular letter, etc. Therefore, it was concluded that maximum respondent students always and some time use ICT gadgetry provided by University.

Utility Perception

The utility perception in the present study studied as the perceived usefulness of Information and Communication Technology with regards to not useful, useful and highly useful.

Table 7. Distribution of respondents according to utility perception (n=150)

S No	Utility Perception	Respondents	
		Number	Percentage
1.	Not useful	04	02.67
2.	Useful	100	66.66
3.	Highly useful	46	30.67
Total		150	150.00

Mean = 69.96 SD = 15.09

The mean of utility perception index was found to be 69.96 per cent. Table 7 reveals that two third of the student respondents (66.66%) perceived ICT as useful, followed by 30.67 per cent who perceived

ICT as highly useful. Only 2.67 per cent of the respondents perceived ICT as not useful. Further, from the Table 8 the item wise utility perception has revealed that computer aided ICT gadgetry and facilities have been presented to be useful and highly useful by most of the student respondents.

Although majority of the students perceived ICT facilities as useful and highly useful for effective learning. Thus, it indicates the strong motivation of students towards use of ICT.

CONCLUSION

On the basis of findings it could be concluded that majority of the students were using ICT for educational purpose, however there was lack of adequate ICT facilities in the institute. Hence, it is recommended that adequate ICT institute should be provided to the students so that they can use those ICT gadgets adequing latest information pertaining to their need.

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