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Relational analysis between profile of the technical staff with extent of knowledge and use about ICT tools and problems faced during usage

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ABSTRACT

Information played an important role in all societies since the dawn of civilization. However, in recent years its increase in volume and accuracy as well as greater access, have significantly elevated its value in all aspects of social life. The world community has recognized the revolutionary nature of information society. The world is undergoing an Information and Communication Technology (ICT) revolution, a revolution that has enormous socio-economic implications for the developed and developing countries. Science and Technology have undergone revolutionary changes in recent past. Only a few decades ago, all telecommunications services were delivered over copper wires. More recently, the world has witnessed the exponential growth of ICT. Today, the dazzling collection of new technologies, services and applications has led to a digital age in which access has become a key component of people's lives. The new information and communication technologies are among the driving forces of globalization. They are bringing people together, and bringing decision makers unprecedented new tools for development. Right now, agriculture universities provide enough computer training and exposure for teachers to used computer confidently in learning and teaching their subjects. It helps them to get quick solution of their queries. According to the World Bank, low level of literacy of ICT application represent significant obstacles in its adoptions, even when physical and institutional infrastructure is available. The significance of any Information and Communication Technology (ICT) can be judge through the assessment of involvement of its real users in it. An appraisal of the factors affecting the internet exposure and readiness of agricultural scientists was , therefore, realized to identify their literacy levels and attitude towards academic application of ICT.

Key Words : Technical staff, ICT tools

INTRODUCTION

In addition to this, it was felt necessary to obtain information about potential role of internet technologies on agricultural teaching and learning, frequency of use of internet made

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by agricultural scientist, their purpose of internet used and degree of importance of internet in their development. The availability of ICT provides teachers and students with access to up-to-date educational resources (Wims and Lawler, 2007). This has greatly increased the quality of what is learned.

Scientists of Agricultural Universities are continuously engaged in teaching, research and extension activities. Development of agricultural scientists can expedite the development of agriculture in the country. Professional growth of scientists can be enhanced by acquiring current information through the use of modern means of communication, mainly through Information and Communication Technologies (ICT). Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani is a leading agriculture university of the country having equipped ICT facilities established in all the departments. Although scientists of the university are well equipped with technology, but a question arose that to what extent they are using ICT tools for improving their professional efficiency. It is very essential to know the relationship between profile with their extent of knowledge and use of ICT tools and problem faced during the usage of the tools. Hence the present study on, "Information and Communication Technology (ICT) Tools used by the Technical staff in VNMKV Parbhani" undertaken with the following objectives-

– To study the profile of the Technical staff.

– To study the relationship between profile of respondents with their extent of knowledge and use of ICT tools.

– To know the problems faced by the Technical staff during usage of ICT tools and elucidate suggestions for improvement.

METHODOLOGY

Present study was conducted in the purposively selected jurisdiction of Vasantrao Naik Marathwada Krishi Vidyapeth, Parbhani. The research stations and Krishi Vigyan Kendras (KVKs) which are under the VNMKV, Parbhani were covered in the study. The population of the study consisted of the technical staff including Teaching, Research and Extension Personnel of Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani.A list of the technical staff working in all three streams *i.e.* Teaching, Research and Extension Works was obtained from the Deans of the constituent colleges, Directorate of Research and Directorate of Extension Education, VNMKV, Parbhani. A sample of 120 Research scientists, Teachers and Extension Workers was drawn randomly with the help of lottery method among which there were 40 teachers, 40 researchers and 40 extension workers. Thus, the total sample size was 120 and they responded to the present study. The research design adopted for the present study was ex-post facto, since the phenomenon had already taken place. Keeping in view the objectives and the variables under study, an interview schedule was prepared. In order to facilitate the analysis and interpretation of data, statistical tools like mean, frequency, percentage, standard deviation, Pearson's Correlation Coefficient were used. Respondents were asked to mention the problems faced by them during the usage of ICT tools. The problems were classified into three categories like general problems, social problems and physiological problems. The suggestions for improvement of usage of ICT tools were also obtained.

RESULTS AND DISCUSSION

The results of the present study are presented and discussed below.

Profile of the Technical staff in VNMKV, Parbhani :

The data regarding personal and professional characteristics of the technical staff selected for the study are presented in this part.

The result pertaining to Table 1, indicates that, majority of the technical staff (58.33 %) belonged to middle age group of 34 - 51 years followed by the old age group of 52 and above years (24.17 %) and 17.50 per cent respondents belonged to young age group *i.e.* upto 33 years.The probable reason might be that recruitment in the past few years is less and hence less numbers of respondents belonged to young age with more per cent middle age group.

This findings is in line with the findings of Salau and Saingbe (2008), Meena and Pankaj (2013), Nawale (2013).

Majority (74.17 %) of the respondents were male and 25.83 per cent were female respondents were working in the VNMKV, Parbhani. The probable reason might be till 1980's females were not that educate and moreover they were not interested in agriculture as a profession. This finding is in line with the findings of Biradar *et al.* (2009), Sutrisno Hadi Purnomo and Yi-Hsuan Lee (2010), Meena and Pankaj (2013).

It is clear from the table that, more than half of the technical staff (53.33 %) were Ph.D. degree holders followed by 46.67 per cent of the respondents were having M.Sc. degree. Reasons lying behind this could be the minimum qualification for recruiting a VNMKV, Parbhani technical staff is master degree, but Ph.D. is require for early promotion and other benefit like additional increment. Moreover everyone prefers to be highly qualified. This findings is in agreement with the finding of Bisht *et al.* (2010), Parida (2010).

Relatively higher proportion of the respondents were Assistant Professors and equivalent category (51.67 %). Where as, 31.67 per cent were Associate Professors and equivalent, 12.50 per cent were SRA/JRA. Obviously very low proportion of respondents (2.50 %) were Professors and equivalent and 1.66 per cent were Head of the Department.The probable reason of the above finding could be the number of post like assistant professors and associate professor are more than other posts. This finding is more or less in line with the findings of Tayade *et al.* (2011), Nawale (2013).

More than half of the technical staff (59.17 %) were having medium service experience *i.e.* 6 – 24 years, followed by 22.50 per cent were having high experience (25 and above years) . While relatively less per cent (18.33 %) of the respondents were having low experience *i.e.* upto 5years.This can be justified as majority of the technical staff are middle aged and having Ph.D. qualification, so they might have joined the service little late or in middle discontinued for Ph.D. study. This findings is in line with the finding of Kiran (2007).

It is clear that relatively higher proportion of the technical staff (48.33 %) were having urban educational background, followed by semi-urban (27.50 %) and rural (24.17 %). The plausible reason might be that the most of the facilities related to study such as quality teaching, special coaching and tutions, different classes etc. made them migrate towards urban area rather the semi-urban and rural areas. The findings is in agreement with the findings of Parida (2010).

The results elicits that 21.67 per cent of respondents received training regarding ICT tools for 2-4 months, followed by 20.83 per cent for 1-2 month, 20 per cent for less than 1 month, 17.50 per cent of 4-6 months, 4.17 per cent of more than 6 months training duration respectively. The reason for this could be more numbers of training organized to motivate

Table 1 : Profile of the technical staff in VNMKV, Parbhani (N = 120)

Sr. No	Variable	Frequency	Percentage
1.	**Age**		
	Young (upto 33 years)	21	17.5
	Middle (34 - 51 years)	70	58.33
	Old (52 and above years)	29	24.17
2.	Gender		
	Female	31	25.83
	Male	89	74.17
3.	**Qualification**		
	M.Sc.	56	46.67
	Ph.D.	64	53.33
4.	**Designation**		
	SRA/JRA	15	12.5
	Assistant Professor and equivalent	62	51.67
	Associate Professor and equivalent	38	31.67
	Professor and equivalent	3	2.5
	Head of the Department	2	1.66
5.	**Experience**		
	Low (upto 5 years)	22	18.33
	Medium (6 – 24 years)	71	59.17
	High (25 and above years)	27	22.5
6.	**Educational background**		
	Rural	29	24.17
	Semi-urban	33	27.5
	Urban	58	48.33
7.	**Training Received regarding ICT**		
	No training	19	15.83
	< 1 month	24	20
	1 – 2 month	25	20.83
	2 – 4 month	26	21.67
	4 – 6 month	21	17.5
	> 6 month	5	4.17
8.	**Nature of Work**		
	Teaching or Research or Extension	24	20
	Teaching and research or teaching and extension or research and extension	52	43.33
	Teaching, Research and Extension	44	36.67
9.	**Availability of ICT tools**		
	Low (upto 7)	28	23.33
	Medium (8 – 12)	66	55
	High (13 and above)	26	21.67

the technical staff to use ICT tools as they are the best means of communication in the changing scenario. In addition to this ICT related training attended by them were based on their subject specialization. On the other hand 15.83 per cent respondents had not undergone any training at all. This point out that there is a need to provide training regarding ICT.

It becomes clearly evident from the results that majority of staff (43.33 %) were engaged in two work activities *i.e.* Teaching and Research or Teaching and Extension or Research and Extension. While, 36.67 per cent of the respondents performing all three activities *i.e.* Teaching, Research and Extension and only 20 per cent respondents were involved in only one activity *i.e.* Teaching or Research or Extension. Reasons lying behind this could be the technical staff in VNMKV, Parbhani are mandate to do all the threefold activity of teaching, research and extension. But it's hard to maintain three activities done by one person in his work schedule. Thus most of them are engaged in at least two activities of these.

In case of overall distribution of the respondents according to the availability of ICT tools the result showed that about 55 per cent of the technical staff were having medium availability of the ICT tools. While, 23.33 per cent respondents were having low followed by 21.67 per cent had high availability of ICT tools.The probable reason of the above findings could be maximum of the technical staff are middle aged and old aged. Very few are young aged. While computer mediated learning is playing a major role in academic and research in recent years. Youngs are more comfortable to access the tools. More over, the results reveals that the technical staff in VNMKV are comparatively less aware and facilitate with ICT tools. The facilities and infrastructure provided in each department might different from department. This finding is more or less similar to the finding of Mohansundaram and Jebaraj (2007), Murahari and Kumar (2008), Yemisi *et al*. (2014).

Relationship between profile of the respondents with their extent of knowledge and extent of use about ICT tools :

This part includes the relationship between the personal profile or characteristics of technical staffs such as, age, gender, qualification, designation, experience, educational background, training received regarding ICT, nature of work and availability of ICT tools with the extent of knowledge (Table 2) and with the extent of use (Table 3) about ICT tools.

The result presented in Table 2 and 3, elucidates the influence of profile of the technical staffs with knowledge and extent of use regarding ICT tools. It was inferred that there was no significant relationship between age, gender, qualification, designation, experience, educational background and nature of work with knowledge level and extent of use of ICT tools of the technical staffs.

The probable reason for this trend may due to the fact that irrespective of age, education, gender, designation etc. the person shows more eagerness to learn new things and to be with a stream of utilizing advance technology. Knowledge will be gained when they will utilize more ICT tools which ultimately made them to procure more knowledge.

Where as, there was positive significant association between training received regarding ICT and availability of ICT tools with the extent of knowledge level and use of ICT tools of the technical staffs.

The probable reason might be due to, the result of training of any technology is visible in

Table 2 : Relationship between profile of the respondents with their extent of knowledge about ICT tools

Sr. No.	Characteristics	'r' value
1.	Age	-0.082 NS
2.	Gender	-0.007 NS
3.	Qualification	0.026 NS
4.	Designation	0.069 NS
5.	Experience	-0.111 NS
6.	Educational background	0.050 NS
7.	Training received regarding ICT	0.206 *
8.	Nature of work	-0.137 NS
9.	Availability of ICT tools	0.497 **

** Significant at 0.01 level of probability
* significant at 0.05 level of probability
NS= Non-significant

Table 3 : Relationship between profile of the respondents with their extent of use of ICT tools

Sr. No.	Characteristics	'r' value
1.	Age	-0.107 NS
2.	Gender	-0.037 NS
3.	Qualification	0.106 NS
4.	Designation	0.143 NS
5.	Experience	-0.100 NS
6.	Educational background	0.184 NS
7.	Training received regarding ICT	0.330 **
8.	Nature of work	-0.167 NS
9.	Availability of ICT tools	0.617 **

** Significant at 0.01 level of probability
* significant at 0.05 level of probability
NS=Non-significant

an individual when he understands all technicalities of it. It is universally accepted that when a person has basic knowledge of any novel, current and needful operation towards any facility, he tries to engage himself more in the same.

While, accessibility of the ICT tools not only imparting skills but also enhancing the knowledge. Now-a-days through internet facility, popularity and use of computer among people has increased to a great extent. This might be the probable reason for the association between availability with knowledge and use of ICT tools.

Problems faced by the technical staff during usage of ICT tools :

The result presented in Table 4, indicated the problems faced by the technical staffs during usage of ICT tools. The general problems faced by the technical staffs always were, internet connection is poor/low (58.33 %) followed by lack of proper training (55.00 %), inadequate computer facility (35.83 %). Sometimes most of them faced problems like can not download full article (54.16 %), read only content (43.33 %). Where as, 32.50 per cent

of them are never found the difficulties to find out the free and paid online services.

Incase of social problems, the technical staffs sometimes faced the problems like time spent with family (40.00 %), meeting with friends (37.50 %), time spent in social events, gathering outside home (33.33 %).

Most of the technical staffs were getting physiological problems like back ache (45.00 %), eye pain (42.50 %), head ache (32.50 %) sometimes. While, never they faced the problems nerve pain (45.00 %), hand pain (44.16 %).

The plausible reason behind this may be like the two sides of coin, each and everything has benefits as well as constraints. Constraints is nothing but anything which tends to prevent or obstruct the achievement of an objective. It is beyond any doubt that ICT is the gift of science. Along with all the advantages, there are certain problems, which the users faces in his or her day to day life. A technical staff engaged in their relevant jobs so they hardly get time to mingle with social activities and friends or relatives. Long time use of the ICT tools also creates physiological problems for them.

Table 4 : Distribution of the respondents according to their problems faced during usage of ICT tools (N = 120)

Sr.	No.	Problems	Always		Sometimes		Never	
I		General problems	Freq	%	Freq	%	Freq	%
	1	Inadequate computer facility	43	35.83	23	28.33	30	25.00
	2	Lack of proper training	66	55.00	27	22.50	13	10.83
	3	Read only content	15	12.50	52	43.33	11	9.16
	4	Cannot down load full text articles	10	8.33	65	54.16	12	10.00
	5	Not sure about the reliability of content	3	2.50	52	43.33	18	15.00
	6	Internet connection is poor/low	70	58.33	27	22.50	8	6.66
	7	Sometimes articles giving only abstract	10	8.33	59	49.16	7	5.83
	8	Difficulties to find out the free and paid online services	20	16.66	20	16.66	39	32.50
II		Social Problems: There is decrease in frequency of-						
	9	Visit to relative house	12	10.00	40	33.33	29	24.16
	10	Time spent in social events, gathering outside home	7	5.83	38	31.66	26	21.66
	11	Time spent in reading books, news paper, articles, journals etc.	11	9.16	37	30.83	26	21.66
	12	Time spent with family	13	10.83	48	40.00	16	3.33
	13	Meeting with friend	7	5.83	45	37.50	7	5.83
III		Physiological problems: I get-						
	14	Back ache	13	10.83	54	45.00	21	17.50
	15	Eye pain	8	6.66	51	42.50	20	16.66
	16	Head ache	6	5.00	39	32.50	32	26.66
	17	Hand pain	-	-	16	13.33	53	44.16
	18	Nerve pain	-	-	12	10.00	54	45.00

This finding is more or less similar with the findings of Emmanuel and Alfred (2008), Salau and Saingbe (2008), Parida (2010,) Tayade *et al.* (2011), Tiwari and Sahoo (2013).

Suggestions for improvement of utilization of ICT tools by the technical staff :

It is noted from the Table 5, that most of the technical staffs suggested that proper training should be provided by the institution (84.16 %), followed by sufficient computer should be made available for all the staffs (80.83 %), internet connection must be provided for each computer (69.16 %), newly launched ICT equipments for agriculture should be made available to keep the staffs updated (58.33 %) and maintainance of already installed computer should be regular (47.50 %).

Twenty first century is characterized as information age. Information revolution has profound impact on all walks of life. All the technical staffs need to keep themselves updated with current happenings to be component in this global era. All these things can be possible through proper facilities. Hence this might be probable reason to give suggestions for improvement of use of ICT tools by the technical staffs.

Implications :

It was evident from the study that profile characteristics like training received regarding ICTs and availability of ICT tools was having a positively significant relationship with knowledge level and extent of use of ICT tools. This implies that the variables 'training' and 'availability of ICT tools' plays a contributing role and should be taken into consideration. The trainings imparted to the technical staff should be upgraded and delivered by experts and it should be mandatory that university must establish their own website and link up with others for getting and sharing information. It should also be seen that the available tools are taken care of and in working conditions.

It was also found from the study that the major problems faced by the technical staff were low internet connectivity followed by lack of proper training and inadequate computer facility among other problems like physiological problem and time factor. To overcome these

Table 5 : Distribution of the respondents according to their suggestions for improvement of utilization of ICT tools (N = 120)

Sr. No.	Suggestions	Frequency	Percentage	Rank
1.	Proper training should be provided by the institution	101	84.16	I
2.	Sufficient computer should be made available for all the staff	97	80.83	II
3.	Internet connection must be provided for each computer	83	69.16	III
4.	Newly launched ICT equipments for agriculture should be made available to keep the staff updated.	70	58.33	IV
5.	Maintenance of already installed computer should be regular	57	47.50	V

- Multiple responses are possible

problems facilities like proper broadband connection or Wi- Fi should be provided by Vasantrao Naik Marathwada Krishi Vidyapeeth for every department and officials. Computers should also be made available for every teacher, researcher and extension worker and basics training should be given to help them utilize the tools.

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