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Priyanka
Ex. M.Sc (Agri.) Student,
Department of agricultural
extension, College of Agriculture
Latur, Maharashtra, India

DD Suradkar
Assistant professor, Department
of agricultural extension, college
of agriculture, Latur,
Maharashtra, India

SS Pudke
Student, M.Sc (Agri.), College of
agriculture, Latur, Maharashtra,
India

Knowledge and its relationship with profile characteristics of the agricultural students towards computer usage

Priyanka, DD Suradkar and SS Pudke

Abstract

The study was conducted in Parbhani and Latur districts of Marathwada region. Population for the study comprised of students who were undergraduate of Agricultural students in Parbhani and Latur district. From each district one agricultural college were selected for the survey. From each college 60 students (30 boys & 30 girls) were selected and the total sample size was one hundred and twenty. This required sample size was selected through purposive random sampling method. One shot case study method of ex-post-facto medium research design was adopted for this study. Data was coded, tabulated, analysed and interpreted using suitable statistical parameters. The results showed that majority of the students 45.83 per cent had high level of knowledge and 43.34 per cent of the students had medium level of knowledge towards computer usage and independent variables like professional education, family education, family occupation and extent of computer use had positively significant with knowledge of students. Independent variables were interpreted and analyzed with knowledge by regression and results showed that professional education, family occupation and extent of computer usage had positive and significant effect on knowledge of respondents towards computer usage. The result showed that respondents were faced some major problems in computer usage that lack of computer and internet facilities, irregular electricity supply and lack of time.

Keywords: Profile, Knowledge of respondents, relationship with knowledge, regression analysis and constraints

Introduction

Computer is a device that can be instructed to carry out an arbitrary set of arithmetic or logical operations automatically. Computers are the main technology support as a tool for effective learning and teaching process (Aytekin *et al.* 2004) [2]. Maharashtra State Certificate for Information and Technology (MS-CIT), Course on Computer Concepts (CCC) are the computer courses which taking by students Parbhani and Latur. Around the world young users are increasingly turning to the computer use and internet as source of information, communication, socializing and entertainment. At the same time web access is the divider between countries and within countries. Computer store material and keep them in memory. It provides knowledge and information in almost all the major languages both national and international. Perhaps it is 'free' access to information on the web than information from traditional media. Young people use the computer primarily for communicating (e-mail and chat rooms), downloading (software and music), computer games and obtaining information (about education, entertainment, sports and news).

Materials and Methods

Population for the study comprised of students who were undergraduate of Agricultural students in Parbhani and Latur district of Marathwada region in Maharashtra state. From each district one agricultural college were selected for the survey. From each college 60 students (30 boys & 30 girls) were selected and the total sample size was one hundred and twenty. This required sample size was selected through purposive random sampling method. One shot case study method of ex-post-facto medium research design was adopted for this study.

English and English (1958) [5] defined knowledge as a body of understood information by an individual or by a culture. This variable was operationalized as the level of knowledge possessed by Agriculture students about computer. In the present study, teacher made test was followed to measure the knowledge level of the respondents. Accordingly statements based on certain important aspects of computer use were formulated and pre-tested in non-sample area finally on the basis of the experience gained in pre testing, 10 statements were selected. They were presented to the respondents with 4 possible answers and selecting the correct answer.

Correspondence

Priyanka
Ex. M.Sc (Agri) Student,
Department of agricultural
extension, College of Agriculture
Latur, Maharashtra, India

A score of one was given to the right answer and zero to the wrong answer. The possible obtainable scores ranged between 10 and 0 respectively. Based on the total scores, the respondents were classified into three categories namely low (1-4), medium (5-7) and high (8-10).

Results and Discussion

Profile characteristics of the respondents

The first objective of the study was to describe profile characteristics of agricultural undergraduate students. Majority 61 per cent of the respondents belongs to nuclear family, 57.50 per cent of the students were medium sized family. As with regard to children future, most of the parents has desire to lead independent life to provide proper accommodation, good education and various facilities they had selected nuclear family (Jayalaxmi, Powar 2009). As regard with knowledge, computer courses (MS-CIT, CCC) as a professional education has to be taken (Abubakar and Adetimirin 2015) [1]. So the results showed that 49.16 per cent of the students had taken MS-CIT computer course.

Results showed that 38.00 per cent of the respondents had

family education above degree and 56.67 per cent of the parents were semi professionalists like school teacher, businessmen, agriculturists, clerk, and accountant. As we are in 21st century parents are thinking positive towards education and their education is better than before some 10-12 years even their occupation had degree (DeBell and Chapman 2006 and Jayalaxmi Powar *et al* 2009) [3]. Majority 40.00 per cent of the respondents were daily users, 62.50 per cent of the respondents were regularly internet browsers with 72.5 per cent of the respondents were spent time above two hours. Students had more attachment with social media like Gmail, facebook, youtubes, whatsapp etc. (Emily B. Rhoades 2008) [4], 32.5 per cent of the respondents were never faced any health problems while using internet and 65.83 per cent of the students family had high level of annual income.(Jayalaxmi, Powar *et al.* 2011) [6] As majority of the students never faced any problems because by using more computer or laptop they relieves tension, depression and nervousness and most of the respondent's family had good education and occupation as mentioned in the above results.

Table 1: Profile characteristics of Agricultural undergraduate students (N=120).

Profile characters	Category	f	%
Professional education	MS-CIT	59	49.16
	DOEACC	1	0.83
	CCC, C++	34	28.33
	No course taken	33	27.50
Family type	Nuclear	73	61.00
	Joint	47	39.00
Family size	Small	24	20.00
	Medium	69	57.50
	Large	27	22.50
Family education	Illiterate	05	04.00
	Primary school	16	13.00
	High school	30	25.00
	Pre university/diploma	24	20.00
	Degree and above	45	38.00
Family occupation	Non worker / unemployed	11	09.16
	Skilled worker-tailor, carpenter, potter etc.	14	11.64
	Semi professionalists- school teacher, businessmen, agriculturist, clerk, accountant, librarian, assistant.	68	56.67
	Higher professionalists- engineer, doctor, professor, manager, law administrator.	27	22.50
Extent of computer use	Daily	48	40.00
	Fortnightly	30	25.00
	Monthly	24	20.00
	Rarely	18	15.00
i. Frequency of usage	Regularly	81	67.50
	Occasionally	39	32.50
	Never	00	00.00
ii. Time spent	Minimum(1hr.)	33	27.5
	Maximum (2 hr.& above)	87	72.5
Health problems	Eye related- eye strain, burning or irritation	37	30.83
	Muscle related- backache, body pain	18	15
	Headache	26	21.67
	Never faced any problem	39	32.50
Annual family income	Normal	21	17.51
	High	79	65.83
	Very high	20	16.66

Knowledge of Agricultural undergraduate students towards computer usage.

Table 2: Distribution of the respondents according to extent of computer knowledge question wise.

S. No	Statements	Freq.	%	Freq.	%
1	Computers were invented by Charles Babbage	119	99.16	1	00.83
2	Uses of computers are games ,painting, research, chatting etc.	120	100.00	00	00.00
3	Computer languages are Basic, C++, java	70	58.33	50	41.66
4	Short key for Undo is Ctrl + Z	80	66.66	40	33.33
5	Ctrl, Shift, Alt are used as short keys.	83	69.16	37	30.83
6	Parts of computer are mouse, key board, C.P.U	120	95.83	00	00.00
7	Abbreviation of C.P.U is Central Processing Unit	108	90.00	12	10.00
8	Information can be copied through C.D. Floppy disk, pen drive.	107	89.16	13	10.83
9	Abbreviation of C.D. is Compact Disk	110	91.66	10	08.33
10	Parts of computer output unit are both monitor and printer.	64	53.33	56	46.66

Table 2 portrayed that 99.16 per cent of the students were know about inventor of computer and only 00.83 per cent of the students were unaware about it. All the students (100 per cent) were known about usage of computer. 58.33 per cent of the students were known about computer languages while 41.66 per cent of the students don't know about it. 66.66 per cent of the students were know short key of Undo while 33.33 per cent of the students unaware about it.69.16 per cent of the students were short keys of computer while 30.83 per cent of the students don't know about it. All the students (100 per cent) were known parts of the computer. 90 per cent of the students were known about abbreviation of C.P.U while 10 per cent of the students were not known about it. 89.16 per cent of the students know through how the information has to be copied, while 10.83 per cent of the students don't know about it. 91.66 per cent of the students were known about abbreviation of C.D. while 8.33 per cent of the students were unaware about it. 53.36 per cent of the students were aware about parts of computer output units while 46.66 per cent of the students were unaware about it.

Table 3: Distribution of the respondents according to overall knowledge of computer.

S. No	Category	Frequency	Percentage
1	Low	13	10.83
2	Medium	52	43.34
3	High	55	45.83
	Total	120	100.00

The data manifested from the Table 3 showed that 43.34 per cent of the students had medium level of computer knowledge, 45.83 per cent of the students had high level of computer knowledge and only 10.83 per cent of the students

Regression Analysis

Table 5: Multiple regression analysis of independent variables with the knowledge.

S. No	Independent Variables	Regression Coefficient	Standard Error	"t" value
1	Professional education	0.2034	0.1492	2.3627*
2	Family type	-0.2259	0.4588	-0.4923
3	Family size	0.1078	0.0806	1.3371
4	Family education	0.0808	0.1726	0.4680
5	Family occupation	0.5824	0.2751	2.1168*
6	Extent of computer usage	0.3987	0.4387	1.9720*
7	Health problems	0.0307	0.1343	0.2290
8	Annual family income	-0.0858	0.1038	-0.8261

R² = 38.83, F-value = 07.724

*= Significant at 0.05 level of probability

**= Significant at 0.01 level of probability

The table 5 indicates that, R value 0.3883 indicated that all the selected independent variables put together explained about 38.83 per cent variation in the knowledge was explained by eight independent variables.

had low level of computer knowledge.

Relationship of knowledge with profile characteristics towards computer usage.

Table 4: Distribution of the respondents according to their relationship between profile characteristics with knowledge and their attitude towards computer usage.

S. No	Variables	Knowledge
1	Professional education	0.1963*
2	Family type	0.0012 ^{NS}
3	Family size	0.1022 ^{NS}
4	Family education	0.1950*
5	Family occupation	0.2671**
6	Extent of computer usage	0.3278**
7	Health problems related to computer usage	0.0017 ^{NS}
8	Annual family income	0.0993 ^{NS}

*&** correlation is significant at the 0.05 and 0.01 level respectively.

NS- Non significant

In order to understand the relationship between independent variables and dependent variables of Agriculture college students towards computer usage, the correlation coefficients computed to know the relationship are presented in the Table 4. The results revealed that out of eight independent variables, four variables had exhibited positive significant relationship with existing knowledge level of the respondents. Professional education, family education and family occupation, extent of computer usage had positive correlation with knowledge level of the respondents at 5 per cent and 1 per cent significant level respectively. Family type, family size, health problems and annual family income were non-significant.

It was also observed that out of eight independent variables professional education, family occupation and extent of computer usage had positive and significant effect on knowledge of respondents towards computer usage.

Constraints faced by the Agricultural students in computer usage**Table 6:** Problems faced by respondents in computer usage

S. No	Constraints	Yes		No	
		Freq	%	Freq	%
1	High cost of internet access	120	100.00	0	0
2	Lack of computer & internet facilities	116	96.66	4	3.33
3	Irregular electricity supply	109	90.83	11	9.16
4	Lack of time	105	87.5	15	12.5
5	No proper working of computer & no MS office, PDF converter.	44	36.66	70	58.33
6	Lack of computer literacy	28	23.30	92	76.70
7	Lack of training on how to use computer	16	13.00	104	87.00
8	Lack of interest	12	10.00	108	90.00

The data mentioned in the Table 6 showed that 76.7 per cent of the students had computer literacy while 23.30 per cent of the students were lack in computer literacy. 87 per cent of the students had training or courses of computer while only 13 per cent of the students were lack in training or courses. All the students (100%) were felt that there was a lack of time. 90 per cent of the students had interest while only 10 per cent of the students had no interest in computer usage. 109 per cent of the students had faced problem of irregular electric supply while only 9.16 per cent of the students were not faced. 96.66 per cent of the students were lacking of computer & internet facilities and 36.66 per cent of the students were faced that most of the computers were not working properly and not having basic applications like MS word, Excel and PDF converter.

Conclusion

Computers have been a significant part of the average student's education since the early few decades. Although computer technology has become much more pervasive since then, people often wonder why we need to learn computer use in school. Some studies showed that those who learn on a computer perform better academically than their peers. Jobs of the future will demand computer literacy from just about every individual. Students should have basic knowledge of computer like using Microsoft-office and short cut keys of computer. The various personal and socio-economic factors depend on their children's education and their basic requirements like family education, family occupation and their annual income. Majority of the students spend their time in internet browsing for facebook, whatsapp, youtubes etc. but in mobile phones and not significantly in computers. It results less occurrence of health problems.

While discussing with students came to know that if father occupation and their education, family income has to be better for fulfilling their children's requirements then it shows significant and positive attitude towards computer usage. As compared to other fields like engineer, medical students etc. the agricultural students had less in extent of using computer. So, majority of the students were not faced any health problems but some students faced getting headache, eye strain. We recommend the University of Parbhani and its sub campus that continue to invest in academic computer services and open access computer labs and installed basic software applications like MS office and PDF converter. As being an Agriculture student, they should know how to search engines, journals, study material, different technologies used by progressive farmers through computer services. So, computer knowledge is very necessary for the students and should add computer course syllabus for their curriculum.

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