



## Research Article

# EXTENT OF UTILIZATION OF ICT TOOLS AMONG THE STAFF AND STUDENTS OF FACULTY OF AGRICULTURE, ANNAMALAI UNIVERSITY, CHIDAMBARAM, CUDDALORE DISTRICT, TAMIL NADU

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**Abstract:** The present investigation was designed to study the extent of utilization of ICT tools among the staff and students. The present study was conducted in Cuddalore district of Tamil Nadu state. A sample size of 120 staff and students was selected for this study by using proportionate random sampling method. The findings of this study revealed that the extent of utilization of ICT tools was observed to be medium by the staff and students. They utilize the Internet/ web services, web-based search engines and social media in frequent intervals and their duration of usage was 4-7 days/ week at the maximum of 3-5 hours and the time of surfing distributed throughout the day. The purpose of utilization of ICT tools by the staff and students mostly for gaining knowledge and their preference of utilization is mainly need based, easy to operate nature and also for its effectiveness and attractiveness.

**Keywords:** ICT tools, Students and Staffs, Teaching, Learning, Extent of Utilization of ICT Tools

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## Introduction

Improvement Agriculture has long been accepted as means of ensuring food security as well as empowering citizens of a nation economically [10]. This gave rise to the need of repositioning agriculture for food security and national economic sustainable development, one of the strategies for the repositioning which led to the introduction of agricultural education as a programme of study [3]. ICT learning and utilization is one of the concerns of educational issues around the world and for a number of years, there has been evidence in the training and development area. This development can only be achieved if the use of computer (ICT) is effectively utilized. The Information and Communication Technologies (ICT's) can create new opportunities to bridge the gap between information haves and information have-nots in the developing countries [4]. The task force on India as Knowledge Superpower [5] emphasized the need to harness ICTs for societal transformation. Considering the above facts it is very essential to study the frequency and duration of utilization of ICT tools. Hence, the present study on extent of utilization of ICT tools among the staff and students of faculty of agriculture university education system in Chidambaram was taken up.

## Materials and Methods

According to Kerlinger (1973) ex-post facto research is a systematic empirical enquiry in which the research does not have direct control over dependent variables. Keeping this in view, the adaptability of the proposed design with respect to the type of variables under consideration, size of respondents and phenomenon to be studied, the ex-post facto was selected as an appropriate research design. The main focus of investigation was to know the extent of utilization of Information and Communication Technology (ICT) tools [8]. The present study was carried out in Cuddalore district of Tamil Nadu. The sample size of 120 consisted of 60 teaching staff and 60 post graduate students of faculty of agriculture, Annamalai University. The extent of utilization of ICT tools was operationalized and measured using appropriate procedure a pre-tested and well-structured questionnaire was used for data collection. The data thus collected were subjected to statistical analysis.

## Findings and Discussion

To analyse the extent of utilization of ICT tools by the staff and student's data are collected in the following aspects and discussed under the following categories. Over all extent of utilization of ICT tools, Frequency of usage of ICT tools, Duration of usage of ICT tools, Purpose of utilization of ICT tools and Preference of utilization of ICT tools.

Table-1 Distribution of staff and students according to their overall extent of utilization of ICT tools

S	Category	Staff		Students	
		Number	Percent	Number	Percent
1	Low	11	18.30	14	23.30
2	Medium	39	65.00	39	66.00
3	High	10	16.70	7	11.70
Total		60	100.00	60	100.00

It could be notified from the table that more than sixty (65.00 percent, 66.00) of the staff and students had medium level of extent of utilization followed by low level (18.30 percent) and high level (16.70 percent). It could be concluded that majority of the staff and students possessed medium level of extent of utilization of ICT tools (65.00 percent). It may be due to fact that some of the ICT tools selected are not found to be popular among the teaching staff and post graduate students.

## Frequency of usage of ICT tools

Frequency of usage classified into four categories viz., frequently-F (4-5 times/ day), Occasionally-O (2-3 times/ week), Rarely -R (once in a month) and Never-N. To find out the frequency of usage of ICT tools by the staff and students' data's are collected and presented in [Table-2]. A perusal of [Table-2] indicates that, among the 10 various ICT tools, Internet/ web services, web based search engines social networks were utilized by cent percent of the teaching staff at frequent intervals (4-5 times/ day). The results shown in Table reveals that frequent utilization of internet/ web services, web based search engines and social networks was observed among cent percent of the students. Occasional (2-3 times/ week) and rare (once in a month) utilization was observed among the staff

Table-2 Distribution of teaching staff and students according to their frequency of usage of ICT tools

S	ICT tools	Frequency of usage (%)							
		F		O		R		N	
		Staff	Student	Staff	Student	Staff	Student	Staff	Student
1	Internet / web services	100.00	100.00	-	-	-	-	-	-
2	MS Word	11.67	15.00	46.67	50.00	28.33	25.00	13.33	10.00
3	MS Excel	-	-	-	-	-	-	100.00	100.00
4	MS Power point	-	-	46.66	75.00	35.00	25.00	18.33	-
5	Analytic package - SPSS	-	-	-	-	-	16.67	100.00	83.33
6	Mobile Map Technology	8.33	8.33	40.00	36.67	20.00	33.33	31.66	21.67
7	Interactive Multimedia Compact Disc	20.00	-	36.66	11.67	28.33	50.00	15.00	38.33
8	Web based search engines	100.00	100.00	-	-	-	-	-	-
9	Agriportals	28.33	-	21.66	-	36.66	-	13.33	-
10	Social networks	100.00	100.00	-	-	-	-	-	-

Table-3 Distribution of staff and student according to their duration of usage of ICT tools

Duration of ICT tool usage		Internet		MS Word		power point		Search engines		Social networks	
		Staff	Student	Staff	Student	Staff	Student	Staff	Student	Staff	Student
Days per week											
i) 4-7 days		68.33	21.67	38.33	41.67	-	-	61.67	58.33	100.00	100.00
ii) 2-3 days		21.67	45.00	43.33	28.33	43.33	80.00	38.33	41.67	-	-
iii) 1 day		10.00	33.33	18.33	30.00	56.67	20.00	-	-	-	-
Hours per day											
i) ½ to 2 and ½ hrs.		-	-	68.33	45.00	56.67	20.00	-	33.33	-	-
ii) 3-5 hrs.		58.33	35.00	31.67	55.00	43.33	48.33	40.00	33.34	31.67	31.67
iii) 5 and ½ to 14 hrs.		41.67	65.00	-	-	-	31.67	60.00	33.33	68.33	68.33
c) Time of day											
i) Morning		21.67	41.67	25.00	15.00	-	-	20.00	-	-	-
ii) Noon		-	-	-	26.67	-	53.33	-	53.33	-	-
iii) Afternoon		16.67	25.00	15.00	-	-	46.67	-	-	-	-
iv) Evening		28.32	13.33	-	31.67	-	-	-	15.00	-	-
v) Night		26.67	-	15.00	-	36.67	-	30.00	-	-	-
vi) No specific time		6.67	20.00	46.67	26.66	63.33	-	50.00	31.67	100.00	100.00

Table-4 Distribution of staff and students to their purpose of utilization of ICT tools

S	Purpose	ICT tools	Staff (n=60) %	Students (n=60) %
1	For gaining knowledge	Internet	70.00	86.77
		Mobile Map technology	45.00	58.33
		Geographical Information System	31.67	41.67
		Web based search engine	63.33	66.67
		Agriportals	40.00	51.67
		Social networks	28.33	55.00
2	For making presentation	MS Power point	91.67	85.00
		SPSS	38.33	58.33
		MS Excel	68.33	46.67
3	For data Analysis	SPSS	38.33	58.33
		MS Excel	68.33	46.67

in case of MS word (46.67 percent, 28.33 percent), MS power point (46.66 percent, 35.00 percent), mobile map technology (40.00 percent, 20.00 percent), IMCD (36.66 percent, 28.33 percent) Rare utilization was also observed in case of IMCD (50.00 percent), Mobile map technology (33.33 percent), MS power point and MS word (25.00 percent), SPSS (16.66 percent), among the students. Hence, it could be concluded that the teaching staff are varied in their frequency of usage of various ICT tools. It may be due to their necessity and convenience of usage of the tools. It was concluded from the above finding that the students are also varied in their frequency of usage of ICT tools due to their accessibility and capability of operating various ICT tools. It may be due to the cost involved in its operation.

#### Duration of usage of ICT tools

Duration of usage of ICT tools studied under three major categories. Days per week (4-7/ 2-3 /1), hours per day (1/2, 2 1/2/3-5/5 ½-4 hrs), time of day (Morning/ Noon/ Afternoon/ Evening/ Night/ No specific time) data are collected and presented in [Table-3]. It could be inferred from the [Table-3] that among the 10 ICT tools, only for 7 tools the duration of usage viz., Days per week, hours per day and specific time of day mentioned which are frequently utilized by the teaching staff and post graduate students. Internet/ web services are used for 4-7 days per week by majority of the staff (68.33 percent) followed by 2-3 days/ week (21.67 percent) and one day (10.00 percent). MS word used for 2-3 days by 43.33

percent of the staff, 4-7 days (38.33 percent) and 1 day (18.33 percent). Web based search engines are used for 4-7 days per week by majority of the post graduate students (58.33 percent) followed by 2-3 days/ week (41.67 percent). Considering the hours/ day usage, cent percent of the students used MS excel and DSS for a minimum of ½ - 2 ½ hours duration. It was followed by MS word (45.00 percent) and web based search engines (33.33 percent). None of the student was using ICT tools during night times. Evening time was utilized for ICT usage in case of MS word (31.67 percent), web based search engine (15.00 percent) and Internet/ web services (13.33 percent). Hence, it could be concluded that the duration of usage of ICT tools by the teaching staff are much varied. It may be due to the reason of convenience, leisure time availability and necessity for preparation of classes. It could also be concluded that the duration of usage of ICT tools by the students are much varied. It may be due to the reason of convenience, leisure time availability and necessary for preparing for exams and research work.

#### Purpose of utilization of ICT tools

To find out the purpose of utilization of ICT tools categorised as for gaining knowledge, for making presentation and for data analysis. The collected data are presented in [Table-4]. The data shown in [Table-4] revealed that majority of the staff and students (70.00 percent and 86.67 percent) utilize Internet/ web services

for gaining knowledge followed by the tools web based search engines (63.33 percent and 66.67 percent), Mobile map technology (45.00 percent and 58.33 percent), agriportals (40.00 percent and 51.67 percent), GIS (31.67 percent and 41.67 percent) and social networks (28.33 percent and 55.00 percent). MS power point utilised only for making presentations by majority of the staff (91.67 percent) and students (85.00 percent). For data analysis the tools namely SPSS and MS excel was utilized by (38.33 percent and 58.33 percent) and (68.33 percent and 46.67 percent) of the staff and students. Hence, it could be concluded that majority of the teaching staff and post graduate students utilize the tools for the general purpose of gaining knowledge. Some of the tools like MS power point, SPSS and MS excel utilised to meet out some specific purposes like making presentations and data analysis.

### Conclusion

The major findings of the study show that medium level of extent of utilization of ICT tools by the teaching staff and post-graduate students. To achieve the high level of utilization of various ICT tools, it was suggested to create and provide ICT infrastructure and resources. At present the extent of utilization was found to be medium, may be due to the ownership of various ICT gadgets like smart phones, Tab and Laptop. If the staff and students utilize these gadgets to complete their academic and research commitments helps to provide quality education in agriculture. Majority of the teaching staff and post graduate students are negatively responded about the availability and adequacy of ICT resources in the department and library. It was suggested to allocate more funds to improve the availability and adequacy of ICT resources. This helps to speed up the teaching and learning process of teachers and students. They are able to complete their work load assigned to them in advance.

**Application of research:** At present the extent of utilization was found to be medium, may be due to the ownership of various ICT gadgets like smart phones, Tab and Laptop. If the staff and students utilise these gadgets to complete their academic and research commitments helps to provide quality education in agriculture. The salient findings on perceived impact of ICT tools shows that ICT enabled agricultural education is a distant dream for its stake holders, it may be achieved in future which was identified as one of the strategies for second green revolution.

### Research Category: Information Communication Technology

**Abbreviations:** ICT: Information Communication Technology

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