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A STUDY ON EFFICACY OF ICT (INFORMATION COMMUNICATION TOOLS) DURING THE PANDEMIC SITUATION WITH PRECISE CITATION TO COLLEGE TEACHERS AT TRICHY REGION

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KEYWORDS: ICT, Resources, Informative Tools, Situating Tools, Constructive Tools, Communicative tools, Collaborative Tools.

ABSTRACT

This study mainly focus on the investigation of how efficiently ICT tools were used by the college teachers for providing education to the students in an effective manner either in this crucial arrival of the pandemic situation. It briefly discusses about the barriers that exist in the usage of ICT resources and includes the individual perception, attitude and acceptance among this new interpretation of the ICT resource in education by every individual, how these resources created impact and their influence on the future of the educational system.

I. INTRODUCTION

ICT Information and communication technology is used as educational mass media, promote practical and important issues. While taking into consideration that teaching during the pandemic becomes very crucial for teachers and it creates a new path for the ICT to take part of that. ICT acts as a communicating bridge between students and pandemic to enforce the teaching without any interruption. The whole ICT resources were studied and categorized into various forms.

II. REVIEW OF LITERATURE

1, Hennessy, Harrison and Wamakote (2010) recommended that teachers should integrate ICT in their teaching-learning approaches in classrooms to improve students' academic results.

2, Onwuagboke and Ukegbu (2010), in their study in Malaysia, revealed that though teachers were aware of ICT resources, did not employ them in teaching.

3, Geeta (2011) investigated the effectiveness of ICT in the improvement of students" learning and found that ICT brings excitement to the learner's eyes, ears, and more importantly the head".

4, Prajapati (2012) explored how ICT can be effectively integrated into the educational system and how it can help in the teaching-learning of physical education and found that the teaching and learning processes in Physical education can also be improved by ICT applications.

5, Kola (2013) found that science education can effectively be taught and learnt with the help of ICT and the knowledge of challenging conceptions in biology, chemistry and physics can be enhanced.

6, Deebom and Zite (2016) recommended the use of ICT by teachers and learners at all levels of education to improve teaching and learning.

7, Noor-Ul-Amin (2017) pinpointed that ICT influences the way students are taught and how they learn by providing rich and motivating environment for teaching and learning processes by offering new possibilities for both teachers and students.

8, Basri, Alandejani &Almadani (2018) revealed a positive relation in the adoption of ICT and student performance in academics.

9, Merillo and Domingo (2019) found that ICT integration is an important tool in enhancing the teaching and learning processes in a language classroom.

10, Ghavifekr & Rosdy (2015) found that the effectiveness of both teachers and students is greatly influenced by ICT integration.

III. OBJECTIVE OF THE STUDY

- To study the familiarity of the concept of ICT Tools among the college Teachers.
- To study the types and tools provided by ICT and their competence.
- To study the availability and usage level of ICT resources in Colleges.
- To study the effective utilization of ICT tools in teaching.

IV. SCOPE OF THE STUDY

The scope is to identify the difficulties faced by the College Teachers to adopt the ICT resources for teaching. This research may clarify the intention of the staff whether they continue teaching by using these ICT resources with competence. This study may also consider the efficacy in teaching using various tools available.

V. RESEARCH METHODOLOGY

RESEARCH DESIGN

The research design used for the study was descriptive analysis. Descriptive research studies are those studies which are concentrated with describing the characteristics of a particular individual, or of a group.

SAMPLING TECHNIQUE

The sample technique chosen was convenience sampling. Colleges were considered for this study to conduct research. The sample is collected from teachers which included of both demographic and other main factors under consideration.

SAMPLE SIZE

The size of the sample considered for the study was about 75 respondents.

AREA OF STUDY

The study area chosen for the study was Trichy.

METHOD OF DATA COLLECTION

The data is collected by using Primary data collection method. The Primary data is collected from the college teachers through online medium. The responses given by the respondents were randomly taken for the study.

STATISTICAL TOOLS USED

The statistical tool is used on the data which was collected primarily and the relatable tools were used to do analysis, came out with a conclusion. The hypothesis were framed and tested by the use of the apt tools such as sample percentage, chi-square analysis.

LIMITATIONS OF THE STUDY

- Limited teachers were considered as sample for the survey.
- The respondents were in crucial situation during the pandemic so the responses were mostly collected through online and not by physical mode.
- The result and conclusion were derived from the responses given by the respondents solely.

VI. DATA ANALYSIS AND INTERPRETATION

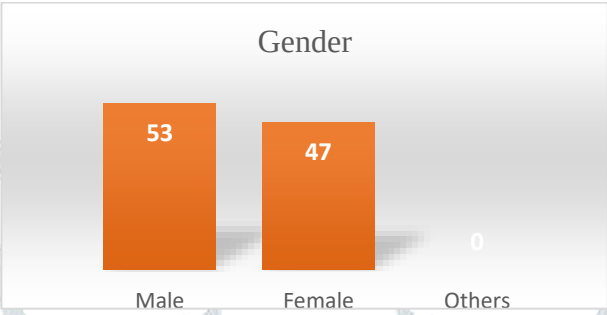
PERCENTAGE ANALYSIS

Table No:6.1.1

Frequency distribution of respondent's gender

S.NO	Gender	Frequency	Percentage
1.	Male	40	53
2.	Female	35	47
3.	Others	0	0
	Total	**75**	**100**

Figure No:6.1.1



INTERPRETATION

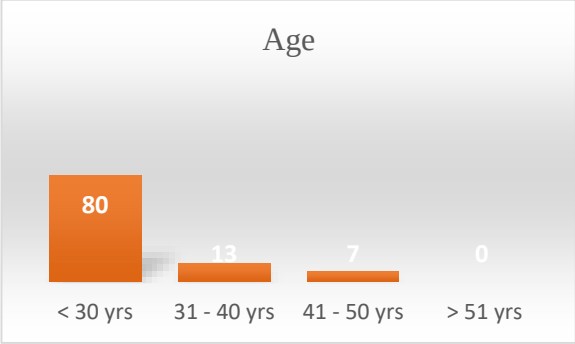
The above table shows that 53% of the respondents are male and 47% of the respondents are female.

Table No:6.1.2

Frequency distribution of respondent's age

S.NO	Age	Frequency	Percentage
1.	< 30 yrs	60	80
2.	31 - 40 yrs	10	13
3.	41 - 50 yrs	5	7
4.	> 51 yrs	0	0
	Total	**75**	**100**

Figure No:6.1.2



INTERPRETATION

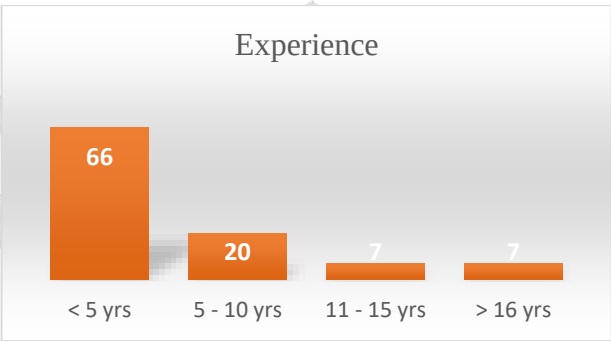
The above table shows that 80% of the respondents are from the age group of 30 and below, 13% of the respondents are from the age group of 31-40, 7% of the respondents are from the age group of 41-50and there is no respondents in the age group of above 51 years.

Table No:6.1.3

Frequency distribution of respondent's experience

S.NO	Experience	Frequency	Percentage
1.	< 5 yrs	50	66
2.	5 - 10 yrs	15	20
3.	11 - 15 yrs	5	7
4.	> 16 yrs	5	7
	Total	**75**	**100**

Figure No: 6.1.3



INTERPRETATION

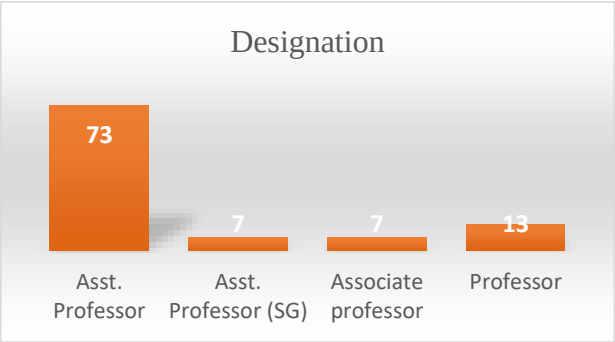
The above table shows that 66% of the respondents have experience of below 5 years, 20% of the respondents have experience of 5-10 years, 7% of the respondents have experience of 11-15 years and 7% of the respondents have experience of above 16 years**.**

Table No:6.1.4

Frequency distribution of respondent's designation

S.NO	Designation	Frequency	Percentage
1.	Asst. Professor	55	73
2.	Asst. Professor (SG)	5	7
3.	Associate professor	5	7
4.	Professor	10	13
	Total	**75**	**100**

Figure No: 6.1.4



INTERPRETATION

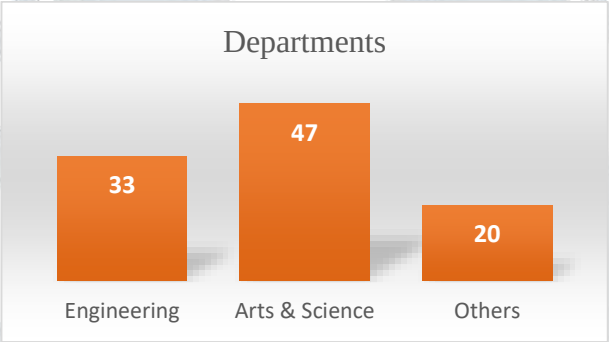
The above table shows that 73% of the respondents were Assistant Professor, 7% of the respondents were (special Grade) Assistant Professor, 7% of the respondents were Associate Professor, 13% of the respondents were professor.

Table No:6.1.5

Frequency distribution of department in which respondent working

S.NO	Departments	Frequency	Percentage
1.	Engineering	25	33
2.	Arts & Science	35	47
3.	Others	15	20
	Total	**75**	**100**

Figure No: 6.1.5



INTERPRETATION

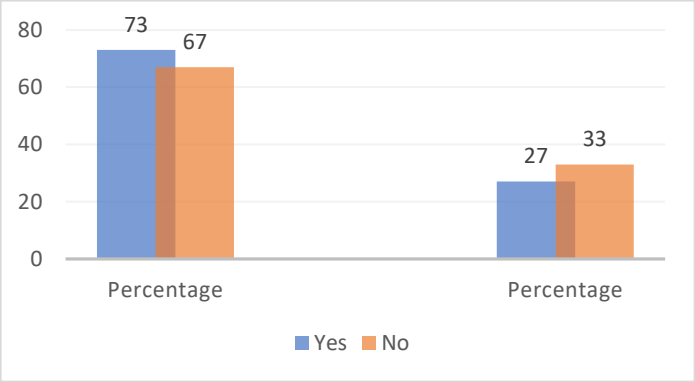
The above table shows that 33% of the respondents were belongs to Engineering department, 47% of the respondents were belong to Arts & Science department and 20% of the respondents were belong to others.

Table No:6.1.6

Access to internet and familiarity with type of ICT resource

S.No	Questions	Yes	No	Total
		Percentage	Percentage	
1	Access to internet in campus	73	27	**100**
2	Familiarity with type of ICT resource	67	33	**100**

Figure No: 6.1.6



INTERPRETATION

The above table shows that 73% of the respondents have access with internet in-campus, 27% of the respondents have no access with the internet in-campus. The above table shows that 67% of the respondents were familiar with the types of ICT resources available, 33% of the respondents were not familiar with the types of ICT resources available.

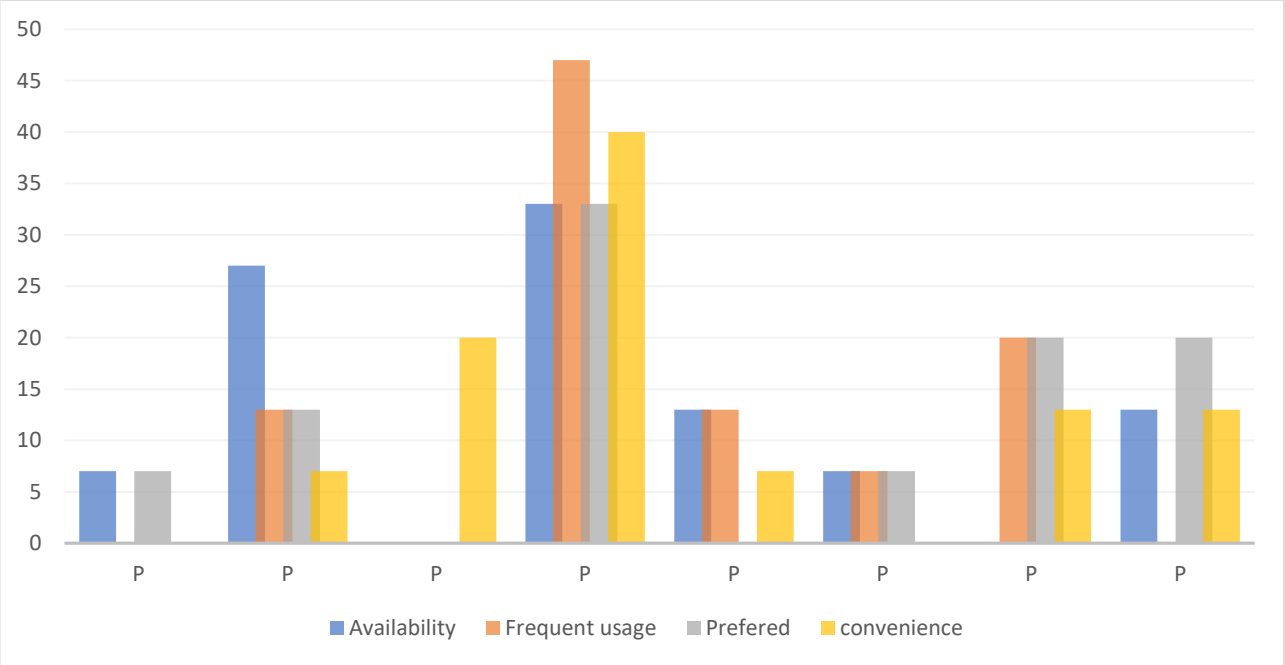
Table.No:6.1.7

ICT Competence

S.No		A	B	C	D	E	F	G	H	Total
		%	%	%	%	%	%	%	%	
1	Availability of ICT resource in campus	7	27	0	33	13	7	0	13	**100**
2	Frequently used ICT resource	0	13	0	47	13	7	20	0	**100**
3	Preferable ICT resource to others	7	13	0	33	0	7	20	20	**100**
4	Convenient usage of ICT resource	0	7	20	40	7	0	13	13	**100**

A-Video conferencing system, B-Wi-Fi enabled environment, C-OS-Windows, D-Laptop, PC, E-Digital library, F-Smart class, G-Licensed software e.g.SPSS, H-Institutional resources

Figure No: 6.1.7



INTERPREATION

The above table shows that for 33% of the respondents laptop/PC is available, 7% of the respondents Video conferencing and smart class is available. 47% of the respondents frequently used laptop/PC, 7% of the respondents frequently used smart class. 33% of the respondents preferred Laptop/PC, 7% of the respondents preferred video conferencing system and smart class. 40% of the respondents felt convenient in using Laptop/PC, 7% of the respondents felt convenient in using Wi-Fi and digital library.

Chi square analysis

Hypothesis 1

Null Hypothesis H0 = There is no significance association between age and familiarity with types of ICT resources.

Alternative Hypothesis H1 = There is significance association between age and familiarity with types of ICT resources.

Table.No:6.2.1 Age* Familiarity with types of ICT resources

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.679[a]	1	.102
Likelihood Ratio	2.687	1	.101
Linear-by-Linear Association	2.643	1	.104
N of Valid Cases	75		

Interpretation

When significance value (.102) is greater than alpha value (.05), H0 is accepted, H1 is rejected. There is no significant association between age and familiarity with types of ICT resources.

Hypothesis 2

Null Hypothesis H0 = There is no significance association between gender and conducting classes through ICT resources.

Alternative Hypothesis H1 = There is significance association between gender and conducting classes through ICT resources.

Table.No:6.2.2 Gender * Classes through ICT resources

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.571[a]	2	.168
Likelihood Ratio	3.621	2	.164
Linear-by-Linear Association	2.973	1	.085
N of Valid Cases	75		

Interpretation

When significance value (.168) is greater than alpha value (.05), H0 is accepted, H1 is rejected. There is no significance association between gender and conducting classes through ICT resources.

Hypothesis 3

Null Hypothesis H0 = There is no significance association between types of institution and accessibility of ICT resources in campus to conduct classes.

Alternative Hypothesis H1 = There is significance association between types of institution and accessibility of ICT resources in campus to conduct classes.

Table.No:6.2.3 Institution types* Accessibility of resources in campus

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	58.355[a]	9	<.001
Likelihood Ratio	65.158	9	<.001
Linear-by-Linear Association	.000	1	1.000
N of Valid Cases	75		

Interpretation

When significance value (.001) is lesser than alpha value (.05), H0 is rejected, H1 is accepted. There is significant association between types of institution and accessibility of ICT resources in campus to conduct classes.

Hypothesis 4

Null Hypothesis H0 = There is no significance association between institutional departments and frequently used ICT resource.

Alternative Hypothesis H1 = There is significance association between institutional departments and frequently used ICT resource.

Table.No:6.2.4 Institutional departments* Frequently used ICT resource

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	14.966[a]	8	.060
Likelihood Ratio	20.350	8	.009
Linear-by-Linear Association	1.301	1	.254
N of Valid Cases	75		

Interpretation

When significance value (.060) is greater than alpha value (.05), H0 is accepted. H1 is rejected. There is no significant association between institutional departments and frequently used ICT resource.

Hypothesis 5

Null Hypothesis H0 = There is no significance association between respondent's designation and familiarity with working on ICT resource.

Alternative Hypothesis H1 = There is significance association between respondent's designation and familiarity with working on ICT resource.

Table.No:6.2.5 Respondent's designation* Familiarity with working on ICT resource

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	32.670[a]	6	<.001
Likelihood Ratio	37.750	6	<.001
Linear-by-Linear Association	15.752	1	<.001
N of Valid Cases	75		

Interpretation

When significance value (.001) is lesser than alpha value (.05), H0 is rejected, H1 is accepted. There is significance association between respondent's designation and familiarity with working on ICT resource.

VII. FINDINGS

- The majority of the respondents are male only. (Table 6.1.1)
- The majority of the respondents are from the age group of below 30. (Table 6.1.2)
- The majority of the respondents have experience of below 5 years. (Table 6.1.3)
- The majority of the respondents were Assistant professor. (Table 6.1.4)
- The majority of the respondents were belonged to Engineering department. (Table 6.1.5)
- The majority of the respondents have access with internet in-campus and familiar with the types of ICT resources available. (Table 6.1.6)
- The majority of the respondent had frequently used, felt convenient in using and most likely preferred laptop/PC to others. (Table 6.1.7)
- There is no significant association between age and familiarity with types of ICT resources. (Table 6.2.1)
- There is no significance association between gender and conducting classes through ICT resources. (Table 6.2.2)
- There is significant association between types of institution and accessibility of ICT resources in campus to conduct classes. (Table 6.2.3)
- There is no significant association between institutional departments and frequently used ICT resource. (Table 6.2.4)
- There is significance association between respondent's designation and familiarity with working on ICT resource. (Table 6.2.5)

VIII. SUGGESTIONS

The respondents mostly access the internet available in campus to conduct classes, so the colleges may need to have proper maintenance over that. (Finding 6)

In between availability of various types of resources laptops/PC had a hike in frequent and convenience in usage and also highly preferred one, so other resources also have to be utilised (Finding 7)

The accessibility of resource had relation with the type of institution, as per this all type of institution have to concentrate over their accessibility of resource. (Finding 10)

The respondent's designation had influence over the familiarity with working on ICT resource, it shows that others were less likely known to operate so it is suggested that all must be competent to handle the resources. (Finding 12)

IX. CONCLUSION

The population need to be improvised among the concept, familiarity and usage of the ICT resources. It won't bring any wider impact among people because it seems to be freshly budding concept in recent years especially during pandemic. It has wider scope in the future and it need to be evolved which may lead to time consumption and used to communicate knowledge in a different and easier aspect.

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