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## **A study of the adaptability of ICT by teachers in their teaching in South district, Delhi**

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### **Abstract**

“ICT act as a tool to improve learning, to enhance pedagogies, for effective technological /digital structures in schools, to establish good relations between schools and society and to motivate the learners”.-- The Ministry of Education-

A study of the adaptability of ICT by teachers in their teaching in South District of Delhi conducted to investigate the adaptability of ICT resources in Schools of DoE and MCD of south District of Delhi. A descriptive design for the study was used. Data was collected through Google form questionnaire. Qualitative data was analyzed and interpreted. The findings of the study indicate that teachers used ICT resources in the teaching to plan and share the E-content for students. This study will be useful for ICT integration in schools of South Delhi and other parts of the country.

**Keywords:** information and communication technology (ICT), adaptability

### **Introduction**

ICT (Information and communication technology) means list of those components used for telecommunication e.g. smart phones, digital T.V., computer and all digital technologies which help the students in learning and to find out the solution of the problems in the field of learning. ICT creates a platform for students, teachers and others to exchange the ideas at local, national and international levels. Now a days, information dissemination became easier because of E learning and on line library. In schools and colleges, ICT used in administration and office for proper documentation.

### **There are some of the challenges during use of ICT**

- Practically, use of ICT equipments is very costly.
- Use of ICT requires technical knowledge, analytical reasoning.
- Use of ICT should be accepted compulsory everywhere in the field of study.
- Sometimes, bad use of ICT can damage computers and other digital equipments.

### **Various devices in ICT include**

- Remote devices such as iPhone, Android,
- Online digital Platforms for lectures, course materials,
- Online/cloud based academic management systems,
- flipped classroom concept- a form of blended learning,
- use of computers, tablet, audio players, projector devices etc.

### **Review of Related Literature**

#### **Use of ICT in Teaching and Learning**

Carmen *et al.* (2003) studied integration of ICT tools in teaching -learning and stated that integration could enhance students' learning competencies and provide opportunities for communication. Plomp *et al.* (1996) research on integration of ICT stated that three major objectives distinguish the use of ICT in education-- the use of ICT as an object of study, an aspect of a discipline or profession and a medium for teaching and learning. The teacher can improve learning with ICT as a key person. Teachers' attitude towards the use of technology in teaching and learning process plays an important role in the use of computer technology in education. Albirini (2006); Baylor and Ritchie (2002) studied and find out that the success of technology use in the education largely depends on teachers' attitudes toward technology use. Kluever *et al.* (1994) research also supported that the use of ICT in the classroom depends mainly on the teachers' attitudes for adopting and integrating ICT tools. Hence, teachers' attitudes have direct impact on the use of technology

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**Objective of the study**

- To study the adaptability of ICT by teachers in their teaching.
- To study about the maximum use of on line platform to teach the content to students.

**Research Design**

In this research, quantitative methodology was used to collect and analyze the data through questionnaire. Questionnaire was developed and finalized by reearchers by the targeted group of respondents through google form. The questionnaire was designed specifically to address research objectives.

**Instrumentation & Sampling**

Total of 70DoE and MCD school teachers in the state of Delhi were selected randomly as the sample for the study. The survey was done through Google form questionnaire to the respondents. The data was analyzed qualitatively. The questionnaire was based on 5-point Likert Scale ranging from: 5 = always, 4= often, 3 = sometimes, 2 = rarely and 1 = never

The QUESTIONNAIRE was distributed through google to the respondents.

**The questionnaire included various sections**

- A. Personal Details,
- B. Information and Communication tools availability checklist in schools,
- C. Adaptability of ICT resources by teachers,

- D. Barriers in using ICT in Teaching- Learning,
- E. Do you use any software in the teaching-learning process? If Yes, please specify the Name of software,
- F. Do you have any suggestions regarding effective use of ICT?

**Data Analysis Process**

The data collected from the respondents were gathered and analyzed by using the Statistical Packages for the Social Sciences (SPSS) version 21. The analysis includes both descriptive and inferential analysis.

**Statistical technique**

Mean, Standard deviation and t-test is used to analysis the Data.

**Analysis of data**

**To attain the different objectives of the study following analysis was done**

1. To study the adaptability of ICT by teachers in their teaching
2. To study about the maximum use of on line platform to teach the content to students.

**1. To study the adaptability of ICT by teachers in their teaching**

To get the overall idea about the adaptability of ICT by teachers in their teaching in schools, the descriptive analysis and inferential analysis were done.

Score Chart

	Minimum	Maximum	Mean	Std. Deviation
Use of digital platforms	1	5	3.00	1.182
To Plan online lessons	1	5	3.11	1.210
To Shared e-content	1	5	3.59	1.165
To motivate students	1	5	3.19	1.320
To provide online assignment	1	5	3.28	1.228
To enhance teaching-learning strategies	1	5	3.36	1.132
To develop ICT based skills among students	1	5	2.98	1.215
To explore pedagogical tools	1	5	3.14	1.271
To create your own learning material	1	5	3.44	1.097
To communicate with parents and SMCs	1	5	3.52	1.297
To interact with students	1	5	3.45	1.332
To evaluate	1	5	3.48	1.182

**Interpretation**

According to this table, the entire disclosures mean showed a moderate level. For the statement, “Use of digital platforms” (M=3.00, SD= 1.182). “To plan online lessons” (M= 3.11, SD=1.210) and “To share e-content with students” (M=3.59, SD=1.165). Further, “To motivate students” (M=3.19, SD=1.320) and “To provide online assignments/projects” (M=3.28, SD=1.228) were calculated. For the statement “To enhance teaching-learning through

ICT” (M=3.36, SD=1.132). “To develop ICT bases skills among students” (M=2.98, SD=1.215). “To explore pedagogical tools” (M=3.14, SD=1.271), “To create your own learning material (M=3.44, SD=1.097). “To communicate with parents and SMCs (M=3.52, SD=1.297), “To interact with students (M=3.45, SD=1.332) and for the statement “To evaluate students’ performance” (M=3.48, SD=1.182). The mean level of expression statement was in between 2.98 to 3.59.

One Sample Test

	Mean	Std. Deviation	Std. Error Mean
Use of digital platforms	3.00	1.182	.148
To Plan online lessons	3.11	1.210	.151
Shared e-content	3.59	1.165	.146
motivate	3.19	1.320	.165
provide online assignment	3.28	1.228	.153
interact	3.45	1.332	.167
evaluate	3.48	1.182	.148
To enhance teaching-learning strategies	3.36	1.132	.142
To develop ICT based skills among students	2.98	1.215	.152
To explore pedagogical tools	3.14	1.271	.159
To create your own learning material	3.44	1.097	.137
To communicate with parents and SMCs	3.52	1.297	.162

One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Use of digital platforms	20.307	63	.000	3.000	2.70	3.30
To Plan online lessons	20.558	63	.000	3.109	2.81	3.41
Shared e-content	24.688	63	.000	3.594	3.30	3.88
motivate	19.320	63	.000	3.188	2.86	3.52
provide online assignment	21.384	63	.000	3.281	2.97	3.59
interact	20.732	63	.000	3.453	3.12	3.79
evaluate	23.588	63	.000	3.484	3.19	3.78
To enhance teaching-learning strategies	23.740	63	.000	3.359	3.08	3.64
To develop ICT based skills among students	19.652	63	.000	2.984	2.68	3.29
To explore pedagogical tools	19.772	63	.000	3.141	2.82	3.46
To create your own learning material	25.079	63	.000	3.438	3.16	3.71
To communicate with parents and SMCs	21.684	63	.000	3.516	3.19	3.84

One-Sample Effect Sizes

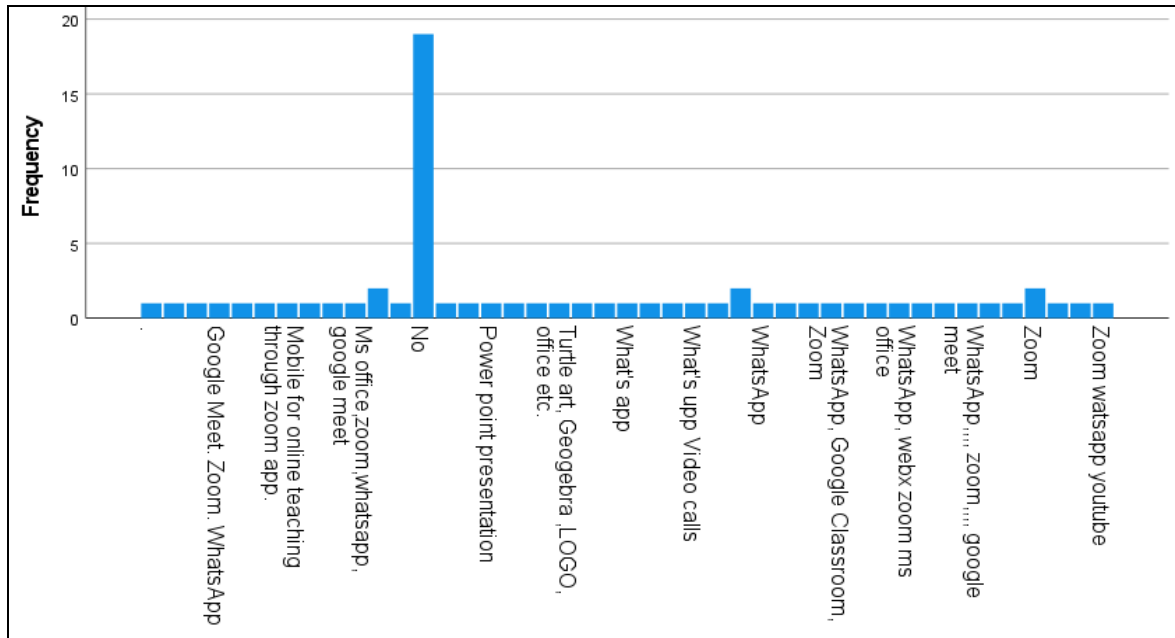
		Standardizer <sup>a</sup>	Point Estimate	95% Confidence Interval	
				Lower	Upper
Use of digital platforms	Cohen's d	1.182	2.538	2.030	3.041
	Hedges' correction	1.196	2.508	2.006	3.005
To Plan online lessons	Cohen's d	1.210	2.570	2.057	3.077
	Hedges' correction	1.225	2.539	2.032	3.041
Shared e-content	Cohen's d	1.165	3.086	2.493	3.674
	Hedges' correction	1.179	3.049	2.463	3.630
motivate	Cohen's d	1.320	2.415	1.925	2.899
	Hedges' correction	1.336	2.386	1.902	2.864
provide online assignment	Cohen's d	1.228	2.673	2.144	3.196
	Hedges' correction	1.242	2.641	2.119	3.158
interact	Cohen's d	1.332	2.591	2.075	3.102
	Hedges' correction	1.349	2.560	2.050	3.065
evaluate	Cohen's d	1.182	2.948	2.377	3.515
	Hedges' correction	1.196	2.913	2.348	3.473
To enhance teaching-learning strategies	Cohen's d	1.132	2.968	2.393	3.537
	Hedges' correction	1.146	2.932	2.364	3.495
To develop ICT based skills among students	Cohen's d	1.215	2.457	1.961	2.947
	Hedges' correction	1.230	2.427	1.937	2.912
To explore pedagogical tools	Cohen's d	1.271	2.471	1.973	2.964
	Hedges' correction	1.286	2.442	1.950	2.929
To create your own learning material	Cohen's d	1.097	3.135	2.534	3.731
	Hedges' correction	1.110	3.097	2.504	3.686
To communicate with parents and SMCs	Cohen's d	1.297	2.711	2.176	3.240
	Hedges' correction	1.313	2.678	2.150	3.201

a. The denominator used in estimating the effect sizes.

Cohen's d uses the sample standard deviation.

Hedges' correction uses the sample standard deviation, plus a correction factor.

**2. Do you/teachers use any software/on line platform in the teaching-learning process? If yes, Please specify the name of the software.**



Do you use any software in the teaching-learning process? If yes, Please specify the name of software

**Interpretation**

According to this graph, normally some teachers in their school use WhatsApp, Google meet, Zoom, Google classroom apps in their teaching-learning process in schools of South district of Delhi. Majority of the data reflects that they don't use any software in their teaching-learning process.

**Conclusion**

Research findings concluded that teachers used ICT platforms to plan, to share and to teach on line content during pandemic through WhatsApp, Google meet, zoom, Google classroom apps, but due to lack of ICT resources in schools and digital knowledge among teachers, they are not able to cope up with the situations.

**Recommendations**

Research study recommended that school authority should provide proper training to teachers with motivation for the use of ICT in collaboration with government.

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