Utility of Digital Tech Classroom Instruction among CBSE School Teachers in Post-Pandemic Scenario

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ABSTRACT

Development of Technological knowledge has been moving towards the nation and international future classroom, after pandemic COVID-19. There are teachers all around the world and world of knowledge has become content of teaching. Today, teachers need to be preparing to provide technology supported opportunities for their students in teaching and learning process. Education is a lifelong process should be reachable by anyone at anytime and anywhere .The quality of education depends upon the quality of teaching and the good academic performance and achievement of the learners. Teachers who are equipped with technology resources and skills can effectively teach the necessary subject matter/content is required in digital era. The educational instructions are required to teach new technological skills, develop new insights and approaches to the new learning society. The purpose of this study is to determining the Utility of Digital Tech Classroom Instruction in the Classroom of CBSE School Teachers from selected CBSE schools in Gurgaon District. A descriptive method was used with normative survey technique was adopted. The study was administered to261 Teachers with reference to Gurgaon district. The study found that the level of Utility of Digital Tech Classroom Instruction among CBSE Teachers is at moderate. Further, it was found that there exists significant difference in Utility of digital classroom technology instruction mean score among CBSE school teachers with respect to gender, locality, discipline and teaching experience

Key Words: Covid-19 Post-Pandemic, Technology, Digital Tech Classroom Instruction, CBSE Teachers

INTRODUCTION

In 21st Century, everything is changing with the talk and chalk method to digital knowledge-based teaching. Teachers' roles in digital learning demand their skill in delivering appropriate solutions to diverse difficulties and adapting to changing contexts. "This movement involves a change in educational focus that promotes creativity, initiative, invention, communication, and interaction. Now a day's teachers must be able to stay up with the times, be change instructors and learning advisors, and have a strong sense of compassion, morals, and social sensitivity, as well as be rational and honest-minded to do work effectively in a dynamic educational environment"(Bastien AR, 2002). Today the world approaches towards digital revolution and teachers have become digital natives and teacher's role become facilitator, instructor and director to their students in their search of knowledge. The digital devices are capable to glorify the requirements of the learners for ease and comfortable learning in collaborative manner and it facilitates adapting learning technology.

The teacher's professional growth is very important because it provides an equal opportunity for obtaining mastery in the field of specialization, and it considered as an advantage. Teachers are successful and efficient in employing knowledge and application of online source materials and e-packages in classroom instruction, as well as encouraging students to use online facilities and sources for their learning process enhancement that will be fruitful and meet international quality standards. When teachers are ready for adapting to digital teaching methods and incorporating computers, lifelong learning will be most possible to changes in learning environments. "In the digital age, the teaching environment must be harmonized with the use of information and communication technology, such as the internet and cyber- net, which allows the learners to learn independently, dynamically, and not be bound by only one place and one source of learning, not even by the teaching from teacher, but it allow to learn from many teachers and various sources in virtual worlds". (Chestar. E 2012)

NEED AND SIGNIFICANCE OF THE STUDY

The need of Digital Tech Classroom Instruction allows for improvements in the quality and creativity of curriculum design and teaching, as well as how it is delivered content to students. It promotes and facilitates changes

and develop teacher's way the organized teaching profession. In the digital era, contents are designed, shared, and developed collaboratively on the cloud. Students learn to accept greater self-responsibility at an early age through teaching, which also improves collaboration as teamwork and it has the unique ability to transform instruction from a classroom-based activity to learner-based activity. Despite all of the changes that have occurred because of digital revolution in the 21st century. The CBSE objectives remain the same: to enable teachers to develop technological skills and to engage their responsibly in Digital teaching in future classroom. It will mandatory that the teacher's of CBSE schools could have been advanced technologically in teaching. That's why we require advanced technologically in teaching. Therefore, it is paramount carryout to study on **"Utility of Digital Tech Classroom Instruction among CBSE School Teachers in Pose-Pandemic Scenario".**

OBJECTIVES OF THE STUDY

The objectives of the study are stated as follows,

➢ To assess the Utility of Digital Tech Classroom Instruction among the CBSE school Teachers in Gurgaon District.
➢ To find out the significance of difference if any, in the Utility of Digital Tech Classroom Instruction mean score of the Demographic variables with respect to Gender, Locality, Discipline of Teaching and Teaching of Experience CBSE school Teachers.

HYPOTHESES OF THE STUDY

Based on the above objectives, the following hypotheses are formulated for testing,

➢ The level of Utility of Digital Tech Classroom Instruction among CBSE School Teachers is not high.
➢ There exists no significant difference in the Utility of Digital Tech Classroom Instruction mean score of the Demographic variables with respect to Gender, Locality, Discipline of Teaching and Teaching of Experience CBSE School Teachers.

METHODOLOGY

The investigator followed a descriptive method with normative survey technique in the study. A sample of 261 CBSE school teachers were working in various CBSE schools of affiliated from Central Board of Secondary Education (CBSE) in Gurgaon District by using simple random sampling technique.

DATA ANALYSIS

HYPOTHESIS – 1

The level of Utility of Digital Tech Classroom Instruction among CBSE School Teachers is not high

Table-1
Mean and Standard Deviation of the Whole Sample's of **Utility of Digital Tech Classroom Instruction mean scores of CBSE school teachers**

Variable	N	Mean	Maximum Score	SD
Digital Tech Classroom Instruction	261	94.47	146	29.20

From the above table-1, the mean Utility of Digital Tech Classroom Instruction Scores of the whole sample is 94.47 against the maximum obtainable value score of 146. This indicates the level of Utility of Digital Tech Classroom Instruction of CBSE School teachers are average. It can be inferred that the Utility of Digital Tech Classroom Instruction of CBSE school teachers are found to be at average level.

HYPOTHESIS - 2

There exists no significant difference in the Utility of Digital Tech Classroom Instruction mean score between CBSE School Teachers of male and female.

This hypothesis was tested by using t-test. The t-value was computed to find out the significance of difference in Utility of Digital Tech Classroom Instruction mean scores between male and female CBSE school teachers.

Table – 2
Significance of difference in Utility of Digital Tech Classroom Instruction means scores of the Demographic variables with respect to Gender, Locality of CBSE School Teachers.

Gender	N	Mean	S.D	t-value	Level of Significance
Male	37	87.48	29.75	1.57	
Female	224	95.62	29.11		Not Significant
Rural	38	87.52	31.27	1.58	
Urban	223	95.65	28.83		

Not Significant at 0.05 level

The above table -2 presents the analysis of the Utility of Digital Tech Classroom Instruction mean scores of the CBSE school teachers with respect to their gender and locality. As revealed by the table the sample consists of 37 male teachers and 224 female teachers. The Utility of Digital Tech Classroom Instruction mean score of male prospective teachers are 87.48 and that of the female prospective teachers are 95.62. The Standard Deviations are 29.75 and 29.11respectively. The calculated't' value is 1.57 is less than the critical value 1.97 corresponding at 0.05 level of significance. It implies that there is no significant differences in Utility of Digital Tech Classroom Instruction mean score of male and female teachers of CBSE schools. Further, it can be concluded that both male and female teachers have similar in their Utility of Digital Tech Classroom Instruction at CBSE schools. The Utility of Digital Tech Classroom Instruction mean score of rural area CBSE school teachers are 87.52 and that of the urban area CBSE school teachers is 95.65. The Standard Deviations are 31.27and 28.83 respectively. The calculated't' value is less than the table value 1.97 corresponding at 0.05 level of significance. This implies that the difference in Utility of Digital Tech Classroom Instruction mean score under consideration is not significant. Hence, the null hypothesis is accepted. Therefore, it can be concluded that rural and urban CBSE school teachers do not differ significantly in respect of their Utility of Digital Tech Classroom Instruction.

HYPOTHESIS – 3
There exists no significant difference in the Utility of Digital Tech Classroom Instruction mean score with respect to their discipline among CBSE school Teachers.
This hypothesis was tested by using f-test. The f-value was computed to find out the significance of difference in Utility of Digital Tech Classroom Instruction mean scores among the CBSE school teachers of various disciplines.

Table – 3(a)
ANOVA table, showing Significance of difference among Utility of Digital Tech Classroom Instruction means scores between the CBSE school teachers of various disciplines.

Source of Variance	Sum of Squares	Degree of Freedom	Mean Square	'F' Ratio
Between Groups	1535.58	2	767.79	
Within Groups	221441.45	258	858.30	0.895

Not significant at 0.05 level

As seen in the table, the computed value of F (0.895) is not significant at 0.05 level of significance .Hence the framed null hypothesis is not rejected. This establishes that the CBSE school teachers of various discipline do not

vary significantly with respect to utility of different Tech Classroom Instruction. For a better understanding, the mean of Utility of Digital Tech Classroom Instruction of CBSE school teachers, sub-grouped on the basis of various disciplines are presented in the next table and discussed.

Table – 3 b)
Utility of Digital Tech Classroom Instruction Score of the CBSE School Teachers with respect to various Disciplines.

Discipline	N	Mean
Arts	92	95.98
Science	119	95.37
Commerce	50	89.52

From the table - 4(b), it is clear that, the mean scores of various disciplines arts, science and commerce are 95.98, 95.37 and 89.52 respectively. Further, it can be seen that the mean scores of arts and science discipline CBSE school teachers are higher than that of their counterparts. Therefore, it can be concluded that the Arts and science Discipline CBSE school teachers are better than their counterparts in Utility of Digital Tech Classroom Instruction.

HYPOTHESIS – 4

There is no significant difference in the Utility of Digital Tech Classroom Instruction mean score between the CBSE school teacher of below ten years and above ten years of teaching experience,

This hypothesis was tested by using t-test. The t- value was computed to find out significance of difference in the Utility of Digital Tech Classroom Instruction mean score between the CBSE school teachers of below ten years and above ten years of teaching experience,

TABLE-4
Significance of difference in the Utility of Digital Tech Classroom Instruction mean score between the CBSE school teachers of below ten years and above ten years of teaching experience,

Teaching Experience	N	Mean	S.D	D.F	't' value
Below 10 years	125	100.63	28.91	259	3.32*
Above10 years	136	88.80	28.57		

*Significant at 0.01 level

In this, study Mean, S.D of Utility of Digital Tech Classroom Instruction of CBSE school teachers of below 10 years experience and above 10 years experience mean values are100.63, 88.80 and S.D values are 28.91 , 28.57 respectively. The calculated 't' value is 3.32, which is more than of table value at both level is significant at DF = 259. It indicates that the mean Utility of Digital Tech Classroom Instruction score of the CBSE school teachers based on their teaching experience is statistically significantly. Hence, the null hypothesis "There is significant difference in the Utility of Digital Tech Classroom Instruction mean score between the CBSE school teachers of below ten years and above ten years of teaching experience. Hence the null hypothesis is rejected. Therefore, it can be concluded that the higher mean score of below 10 years teaching experience CBSE school teachers have significantly better in their Utility of Digital Tech Classroom Instruction than the above 10 years teaching experience.

MAJOR FINDINGS OF THE STUDY

The findings of the study are stated as follows:

1. The level of Utility of Digital Tech Classroom Instruction of the CBSE school teachers with reference to Gurgaon District is at average level.
2. No Significant difference is found in the Utility of Digital Tech Classroom Instruction mean scores between male and female CBSE teachers of CBSE Schools. Both male and female have a same in their level of Utility of Digital Tech Classroom Instruction at CBSE Schools.
3. No significant difference is found in the Utility of Digital Tech Classroom Instruction between the CBSE school teachers of rural and urban area. Both of them have a similar level of Utility of Digital Tech Classroom Instruction.

4. No significant difference is found in the Utility of Digital Tech Classroom Instruction mean scores among CBSE school teachers with respect to various discipline of teaching. It revealed that CBSE school teachers do not have significant difference on the basis of various discipline of teaching with regard to Utility of Digital Tech Classroom Instruction.
5. Significant difference is found in the Utility of Digital Tech Classroom Instruction mean scores between the CBSE school teachers of above and below 10 years of teaching experience. The higher mean scores of below 10 years of teaching experience in CBSE school teachers have a better in their level of Utility of Digital Tech Classroom Instruction than the above 10 years of teaching experience.

EDUCATIONAL IMPLICATIONS OF THE STUDY
1- All CBSE schools should provide digital equipment such as Interactive white board, Document camera, Projector to use in the future classrooms in their teaching in Post-Pandemic Outbreak.
2- Provide proper training/ orientation programme to use new Tech gadgets among teachers at all levels to handle students with Tech.
3- All teachers must improve their ability to adapt technology for delivery content to students, as well as make their responses more collaborative, cooperative and holistic.
4- Teachers of CBSE Schools should be supervised in CBSE school monitoring team to identify and use their existing talents and knowledge and collect feedback about their usages of Digital Tech from Students.
5- Teachers should be used Digital Tech Classroom Instructional methods, which make use of digital materials whenever possible and gives more flexibility and make easy to learn to understand, apply, evaluate, analyze, synthesis, innovative and create the thing with maximizing their Potentials.

CONCLUSION

The aim of this study was to examine how teachers strategically employed online tools, utilizing breakout groups, interactive whiteboards, agendas, and community-building activities to model effective teaching strategies.(Metscher 2021) Due to the Post-Pandemic situation, the CBSE schools closures have enhanced their teacher engagement with technology and the build their confidence in applying it. 'The classroom difficulty is that today's students are digital natives who are well versed in technology, whereas many teachers are face problems to use technology in teaching. Teachers must be able to use software, hardware, digital, technological, and social platforms to teach the "content of the future." (Lakkala M 2018) The new concept of education in the digital era is the integration of continuous grading, quick feedback, defined goals, incentives, challenges, and positive reinforcement. Above all, action is required to encourage the use of technology in the classroom and to capitalize on the rising usage of instruction by using technology, open educational materials, and the emergence of data-driven learning and assessment. As a result, teachers of CBSE Schools will need to develop a set of Technological skills to meet the demands of the digital age. It has also increased teacher technological engagement, and students have also developed digital skills that will help them to achieve in their studies and it will be strengthened their networking skills among students and teachers.

REFERENCES:
➢ Fitria, H., and Suminah, S. (2020). Role of Teachers in Digital Tech Classroom Instruction al Era. Journal of Social Work and Science Education, Vol 1(1),
➢ Harwati Hashim (2018) Application of Technology in digital Era Education , Vol 1 (2)
➢ Jayanthi. R and Shivakumar .R (2014) Application of Digital Technology in Classroom instruction Among Teacher Educators in B.Ed Colleges. Vol 4 (6).
➢ Manju Gehlawart and Indu Bala Tehlan (2018) Innovative Strategies in Education- The Emerging Paradigm, Sarup Book Publications (P) Ltd, New Delhi.
➢ Marimuthu, S (2017) Effectiveness of computer assisted instruction CAI and self-instructional modules SIM for enhancing performance of higher secondary students in Economics Vol,12 p.157,
➢ Metscher S. (2021). Digital Tech Classroom Instruction al practices to promote pedagogical content knowledge during COVID-19. *Journal of Education for Teaching*, Vol, *47*(1), 121-124.
➢ Stošić Lazar (2015). The importance of educational technology in teaching. International Journal of Cognitive Research in Science, Engineering and Education, Vol, 3 (1), 111-114.
➢ Tuma, F. (2021). The use of educational technology for interactive teaching in lectures. Annals of Medicine and Surgery, Vol (62), 231-235
➢ Winter, E and Costello, A. et, al (2021). Teachers' use of technology and the impact of Covid-19. *Irish Educational Studies*, Vol *40*(2), 235-246.