

Impact of Digital Classroom on Teaching Learning Process at Primary Level: A Comparative Analysis

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Introduction:

Digital Classroom can help students by making learning more engaging and collaborative. Rather than memorizing facts, students learn by doing and through critical thinking. This could be as simple as taking an interactive quiz in class or participating in tech-enabled group discussions. Or it could be as involved as playing educational games, practicing in science experiments in a virtual lab or taking a virtual field trip.

To make learning truly engaging, it must be truly interactive. Doing math on a computer isn't any different than doing math with a pencil and pad of paper. But using augmented reality to animate math challenges is a whole different ball game. Ultimately, interactivity and technology enhance learning.

For educators, the role of education technology is endless: from using simulation tools to demonstrate how a hurricane develops, to using virtual reality to practice medical procedures. "As a growing number of medical schools bring virtual reality into the classroom, students are finding it an effective way to learn complex subject matter, such as anatomy, that's often easier to understand with hands-on practice," writes Chris Hayhurst for EdTech Magazine. Blended learning is a great way to ensure you're using technology to engage your students both in and out of your class.

Need and Importance of Digital Classroom:

There are so many benefits when it comes to transforming a classroom into a digital classroom. In my opinion, one of the greatest advantages of going digital is that the possibilities of what you can do are endless. There are so many different websites, extensions, add-ons, and apps that teachers can use to enhance their teaching and connect with students. Digital classrooms prepare students for life in college

and the real world by providing them with a technology-based education. Digital classrooms are also great for the environment because paper use is either eliminated or significantly reduced.

Assumptions:

- 1) Students both from urban and rural areas learn through the medium of digital classrooms.
- 2) Teachers both from urban and rural areas make use of the medium of digital classrooms for teaching purpose.

Objectives:

- 1) To make a comparative study of the effects of digital classroom method on the learning of both – students from urban areas and those from rural areas.
- 2) To make a comparative study of the effects of digital classroom method on the teaching process of both – teachers from urban areas and those from rural areas.

Hypotheses:

- 1) There is no appreciable difference between the effectiveness in the learning abilities (capacities) of students from urban areas due to the use of digital classrooms.
- 2) There is no appreciable difference between the effectiveness in the learning abilities (capacities) of students from rural areas due to the use of digital classrooms.

Research Methodology:

In the current research paper, since the research subject is concerned with school subjects/theme, in it both the methods (tools), viz. school survey and experimental survey have been put to use.

Population:

In the current research paper, the population chosen is teachers from primary schools both from rural as well as those from urban areas – a total of

1,625 schools from a total of 08 talukas of Osmanabad have been included in it.

Sample:

While taking into consideration the population for the current research paper, sample has been chosen by using simple random sampling method and for this, 2 types of samples, viz. lottery and scoring have been put to use. For this research purpose, a total of 200 schools from the total population of 150 schools from rural areas and 50 schools from urban areas have been selected and in it, a total of 450 teachers have been selected (or included). For purpose no. 1, a total of 200 students from 10 schools from urban areas and 10 schools from rural areas have been included.

Tools:

For the purpose of data collection for the present research work, the tools viz. teachers' questionnaire and students' pre – test and post – test (self – created and standardized) have been put to use.

Statistical Tools:

In this research, following Statistical dimensions are used for the sake of analysis of data obtained and interpretation of the data.

- Mean value,
- Median,
- Standard deviation (S. D.) and
- t – test

t- Value of Pre-Test and Post Test of Urban Students

S r. No.	Particular	Sample (N)	Mean (M)	Standard Deviation (SD)	Calculated t-value	Table t-value		df	Result
						0.01	0.05		
1	Pre-Test	100	M = 15.50	SD = 2.682	18.44	2.63	1.08	99	Rejected
2	Post-Test	100	M = 17.16	SD = 1.864					

Observation and Interpretation:

From the above chart, it can be said that since these students from urban areas have been taught through the use of digital classroom methods, the obtained t – value regarding students' achievement is 18.44 and the relevance level of 0.01 and 0.05, the t – value is greater (18.44), therefore, the present hypothesis rejected by the researcher. There is appreciable difference on the effectiveness of learning level on students from urban areas due to the use of digital classroom methods and the researcher is inclined to accept this new research hypothesis.

t- Value of Pre-Test and Post Test of Rural Students

S r. No.	Particular	Sample (N)	Mean (M)	Standard Deviation (SD)	Calculated t-value	Table t-value		df	Result
						0.01	0.05		
1	Pre-Test	100	M = 16.16	SD = 3.072	5.43	2.63	1.08	99	Rejected
2	Post-Test	100	M = 16.72	SD = 2.134					

Observation and Interpretation:

From the above chart, it becomes evident that since the rural students have been taught by using learning – teaching through the digital classroom methods, the t – value of students' achievement is 5.43 and this t – value is more (18.44) than table t – value at 0.01 and 0.05 significance levels. Therefore, this hypothesis rejected to the researcher. Due to the use of digital classroom methods, there is appreciable difference on significance levels of students coming from rural areas. Therefore, the researcher is accepting this new hypothesis.

On studying both the tables comparatively, it becomes clear that the achievement level of students from rural comes out to be 5.43, whereas this achievement level for students from urban areas comes out to be 18.44. From this, it becomes clear that there is appreciable difference in the

achievement levels of students coming from urban areas, as compared to those from rural areas.

Impact of digital classroom on teachers' teaching

S r . N o	O p t i o n s	F a c t o r s	Factors Affecting on Teaching						P e r c e n t a g e
			Eff e c t i v e T e a c h i n g	Cl a r i t y o f A b s t r a c t C o n c e p t	Sci e n t i f i c C o n c e p t u a l C l a r i t y	J o y f u l E d u c a t i o n	L i m i t a t i o n C o n s t r u c t i v e T e a c h i n g	L i m i t a t i o n i n P e r s o n a l i t y D e v e l o p m e n t	
1	Y e s	R u r a l	290	289	296	292	193	186	87.00
		U r b a n	198	200	200	198	148	120	
Total			488	489	496	490	341	306	
2	N o	R u r a l	10	11	4	8	107	114	13.00
		U r b a n	2	0	0	2	52	80	
Total			12	11	4	10	159	194	

Observation and Interpretation:

From the above table, it becomes clear that since the teachers use (are using) digital classroom tools (methods), their teaching becomes effective and from students point of view, abstract concepts become clear to them, science concepts become clear and their learning process becomes enjoyable. But, at the same time, limitations have come across in personality development and constructivism teaching. Teachers from rural areas have registered responses respectively 290, 289, 296, 292, 193 and 186 and those from urban areas have registered responses respectively 198, 200, 200, 198, 148 and 120. From this, it becomes clear that the average population of teachers who confirm that the aspects from the above chart impact positively on teaching is 87%, whereas those teachers who deny this statement comes out to be merely 13%.

From this above analysis, it becomes clear that due to making use of digital classroom methods in teaching, there is more positive (appreciable)

difference on teaching from teachers who come from urban areas rather than those from rural areas.

Findings:

Objective-1

- 1) More effect of digital classroom methods is seen on the teaching on teachers coming from urban areas as compared to those coming from rural areas.
- 2) As regards to clarifying the scientific concepts, the teachers coming from urban areas are more positive than those coming from rural areas.
- 3) Seventy – four (74) % teachers from urban areas feel that there is limitation in constructivism teaching as compared to 64.33% teachers from urban areas and rural areas who state that the use of digital classrooms poses more problems in the personality development of students.

Objective-2

- 1) There seems to be positive impact on learning of students both from rural areas and those from urban areas due to the use of digital classrooms.
- 2) There is appreciable (more) rise in the achievement levels of students as far as students coming from urban areas than those from rural areas due to the use of digital classrooms.

Recommendations:

- 1) The govt. should provide with proper financial provision to both – schools from the rural areas as well as those from urban areas, in order to provide them with essential instruments (say, infrastructure) and facilities.
- 2) As compared to those areas from cities, there is more need to spread awareness in areas from villages, regarding the literacy of digital classrooms.

Discussion with Results:

In the current research paper, it becomes evident that there is a rise in the post – test marks of students than in the pre – test marks regarding students coming from both urban areas and those from rural areas and the reason behind this is that

students take up learning carefully when they are taught through the use of digital classrooms. Due to the use of digital tools, it becomes easy to explain the abstract and concrete concepts in learning – teaching, by making use of a variety of attractive colours, pictures and audio – visual media. The learning done through the use of digital classrooms becomes a pleasurable experience and aspects learnt are recollected well. That's the reason why there is a rise in the marks of post – test of students studied in the current research thesis.

Due to the use of digital classrooms, it becomes easy for teachers to explain the abstract concepts to students, to save both efforts and time and to bring about increase in students' marks – which is also useful to teachers from teaching point of view. It is also clear that there encounter comparative limitations in constructivism teaching and personality development of students when the digital classroom method is used and the reason for this is that for bringing about personality development, more than anything what is truly needed is building better relations among men then only personality development can take place in the true sense of the term.

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