EVOLVING HORIZONS
An Interdisciplinary International Journal of Education,
Humanities, Social And Behavioral Sciences
(A Peer Reviewed Journal)
Volume 9 • November 2020 • ISSN : 2319 - 6521

PARADIGM SHIFT FROM CONVENTIONAL TO DIGITAL CLASSROOMS: A COMPARATIVE STUDY

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Abstract

The world is experiencing the threat of massive devastation. An unusual disease outbreak which has no remedial measure, COVID 19 (novel corona virus) is upsetting the ecological balance and stability of mankind. In this communicable pandemic situation a digital classroom is the only alternative left for us to continue the education system. To compare this new digital platform of teaching learning method with the conventional teaching method certain parameters must be taken as the point of consideration. The researchers conducted an online survey and collected data from 100 teacher educators and 100 school teachers from urban region and suburb region. The survey was designed in a mode of both qualitative and quantitative research. Self made standardized questionnaire or Google form was used as a tool for the study. The present study was undertaken to identify which method or mode of teaching is better - Conventional or Digital. The final data was analysed quantitatively. Two clear distinguishing factors were identified by qualitative analysis viz, age and locality. Though it was finally concluded that the digital mode of teaching is the only way out in this present situation but the list of limitations were long. Teacher educators and school teachers of Suburb regions were facing issues with low bandwidth of internet, unavailability of suitable electronic gadgets and personal mobiles or computers. On the other hand the educators of the urban area are well equipped with all the electronic gadgets and the internet speed is also found to be high. Age was found to be another distinguishing factor which showed that children below the age of 13 are facing a lot of issues in understanding the mechanism of handling the gadgets. Whereas the children above 13 years were found to be very tech-savvy and they could take up this

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new method easily. Few other limitations were also found like conducting practical classes, teaching subject like Bengali, Hindi and Mathematics, value based learning, conducting collaborative activities, conducting co-curricular activities, setting assessment methods that contain long questions, limitations of unpaid websites etc. Overall it can be concluded that the students who are technologically advanced are getting benefited over the rest. This is creating a new mode of discrimination and here, the paradigm shifts.

Keywords: Paradigm shift, conventional classroom, digital classroom, communicable pandemic, collaborative activities, tech savvy, co-curricular activities

INTRODUCTION

An infectious disease called Corona virus disease COVID-19 outbreak all over the world is declared as Pandemic. This pandemic situation affected the education system globally. All the schools, colleges and universities are shut down indefinitely to tackle the spread of the deadly novel virus as no proper vaccination and treatment are still discovered. In this communicable pandemic situation a digital classroom is the only alternative left for us to continue the education system. Both the classroom situations have got their advantages and disadvantages.

Computer cannot replace a teacher. Face to face mode of teaching-learning process is more fruitful in case of Indian Education System, as there is more opportunity for a teacher to provide the non-verbal reinforcement. During lock down period, as the whole family is at home, so often students get distracted from the lecture and teachers are unable to control them properly through digital classroom situation. The scope of peer tutoring is also less. All the students are not tech savvy so independently they cannot learn. But digital classroom has its advantages also like students can stay at home safely, comfortably and can learn at their own pace. They can access study materials anytime they want, the digital classroom situation is more relaxed. So, it is a high time to think about the paradigm shift from lecture method to ICT(Information and Communication Technology) method. For some learners digital classroom is a boon but for some learners who are not tech friendly, for them it is becoming a curse. Only self motivated, organised, tech savvy learners can get full benefits from the digital classroom.

Conventional classroom means traditional classroom where a teacher and the students interact in a face-to-face mode. So, the education system is a bi directional process. This concept originates from the philosophy of Idealism. In this method the students can directly interact with the teacher and learn from his or her gesture, posture i.e they can get non verbal reinforcement.

Information and Communication Technology plays an important role in today's education system. Everywhere a concept of "smart class" is evolving. In this Information Age, teaching-learning process also needs a revolutionary change, a rapid modification and has to cope up with the diverse needs of the society. The concept of 'Digital India' is the burning issue of today. But due to outbreak of the deadly virus COVID-19 and lock down, no other option left but to choose digital mode of teaching to con-

tinue the education. From school to university level, everyone is using digital classroom. All of us should keep pace with the technological advancement and should realise the need of the hour. Though there are many pros and cons regarding use of digital classroom, we need to embrace it.

REVIEW OF RELATED LITERATURE

Pynoo, B., Devolder, P. (2011) published a paper titled as "Predicting Secondary school teachers' acceptance and Use of a digital learning environment: A cross-sectional study. In their study, the researchers have investigated about secondary school teachers' acceptance of a digital learning environment (DLE). Questionnaires were taken on three times (T1/T2/T3) during the same school year, with the Unified Theory of Acceptance and Use of Technology (UTAUT) as theoretical framework. Next to questionnaires, user-logs were collected during the entire school year. A total of 72 teachers completed a questionnaire on at least one occasion: 64 teachers responded at T1, 41 at T2, and 55 at T3. Researchers first investigated which factors influence teachers' acceptance of a DLE. The main predictors of DLE acceptance were performance expectancy and social influence by superiors to use the DLE. Effort expectancy and facilitating conditions were of minor importance. Researchers then investigated how well the amount of final observed use could be predicted, and found that at T1 about one third, at T2 about one fourth and at T3 about half of the variance in observed use was predicted by attitude, behavioral intention and self-reported frequency of use. Their study showed that to maximize use of a DLE, its usefulness should be demonstrated, while school boards or principals should strongly encourage teachers to (start to) use the DLE.

Burdick, A., Willis, H. (2011) published a paper titled as "Digital learning, Digital scholarship and Design thinking". This paper identifies opportunities for design thinking to be integrated into digital learning and digital scholarship initiatives. The paper traces how the rise of digital culture has led to the reconsideration of models for learning and the call for new modes of knowledge production. The researchers highlighted few points like-

- Digital technology has an impact on learning models and scholarly production.
- Digital learning initiatives value abilities claimed by design thinking.
- The design of platforms and interfaces for scholarship has epistemic impact.
- This calls for design thinking defined by interpretive, situated ways of knowing.
- Digital educators and design thinkers can create new modes of learning and research.

OBJECTIVES OF THE STUDY

The objectives of the present study are-

- To find out the better teaching-learning method among conventional and digital mode of teaching.
- To chalk out the limitations of digital learning method.
- To identify the distinguishing factors of conventional and digital mode of teaching-learning.

METHODOLOGY

Research design- This study is an online descriptive survey based research. It has both qualitative and quantitative part. So it can be said that it is mixed method research. For the quantitative part, questionnaire or google form was administered to the respondents and for the qualitative part individual interview was carried out over phone and questionnaire or google form was distributed among the respondents.

Population- The population of the present study comprised of all the school teachers and teacher educators working in Kolkata district and its suburbs.

Sample- From the total population of school teachers and teacher educators of Kolkata district and its suburbs, a sample of 100 school teachers and 100 teacher educators have been taken into consideration for this particular study.

	Teacher educators	School teachers
Urban	50	50
Suburbs	50	50

Tool- A self made, standardised questionnaire or google form is used as a tool for conducting the comparative study which contains 20 closed ended questions.

Procedure Of Data Collection- Data was obtained by online mode and opinion was sought by personal telephonic conversations.

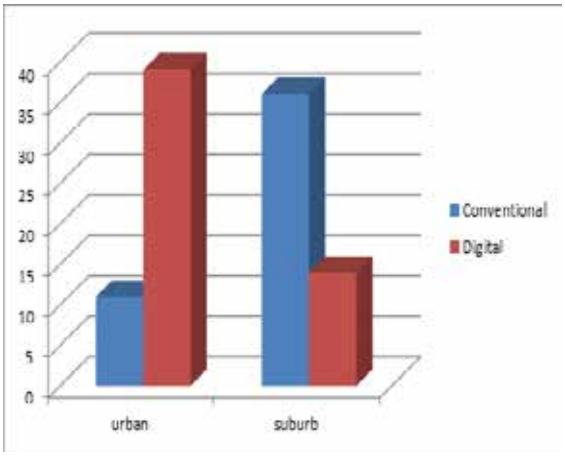
RESULT AND FINDINGS

Quantitative analysis: From the present study after analyzing the collected data quantitatively the following conclusions can be made. Table 1 shows that 36% of urban school teachers preferred conventional mode of teaching-learning and 76% of suburb school teachers preferred conventional mode of teaching-learning. Table 1 also shows 64% of urban school teachers preferred digital mode of teaching-learning and 24% of suburb school teachers preferred digital mode of teaching-learning.

	urban	suburb
Conventional	18	38
Digital	32	12

Table1: showing the feedback of school teachers of urban and suburb region regarding preferable mode of teaching

Figure 1: showing the feedback of school



teachers of urban and suburb region regarding preferable mode of teaching

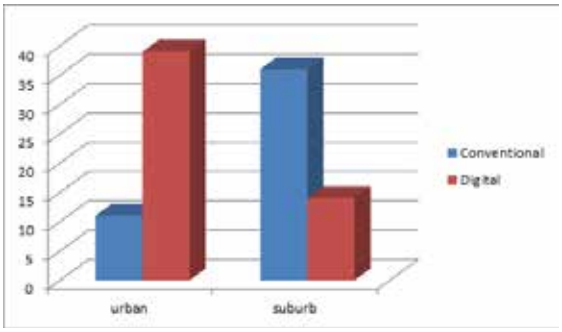
Figure 1: showing the feedback of school teachers of urban and suburb region regarding preferable mode of teaching

Table 2 shows that there exists significant difference among the urban and suburb teacher

educators about their preferences of teaching learning process. This table shows that 22% of urban teacher educators preferred conventional mode of teaching-learning and 72% of suburb teacher educators preferred conventional mode of teaching-learning. Table 2 also shows 78% of urban teacher educators preferred digital mode of teaching-learning and 28% of suburb teacher educators preferred digital mode of teaching-learning.

	urban	suburb
Conventional	11	36
Digital	39	14

Table 2 shows that there exists significant difference among the urban and suburb teacher educators about their preferences of teaching



learning process. This table shows that 22% of urban teacher educators preferred convention

Figure 2: showing the feedback of teacher educators of urban and suburb region regarding preferable mode of teaching

***Qualitative analysis*:** From the qualitative analysis another major distinguishing factor was identified which limits the digital teaching-learning process i.e. age. It was found that below the age of 13 students find it difficult to understand the mechanism of handling gadgets. Whereas the children above 13 years were found to be very tech-savvy and they could take up this new method easily.

School teachers and teacher educators have identified the following advantages and limitations of both conventional and digital mode of teaching-learning.

ADVANTAGES OF CONVENTIONAL CLASSROOM

- Students can interact with their teachers and peers in a face-to-face mode.
- Collaborative learning is promoted in conventional classroom.
- Proper rapport is built with teachers and peers. In this way social skills are developed like co-operation, collaboration etc.
- It is economical method.
- It is a preferable method in case of large number of students.
- It covers huge curriculum and saves time.
- It is a simplest method and requires no special arrangements to conduct the classroom teaching.
- **LIMITATIONS OF CONVENTIONAL CLASSROOM**
- Students become passive learners.
- Individual difference is often ignored.
- Teachers are not creative enough and sometimes reluctant.
- Classroom environment becomes monotonous.

- Creative thinking is blocked and focus is only on completion of the syllabus.
- Students' activity and engagement are very less.

ADVANTAGES OF DIGITAL CLASSROOM

- Classroom management becomes easier.
- The distracting factors of each student is limited in absence of their peers.
- Power point presentations can be included and a variety of colourful pictures and innovative teaching modules are way more attractive than chalk and talk method.
- The store house of knowledge i.e. internet can be utilised at its best.
- Encourages individual learning.
- It saves time and the travelling cost.
- It increases self motivation and accountability.
- **LIMITATIONS OF DIGITAL CLASSROOM**
- Limitation of conducting practical classes.
- Excessive screen time can damage eye sight.
- Digital distractions due to advertisement, pop ups, games, news updates.
- Using unfair means during online mode of assessment.
- Setting the assessment methods that contain long questions.
- Teaching subjects like Bengali, Hindi and Mathematics have limitations in using special characters.
- Unequal access to technology depending on their socio economic status and locality.
- Limited opportunity of conducting co curricular activities.
- No scope of collaborative activities.
- Limitations of using unpaid websites.

CONCLUSION

In the context of present challenging situation during this post COVID 19 period of time, school education and higher education both have experienced a major paradigm shift from conventional classroom teaching to digital learning from home. The present study has identified various dimensions of both school education as well as teacher education in order to analyse the present situation for developing an insight into the present day burning issue of education system. These two domains of education are selected viz. School education and teacher education because these two are inter related. All the researches and training given under teacher education is actually for the benefit of school education system. Hence, any insight study can not be undertaken without covering these two domains together. Quatitative and qualitative analysis are done together to cross check the data obtained in a quantitative manner along with the opinion and feelings of both school teachers and teacher educators through personal telephonic interview and conversations. A true picture could be obtained from this cross sectional analysis of these two important arenas of education system following mix and match method. The final interpretation of the present study as already been summed up earlier through quantitative analysis as well as listing of advantages

and limitations of both conventional and digital teaching-learning system.

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