OPPORTUNITIES AND CHALLENGES OF DIGITAL LEARNING DURING COVID-19 PANDEMIC

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$(Abstract)$

The Covid-19 pandemic has shaken the backbone of the world economy and disrupted all sectors of activates including education sector. Educational instaurations have completely shut down from third week of March, 2020. In this situation e-learning has played the role of substitute of classroom learning and helped the student to continue their study and the progress of their learning are not stopped due to this lockdown. It is true that e-learning is a new concept and India has adapting this new age of learning due to Covid-19 pandemic but there are so many obstructions or limitations to implement this e-learning successfully. This study is based on primary data survey on structured questionnaire among students, teachers and guardians. Total 153 responses have been received. This paper reviews the Opportunities and Future Prospect of e-learning.

Keywords: E-learning, covid-19 pandemic, educational institutions, lockdown.

INTRODUCTION

The World Health Organization has declared Covid-19 as pandemic on 11th March, 2020. This Covid-19 pandemic has shaken the backbone of the world economy and disrupted all types of activates. Most of Governments around the world have taken decision to shut down all educational institution in this situation. The Government of India has begun shutting down all school, college and university from third week of March, 2020 as a measure to contain the spread of the novel corona virus. Educational institutions of our country are already closed more than six months and have

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impact on the continuity of learning for more than 285 million young learners in India[2]. There is no certainty when school and colleges will reopen as there is no immediate solution to control this pandemic situation. Closures of educational institution will not only have a short-term but also engender far-reaching economic and societal consequences. This uncertainty regarding normality education sector has been stepping up to e-learning solution temporarily. Therefore, pandemic has been working as a catalyst for the educational sector to opt for e-learning platforms and techniques. Although the e-learning is not a new concept, it exists for over a decade (Abou El-Seoud et al., 2014, p. 20).

Meaning of e-learning:

Generally e-learning means learning through electronic medium. "E-learning is the use of electronic media for a variety of learning purposes that range from add-on functions in conventional classrooms to full substitution for the face-to face meetings by online encounters" (Guri-Rosenblit, 2005). "E-learning is distance education through remote resources" (Marquès, 2006). "E-learning is the delivery of a learning, training or education program by electronic means" (Li, Lau & Dharmendran, 2009).

In this crisis situation only a handful educational institutions of our country have started online classes. On the other hand, low-income private and government institutions have completely shut down for not having proper infrastructural facilities to access to e-learning facility. The Covid-19 pandemic has pointed out that necessity is the mother of all inventions by forcing educational institutions to adopt e-learning culture (Jana, 2020, p. 80). In this situation e-learning has played the role of substitute of classroom learning and helped the student to continue their study and the progress of their learning are not stopped due to this lockdown. Education system of our country has made a paradigm shift to the virtual world. Covid-19 has accelerated to adopt of e-learning and encourages teachers and students to become technology savvy (Jana, 2020, p. 80).

It is true that e-learning is a new concept and India has adapting this new age of learning due to Covid-19 pandemic but there are so many obstructions or limitations to implement this e-learning successfully. Basically people of rural and marginalized section of our society are not in the position to adapt this new age learning because our country is not fully equipped to reach e-learning facilities to every corners of our society. Although Government of India has taken initiative to come up with a solution to resolve this problem.

OBJECTIVE OF THE STUDY

1. To analysis the opportunities and challenges of online classes.

2. To analysis the e-learning and its prospect.

RESEARCH METHODOLOGY

This study is based on primary data survey on structured questionnaire among students, teachers and guardians. Questionnaire has been framed on advantages and limitations of e-learning in Google form. This questionnaire has been circulated in different social media from 10th August to 25th August, 2020. Total 153 responses have been received. Different charts, diagrams and tables have been used for presentation of data. Descriptive Statistics has been used to analyse the limitations or con-

straints of e-learning.

OBSERVATIONS OF E-LEARNING FROM DIF-FERENT STAKEHOLDERS POINT OF VIEW

E-learning is not a new concept; it is already exist over a decade. Many advance countries have already started e-learning in last few years. But we realised the necessity of e-learning during this crucial period of covid-19 pandemic. Before pandemic we hardly hear the name of any one online platform like, Zoom, Google Meet, Microsoft Team, Webex etc and how to use these platforms. Now it is very common to teaching- learning fraternity and it is almost indispensible in today's world of education. Although conventional class room teaching has no alternative but online education plays as a substitute of conventional classroom learning during this crucial time.

One of the questionnaires of this survey was regarding the **name of different online** platform. The result is shown in chart 1.

Chart 1. *e Survey*
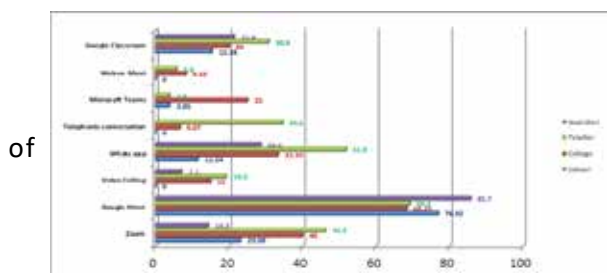
Finding:

On analysis of the above chart 1 it is observed that Google Meet is the most popular mode online e-learning platform and second most popular platform is Zoom. Many teachers are also preferred to use whatsapp as a mode of teaching tools in addition to other platforms.

The next question was relating to **face to face interaction** with teachers in chalk & talk method of teaching promotes **better clarity of understanding** than online teaching, which is shown in chart 2.

Chart 2.

*Source: Online Survey*

Finding:

It is observed from chart 2 that all stakeholders, i.e., students (school and higher studies), teachers and guardians are strongly agreed that conventional classroom teaching has better for understanding of lessons and teaching-learning interaction between teachers and students.
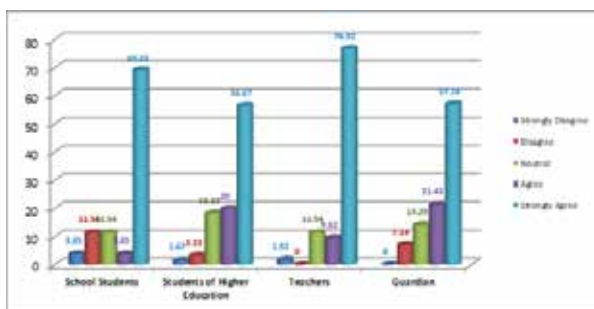
The next question was that online class can be a **close substitute of traditional chalk and talk** method. The observation is depicted in chart 3.

Chart 3.

Source: Online Survey
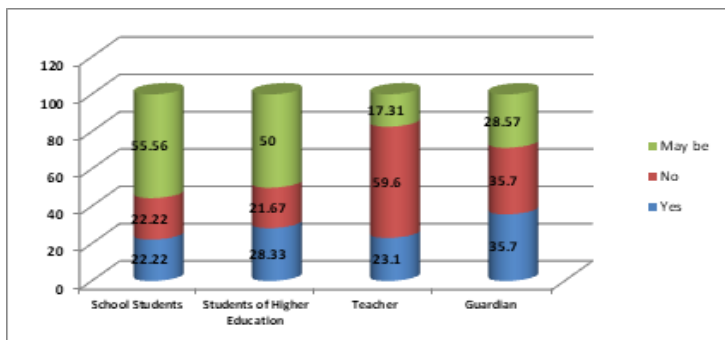
Finding:

From the above chart 3, it is observed that 55.56% and 50% students of school and higher education are said that e-learning may be close substitute of classroom learning. But teachers' opinion is that e-learning is not a close substitute of classroom learning, they feel comfortable in classroom learning because 59.6% teachers have chosen option 'NO'. Whereas 35.7% guardians opted the opinion 'Yes' and 'No 'respectively. Therefore, it can be conclude that direct teaching has no alternative, although e-learning is the most preferred mode of education at this time of Covid-19 pandemic.

The next question was regarding **flexibility e-Learning** in compare to classroom learning. This question was specifically framed for teachers' community. The result is shown in chart 4.
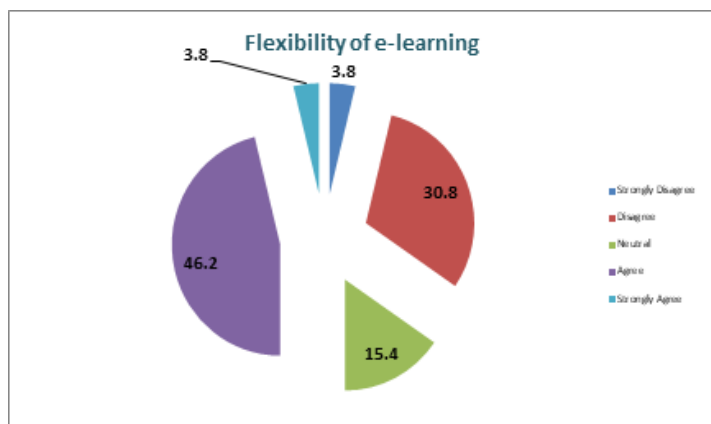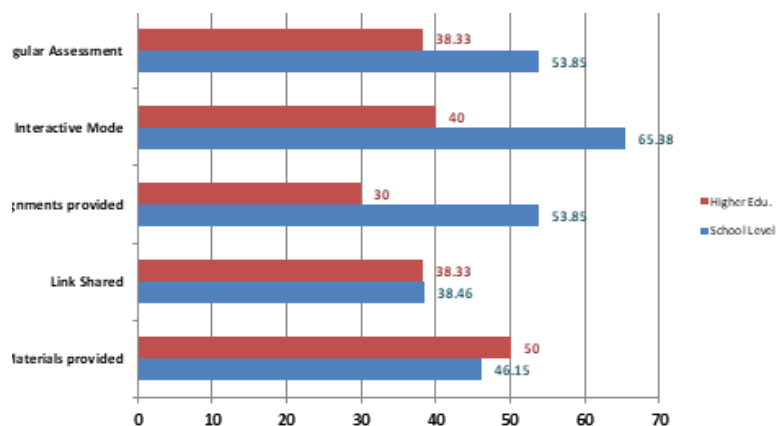

Chart 4.

Source: Online Survey

Finding:

On analysis of the above chart 4, it highlights that 46.2% teachers are agreed that e-learning is more flexible than conventional teaching mode. Although 30.8% teachers are disagreed with this fact. So, it can be said that e-learning is flexible in terms of place and time.

The following question was related to **tools/methods of improvement** of e-learning mode of teaching. This question was prepared exclusively for students both school level and higher education level. The result is depicted in chart 5.

Chart 5.

Finding:

On analysis of above chart 5 it focuses that there is a room for improvement of e-learning mode of teaching which help e-learning as an interactive and more interesting alternative as compared to classroom teaching.

- 65.38% respondents of school students are emphasized on interactive mode of education like Zoom, Google Meet etc. Whereas 40% respondents of college students are agreed in this point. Therefore, interactive mode of education is necessary for school level students.

- 50% respondents of higher studies suggest providing notes, study materials for their learning betterment. Whereas 46.15% school students are agreed in this point.

- 53.85% schools students are also suggested that regular assessment and assessment provide by the teachers are another room for improvement of e-learning system. But 38.33% and 30% students of higher education votes in this regard.

- 38.46% and 38.33% students of school education and higher education are highlighted the share link for reference purpose like you tube, website link, books and study reference link etc.

CHALLENGES OF E-LEARNING

Due to covid-19 pandemic educational activities have been totally closed since March, 2020 and created many challenges to the stake holders (Pravat, 2020a). As a result, the various academic activities for example admission, entrance tests, examinations conducted by various boards(ICSE, ICSs, CBSC and Higher Secondary)/colleges/ universities have been delayed and postponed certain examinations by the different school boards. The primary challenge was to conduct these activities because faculties, administrative staff and students could not physically present on the campuses in last few months. The obvious solution for the institutions was to depend upon online platform both for academic and administrative purposes. University Grants Commission (UGC) has issued a notification regarding 'Open and Distance Learning Programmes and Online programmes' Regulation 2020, dated on 4th September, 2020. The Higher Education Department, Government of West Bengal has issued a notification (vide no 517-Edn(A)/10M-21/20 dated 10th September, 2020) regarding online

Refresher Courses, Orientation Programmes and other Short-Term Courses for the purpose of career advancement of teachers of higher education institutions. Many institutions have already been started classes through online modes (Jana, 2020, p. 80). It is clear that e-learning is the most preferred teaching –learning mode of education at this time of crisis of covid-19 pandemic. But it has several limitations or challenges for smooth running of e-learning system.

The following constraints and limitations have been pointed out by conducting the survey of this study. These are discussed below in different Table, charts and diagrams.

Table 1.Constraints of e-learning

	School			College			Teacher			Guardian		
	A	B	C	A	B	C	A	B	C	A	B	C
Accessibility of Android Phone or Computers.	50	38.46	11.54	38.33	50	11.67	69.51	22.26	8.23	64.29	21.43	14.29
Costly internet data	26.92	42.31	30.77	23.33	23.33	53.33	70.25	23.78	5.97	57.14	28.57	14.29
Lack of motivation	26.92	34.62	38.46	41.67	31.67	26.67	40.38	17.31	42.31	28.57	57.14	14.29
Secured online platform	23.08	46.15	30.77	45	30	25	32.69	30.77	36.54	35.71	35.71	28.57
Health Hazards	53.85	19.23	26.92	41.67	38.33	20	38.46	32.69	28.85	35.71	28.57	35.71
Lack of technical Knowledge	38.46	26.92	34.62	31.67	41.67	26.67	28.85	46.15	25	50	42.86	7.14
Internet quality	11.54	50	38.46	20	43.33	36.67	7.69	34.62	57.69	21.43	28.57	50
Video quality	30.77	42.31	26.92	31.67	45	23.33	28.85	44.23	26.92	35.71	42.86	21.43
Audio quality	53.58	23.08	23.08	36.67	38.33	25	21.15	55.77	23.08	28.57	50	21.43

Source: Online Survey　　　　(A.= Not a serious problem, B= Problem but manageable; C= Serious problem)

Finding:

On analysis of the above table 1, the following observations are-

Accessibility of Android Phone or Computers: It is true that e-learning is totally based on accessibility of android phone or computer. In this point more than 50% respondents among school students, teachers and guardians are agreed that this is not very serious issue whereas 50% students of higher education are opinioned that it is a problem but manageable.

Costly Internet Data: Recharging cost of 3G data of various service providers are around Rs 699 for 2GB data per day for 84 days duration. This really a big problem for students' community. 23.08% school students are agreed that it is a serious problem or problem but manageable. Whereas 53.33% students of higher education are highlighted this as serious problem. Teachers and guardians are opinioned that it is not a serious problem.

Health Hazards: As e-learning is based on digital electronic devices, therefore there must be a health issue. 53.85% and 41.67% students of school and colleges have opinioned that it is not a serious problem. But 28.85% and 35.71% teachers and guardians are agreed that health problem is a serious issue.

Lack of Motivation: In this point mixed responses have been received. 38.46% Students at school level are argued that it is a serious problem whereas 41.67% college students and 40.38% teachers are opinioned that it is not a serious issue. 57.14% guardians are agreed that it is manageable problem.

Lack of Technical Knowledge: For conducting the online classes, adequate technical knowledge of operating e-learning apps and software like Google Classroom, G-suite account, Google forms, Google Meet, Zoom apps etc. are very much necessary for both students and teachers. 34.62% school students are agreed that it is a serious problem whereas 41.67% students of higher education and 46.15% teachers are pointed out that it is manageable problem.

A descriptive analysis regarding limitation of e-learning has been made on the data available in table 1. There are four categories of respondents such as school students, college students, teachers and guardians and every category has three options. Therefore, total number of observations are (9 questions X 4 categories) 36. Descriptive Statistics are shown in table 2.

Table 2.Descriptive Statistics

|	N	Range	Minimum	Maximum	Mean	Std. Deviation
NSP	36	62.56	7.69	70.25	36.6692	14.73465
PBM	36	39.83	17.31	57.14	36.3342	10.56472
SP	36	51.72	5.97	57.69	26.9894	12.33936
Valid N (list wise)	36					

Source: Computed from the data available in table 1.

From the above descriptive analysis, it is shown that mean value of NSP (Not a Serious Problem) and PBS (Problems but Manageable) are 36.67 and 36.33 respectively. This indicates that either it is not a serious problem or problem but manageable. Whereas mean value of SP (Serious Problem) is only 26.99 which implies that constraints of e-learning is not a very serious issue. Standard Deviation of all three options is not very wide. Therefore, it can conclude that e-learning has some problems in initial stage but it cannot be considered as serious problems, rather it can be manageable in near future.

Difficulties relating to Work from Home (WFH) culture. This question is specifically for teachers' community.

Chart 6.

Work from Home

- Not a Serious Prob
- Prob But Manageable
- Serious Problem

11.54
34.62
53.85
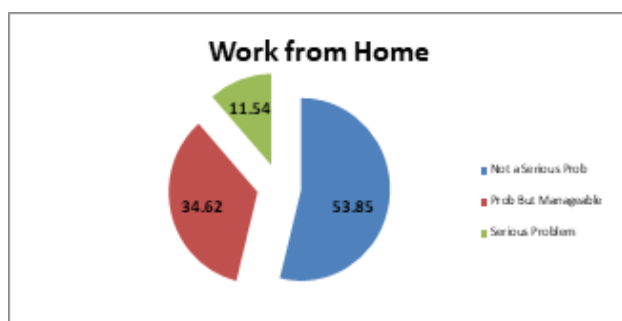
Finding:

On analysis of chart 6, it is observed that 53.85% teachers are opinioned that WFH is not a serious problem, whereas 34.62% respondents highlight that this is a manageable problem.

Difficulties relating to **hands on experience of doing Laboratory practical** classes in the online mode of teaching.
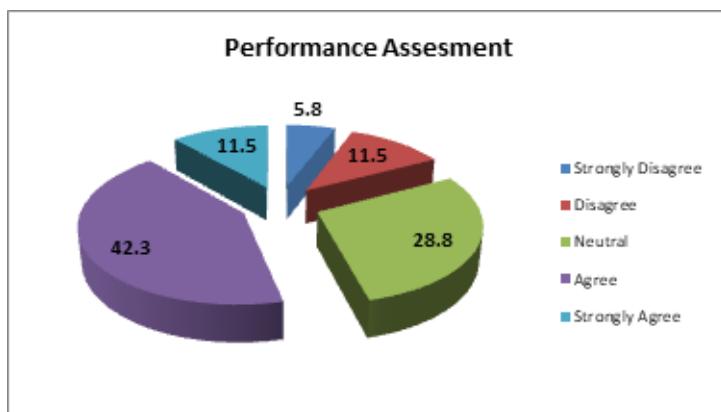
Chart 7.

Findings:

From the above chart 7, it reveals that conducting practical classes is a really a big problem, rather impossible to do this classes. Although some technology based simulation can be done instead of actual practical classes but this is not very common in our country. Students and teachers are agreed to this point.

Agree	86.54 / 61.67 / 73.08
Can't Say	13.46 / 35 / 26.92
Disagree	3.33

- Teachers
- High Edu
- School
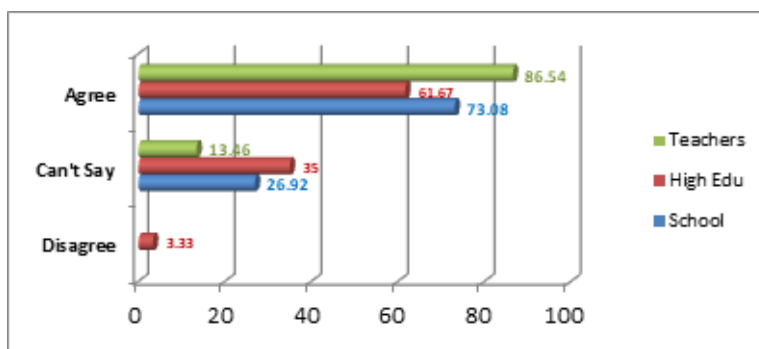
Challenge to **administer online examination or performance assessment**. This question is specifically for teachers.

Chart 8.

Finding:

Most important challenge of e-learning platform to conduct online examination or performance assessment and evaluation of answer script. On the above chart 8, 42.3% teachers are agreed with this point. But cancellation of examination has negative impact on students' learning process. Uncertainty of assessment, timely getting certificate and apply for further studies even if in foreign universities etc has created anxiety among students (Jana, 2020, p. 80). During this pandemic situation rate of unemployment increases very high and people struggle for food rather than education (Pravat, 2020b).

Recently as per the verdict of Supreme Court of India and notification of UGC, the final year or semester examination must be conducted online, offline or blended mode within 30th September, 2020 or may be extended as per covid-19 situation of different state. All universities in India have started this process of conducting examination online, offline or blended mode.

ADVANTAGES OF E-LEARNING

E-learning has several limitations but it has some vital advantages which makes it very much popular worldwide. This study has made a survey on this points and result has been shown in chart 9.

Chart 9.Advantages of e-learning

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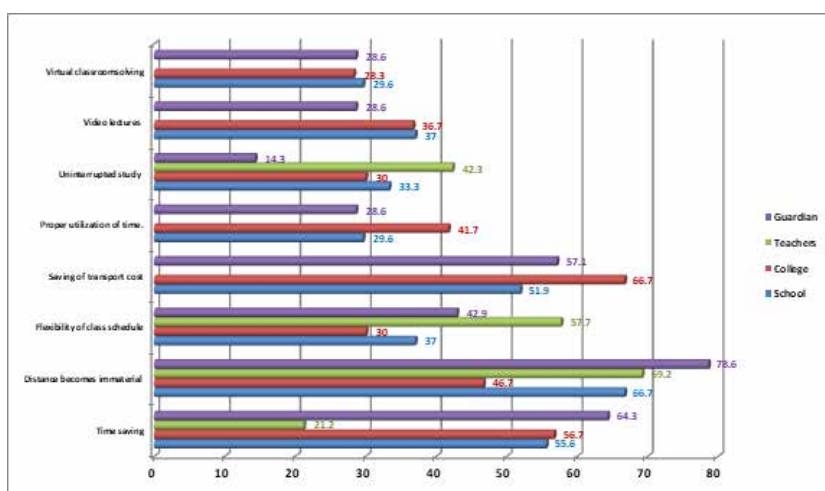
Findings:

On analysis of above chart 9, observations are summarized as follows:-

- **Distance becomes immaterial:** Guardians, teachers and school students are pointed out that the most important advantages are vanishing the physical distance between teachers and students. All students at different place even if outside the country can attend the classes which is not possible in conventional classroom system. It gives students' greater access to education as students can undertake their study from anywhere and at any time (Abou El-Seoud et al., 2014, p. 20). Students can access some valuable lectures of very eminent teachers, professors of our country and foreign universities also. The best example of this course is Massive Open Online Courses (MOOC). **Saving of transport cost:** The second best advantages for students are saving of transport cost. Students of school (51.9%), colleges (66.7%) and guardians (57.1%) are agreed with this point as online classes are home based. Therefore, it can be said that this savings of transport cost can help to compensate the extra cost of data recharging.

- ✓ **Time saving:** Third advantages of e-learning are time saving. Students and guardians are agreed with this.

- ✓ **Flexibility of class schedule:** The rank of next advantage is flexibility of time schedule. 57.7% teachers are agreed with this point because they arrange their classes according to their convenient time.

- ✓ **Uninterrupted study i.e., Vacation, Holiday, off Period etc can't interrupt the study.** It is true that in this system classes are taken online and convenient time. So, any leave, meeting, holiday, vacation etc doesn't hamper the teaching-learning process.

- ✓ Other advantages i.e. **Proper utilization of time, Video lectures, Virtual classroom** are helpful for students in learning time management, self-study, assignment and problem solving etc in e-learning process.

OPPORTUNITIES AND FUTURE PROSPECT OF E-LEARNING:

Under the climate with changing learning modes, the Ministry of Human Resource Development (MHRD), Govt. of India and UGC has notified to start the new academic session, either conventional classroom teaching, online teaching or blended mode on and from 2nd November, 2020. Government of various countries including our country has started research and development of e-learning platform. Many corporate houses have invested to develop user friendly, secured digital learning platforms which help the educational institution to introduced distinct e-learning platforms and expecting to promote students' learning outcome (Lin et al., 2017, p. 3560). MHRD and UGC have taken initiative for higher education and introduced some digital platforms like Swayam (MOOC), Shodhganga (https://shodhganga.inflibnet.ac.in/), e-ShodhSindhu (https://ess.inflibnet.ac.in/), e-GyanKosh (http://egyankosh.ac.in/), National Digital Library of India (NDLI) (https://ndl.iitkgp.ac.in/), e-Adhyayan (e-Books) etc.

One question is framed in my survey form to know that digital learning can be a close **substitute of conventional chalk and talk** method. The result is depicted in chart 10.

Chart 10.e-learning –substitute of classroom learning
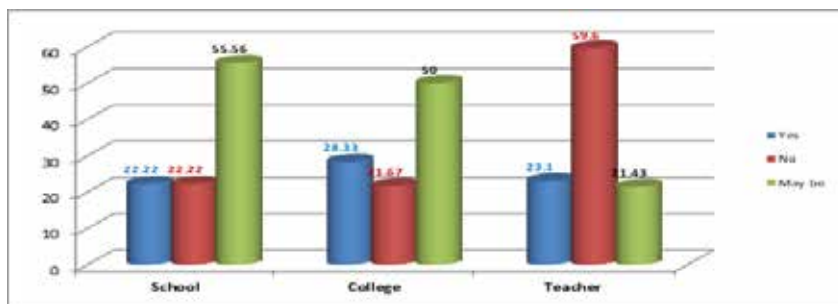
Source: Online Survey

Findings:

As digital learning is a new concept and have some limitations, students are confused to chose yes or no. 55.56% and 50% students are opinioned 'May be', but 59.6% teachers are not considered the e-learning as a substitute of conventional teaching- learning process.

The last question was regarding **continuation of online classes in post covid time** when normal classes will resume. This is shown in chart 11.

Chart 11.Continuation of online classes in post covid time.

Source: Online Survey

Findings:

It is true that digital learning is not a substitute of conventional teaching method. But it has some unique fea-

tures like uninterrupted study, avoidance of distance, flexibility of time schedule and saving of time and transport cost etc for which students, teachers and guardians are agreed that online classes will continue in post covid era.
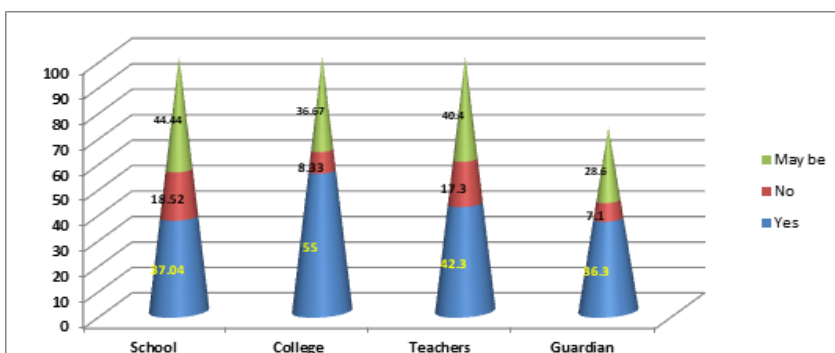
It is true that this pandemic situation has disrupted our daily life and daily routine which is also affected our children and student life. At this moment nobody knows when this situation will change and normal life will resume. So we are compelled to accept this new pedagogical approaches and introduction of digital learning in all levels of education. Now we are in the transition stage to move towards digital learning system. So it is necessary to upgrade digital learning platform and ensure that proper access of digital learning to the marginalized section of population. It can assume that this widely accepted digital education may perhaps be a parallel system of education along with conventional classroom teaching.

Government should support educational institutions to strengthen their resources to run digital learning system and students especially backward section of our society also need to be provided free internet and free digital gadgets to get the benefits of this advanced learning system (Pravat, 2020c).

CONCLUSION

We have learned so many things from covid-19 pandemic e.g., maintaining social distancing, compulsory usage of masks, sanitizing etc as a preventive measures of spreading corona virus. Now we are adopting new-normal lifestyle and started unlocking process of all activities. So education sector has also taken initiative to provide education in digital form and has compelled to adopt digital learning platform to continue the flow of education from school level to higher education level. From this study we reveal that there are so many constraints for smooth running of this system but it has also some unique advantages which makes this system widely accepted and very much popular among students, teachers and guardians community. Government should take adequate steps to provide this digital learning system among all section of people of our country. It can be assumed that this widely accepted digital education may perhaps be a parallel system of education in post covid era.

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