

Advent of E-Learning is a blessing to education sector during covid-19 pandemic

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Abstract: In India, educational institutions (schools, colleges, and universities) use only traditional learning methods, such as face-to-face lectures in a classroom. Despite the fact that many academic institutions have begun to implement blended learning, many remain trapped in the past. The rapid emergence of Covid-19, a devastating disease caused by the Corona Virus (SARS-CoV-2) startled the entire world. This situation posed a challenge to the global education system, forcing instructors to switch to an online form of instruction overnight. Many academic institutions that had previously been hesitant to adapt their traditional pedagogical method now have no choice but to fully embrace online teaching-learning. This research will assist in determining the effects of e-learning during the COVID –19 Pandemic. This research was conducted for students enrolled in various colleges and universities who wanted to understand more about the role of e-learning during the epidemic. It can be a learning paradigm at educational institutions to use digital technologies to improve students' knowledge and abilities. For the sake of pupils, the government and educational departments must offer improved infrastructure for e-learning.

Keywords-E-Learning, Covid-19, Teaching learning, online teaching

1. INTRODUCTION

“Learning should never stop even at the time of crisis”

Corona Virus, commonly known as Covid-19, is a fatal and infectious disease that has had a significant impact on the worldwide economy. This catastrophe has also rattled the education sector, and this dread is likely to spread throughout the world's education industry. With the abrupt movement away from the classroom in many parts of the world, some are wondering if online learning adoption would continue post-pandemic, and how such a movement might affect the global education industry. In this information realm, even though students and faculty have a social distance barrier, many sectors, including the education sector, are affected, but with the aid of so many digital and online initiatives and resources, ICT has lowered this barrier of social distance and lockdown. With the aid of online classes conducted through Skype, Zoom, google hangouts, google classroom, etc., students can be in constant contact with their teachers. Education technology has already experienced rapid growth and adoption prior to COVID-19. The goal of this research was to look into faculty and students opinions of what constitutes successful teaching learning and quality indicators in an online learning environment during a pandemic.

Objective

1. To study the effectiveness of e-Learning in higher education during lockdown period.
2. To study the positive impact of e-Learning on various stakeholders (teachers, students, Principal)
3. To explore the advantages and disadvantages that the students experienced in connection with e-learning during lockdown.

Hypothesis

1. E-learning is very effective source of learning during lockdown
2. E-learning has positive impact on performance of students.
3. E-learning increases the interest of students towards learning in lockdown period.

2. RESEARCH METHODOLOGY

This Research used both quantitative and qualitative procedures to study the insights of Students, Teachers and other stake holders of education institutions based on the online teaching-learning process in Higher Education institutions during the corona pandemic period. This study investigates effectiveness of E-Learning in higher education institution of Nagpur region. The respondents of this study consisted of teachers teaching in graduate and postgraduate courses from different colleges, Students studies in different colleges of Nagpur city and education officers of institutions in Nagpur City. Respondent were selected for this study on random basis. Respondents are from different academic fields like arts, science, commerce and humanities. Sample size used for study Students 200 ,Teachers 50,College authority members (director, principal)10. Four-point Likert scale was used to collect the opinion of respondent about the E-Learning. Four-point Likert scale indicates with one being strongly disagreed and four being strongly agreed. Questionnaires were distributed to participants by using Google form, and participants were informed that all opinions provided by them were kept confidential. The data were collected and recorded in a systematic way, late reanalysed by using Statistical Package for Social Science (SPSS).

3. LITERATURE REVIEW

Many studies aimed at evaluating distant education during the COVID-19 period in several countries have lately been done in this respect. (B. Mulyanti, W. Purnama, and R. E. Pawianto, "Distance learning in vocational high schools during the COVID-19 pandemic in West Java Province, Indonesia," 2020.)

The majority of them have demonstrated that the education sector closures have clarified several difficulties involving educational access as well as wider socioeconomic difficulties that affect people throughout communities, although their impact is most severe on low-income families. (C. Owusu-Fordjour, C. K. Koomson, and D. Hanson, "The impact of covid-19 on learning-the perspective of the Ghanaian student," *European Journal of Education Studies*, vol. 7, no. 13, pp. 88–101, 2020.)

Moving from traditional to online education would be the best option in this circumstance. However, access to information technology equipment, as well as Internet coverage and speed, are critical. (G. Basilaia and D. Kvavadze, "Transition to online education in schools during a SARS-CoV-2 coronavirus (COVID-19) pandemic in Georgia," *Pedagogical Research*, vol. 5, no. 4, 2020)

Because practically all of the studies were conducted during the first weeks of the outbreak, it appears that determining the quality of online learning will necessitate more research, as the

primary focus was to continue teaching in any way feasible. (G. Basilaia and D. Kvavadze, “Transition to online education in schools during a SARS-CoV-2 coronavirus (COVID-19) pandemic in Georgia,” *Pedagogical Research*, vol. 5, no. 4, 2020,)

They come to the conclusion that online education will be beneficial in the future. As a result, students will work more autonomously, which will assist them in terms of learning new abilities, especially for kids with special needs. Similarly, changing teachers' assignments to a new manner of teaching and becoming more learning facilitators had a favourable impact on their qualifications. (R. H. Huang, D. J. Liu, A. Tlili, J. F. Yang, and H. H. Wang, *Handbook on Facilitating Flexible Learning during Educational Disruption: The Chinese Experience in Maintaining Undisrupted Learning in COVID-19 Outbreak*, Smart Learning Institute of Beijing Normal University, Beijing, China, 2020.)

The authors explain that the success of these changes is highly dependent on the development of information and communication technology in order to improve open learning efficacy. (R. H. Huang, D. J. Liu, A. Tlili, J. F. Yang, and H. H. Wang, *Handbook on Facilitating Flexible Learning during Educational Disruption: The Chinese Experience in Maintaining Undisrupted Learning in COVID-19 Outbreak*, Smart Learning Institute of Beijing Normal University, Beijing, China, 2020.)

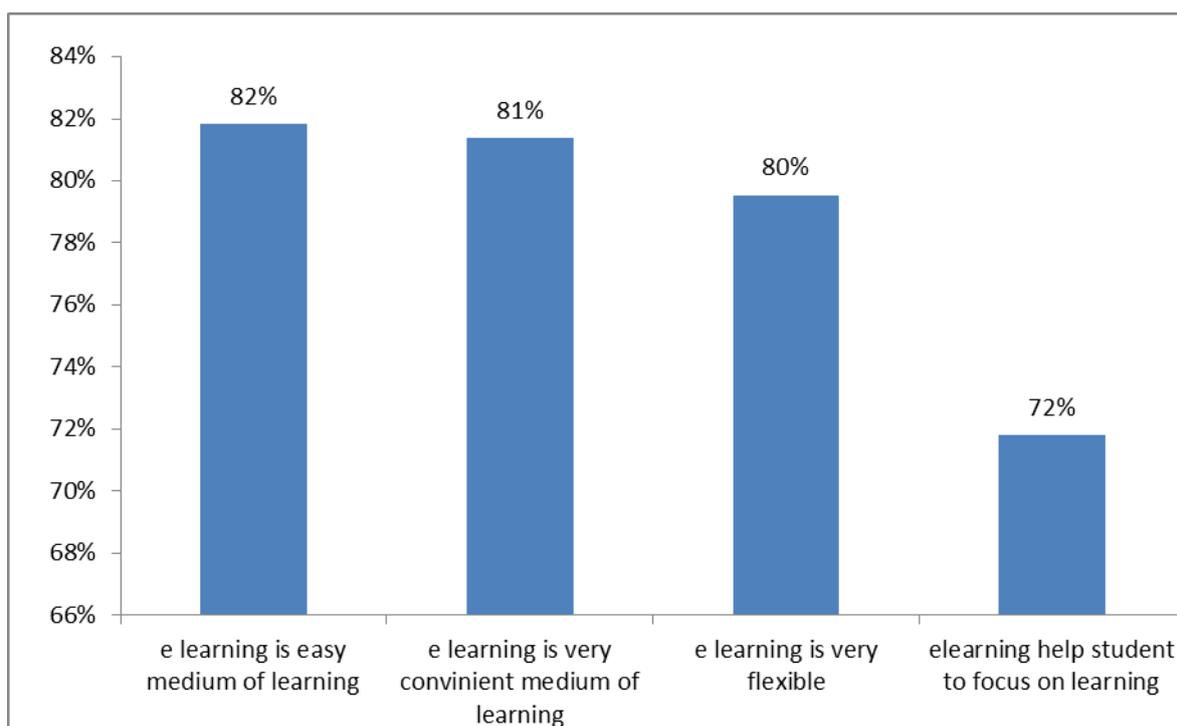
In Indian medicinal schools, a study was conducted on an approach for engaging distant learners. They have demonstrated that technology cannot replace effective instruction or a teacher; it can only be used in certain contexts, such as COVID-19. The expertise required for digital technology adoption during the epidemic period is also investigated. (E. M. Mulenga and J. M. Marbán, “Is COVID-19 the gateway for digital learning in mathematics education?” *Contemporary Educational Technology*, vol. 12, no. 2, 2020.)

Online learning can be described as a tool for making the teaching–learning process more student-centered, inventive, and adaptable. “Learning experiences in synchronous or asynchronous situations using various devices with internet access” is how online learning is defined. Students can learn and connect with teachers and other students from anywhere in these environments.” (Singh & Thurman, 2019).

During the COVID-19 period, the effort focuses on the gateway for digital learning in education. Adoption of digital learning has been demonstrated to boost the expansion of digital learning in mathematics, which could be a constructive response to such a circumstance. Due to crisis circumstances, emergency remote education is a temporary change in the delivery of education to an alternative form of delivery. (e.g., pandemics, wars, local conflicts, and other types of natural disasters) C. Golden, “Remote teaching: the glass half-full. *Educause Review*,” 2020,

Data Analysis and interpretation

e-Learning is the temporary solution for teaching and learning during the difficult situation which we are facing	83%
During this lockdown period switching to a fully online mode of instructions was challenging at first	58%
Online teaching is convenient to use during lockdown period for teaching	98%
online teaching is helping teachers to complete the syllabus during lockdown	94%
Students are more attentive through online teaching medium	64%
connectivity problem is major obstacle for e-learning during this pandemic time	84%
Students are more attentive through online teaching medium	50%



From the above graph it is cleared that 82% respondents feels that e learning is easy medium of learning as Teachers can provide lessons to students more efficiently through online learning. Teachers can employ a variety of online learning tools, such as videos, PDFs, and podcasts, as part of their lesson preparations. 81% agrees that E-Learning is convenient medium of learning as It permits students to attend lessons from wherever they want. For future reference, online lectures can be recorded, saved, and shared. This allows students to access the instructional materials whenever it is convenient for them. 80% suggested that e learning is very flexible because Learners can understand the idea at their own pace with flexible learning via e-learning courses. Learners can replay and retain information better with recorded videos and e-notes available at their leisure. 72% respondents feels that

eLearning help students to focus on learning as students that like the idea of e-learning and see it as an innovative concept that should be promoted and developed.

Hypothesis Testing

E-learning is very effective source of learning during lockdown

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Students	220	2.8557	.64188	.04328

One-Sample Test

	Test Value = 2.5					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Students	8.219	219	.000	.35568	.2704	.4410

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Teachers	49	2.9082	.51208	.07315

One-Sample Test

	Test Value = 2.5					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Teachers	5.580	48	.000	.40816	.2611	.5552

We accept the hypothesis Ho1 and conclude that E-Learning has proven very effective source of learning during lockdown period in higher education. E-Learning made it possible to easily and efficiently conduct course and share materials to students via internet and allowed for greater online communication and interaction. It is very much useful for education.

E-learning has positive impact on performance of students.

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Teachers	49	2.7212	.54998	.07857

One-Sample Test

	Test Value = 2.5					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Teachers	2.816	48	.007	.22122	.0633	.3792

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Students	220	2.9159	.66447	.04480

One-Sample Test

	Test Value = 2.5					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Students	9.284	219	.000	.41591	.3276	.5042

We accept the hypothesis Ho2 and conclude that E-Learning has positive impact on performance students in terms of grade attendance and active participation.
E-learning increases the interest of students towards learning in lockdown period.

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Students	220	2.7182	.71042	.04790

One-Sample Test

	Test Value = 2.5					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Students	4.555	219	.000	.21818	.1238	.3126

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Teachers	49	2.7347	.81075	.11582

One-Sample Test						
	Test Value = 2.5					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Teachers	2.026	48	.048	.23469	.0018	.4676

We can accept the hypothesis Ho3 and conclude that E-learning increases the interest of students towards learning in lockdown period. E-Learning gives comfort to students to learn anywhere anytime, this flexibility increase their motivation of learning.

General Finding

Online learning has played role of bridge between the teachers and students in COVID-19 pandemic crisis. It has both strengths and weaknesses. Although students found online teaching to be best suited during any adversity such as the recent lockdown but were of the opinion that it cannot be a regular substitute for the classroom teaching. The response from teachers, learners and stakeholders to this approach of teaching and learning has been overwhelmingly positive it has made teachers more innovative and techno-savvy but there is a need to motivate students to be more active during online classes. Success of online teaching learning process depends upon the student's sincerity so that the evaluation process can be more transparent. Online teaching can become the part of routine teaching learning process if the network issues are resolved even in remote areas. Teaching community looks forward at a future of blending online and classroom teaching so that strengths and opportunities of both may be availed while overcoming weaknesses and threats of both.

Objective wise findings

To study the effectiveness of e-Learning in higher education during lockdown period.

Teachers believe that e-learning is good, and that one of the most important positive aspects is that it helps learners enhance their technology skills. Teachers feel that e-learning is widely used, with faculty members having access to e-mail and other e-services being the most important use. Teachers believe that there are obstacles to the adoption of e-learning, with one of the most significant being the high cost of implementation. They accept that e-learning has disadvantages and that the biggest downside is that, relative to traditional learning, it requires financial support specially for rural area students.

To study the positive impact of e-Learning on various stakeholders (teachers, students, research scholars)

Online learning, comfort, and accessibility were among the benefits, while inefficiency and trouble preserving academic integrity were among the drawbacks. Faculty should be trained in using online modalities and devising lesson plans with less cognitive load and more interactivity, according to the guidelines. Online learning, according to faculty, helped assure distant learning, was manageable, and allowed students to easily contact lecturers and teaching resources. It also cut down on the usage of travel resources and other costs. It

simplified administrative responsibilities like recording lectures and keeping track of attendance. During the lockdown, both students and teachers agreed that online learning modes had facilitated student-centeredness. The students had evolved into self-directed learners who could learn at any time during the day.

To explore the advantages and disadvantages that the students experienced in connection with e-learning during lockdown.

Students like e-learning because it allows them to interact with their lecturers, fellow students, and engage with their study materials while being comfortable and flexible in terms of space and time. One of the main reasons why students choose e-learning is the ease with which they may obtain study resources. Students have a positive attitude toward e-learning technology since it allows for simple access to information. This is based on utility, self-efficacy, convenience of use, and student attitudes toward e-learning. In India, e-learning has grown in popularity as students prefer to use online learning tools to engage with one another and with their teachers. Furthermore, in the lack of face-to-face interaction, students have embraced digital technology for the sake of learning. But For students who want to enjoy a typical college experience, online learning loses its attractiveness. Many students can feel lonely without on-campus contacts with educators, organisations and sports, and other students.

Suggestion

Technology aided them in conquering the barriers during those trying times. They do, however, advise that for online learning, a good IT infrastructure is essential. During and after a crisis, infrastructure must be strong enough to provide uninterrupted services. In pandemic scenarios like Covid-19, we require a high level of readiness so that we can swiftly adapt to changes in the environment and respond to alternative delivery modes, such as remote learning or online learning. The spread of the Corona Virus is an opportunity to make the best of a terrible situation. We can learn a lot from this difficult situation. There are a variety of tools available; teachers must choose the most appropriate tool and use it to educate their students. Academic institutions can produce a step-by-step guide to demonstrate teachers and students how to access and use various e-learning tools, as well as how to use these technologies to cover important curriculum subjects, therefore reducing digital illiteracy. When the pandemic is over, we should take the positive aspects of virtual learning that we've discovered and apply them to the development of a new paradigm for higher education that is really inclusive, unabashedly equal, and entirely accessible to all.

Future Implications

The use of e-learning in higher education may not yet be specifically correlated with the end-point results of retention and achievement, although there may be some early signs that the extensive use of e-learning by lecturers for study and training is associated with achievement.

4. CONCLUSION

E-learning appears to be the next big thing. It has been spreading widely. For everyone, the online learning approach is the ideal option. Many people opt to learn at a convenient time based on their availability and comfort. This allows the student to have access to the most up-to-date content whenever they desire. It provides students with a wide range of benefits. The study's findings show the impact of E-learning, as well as students' enthusiasm in using E-learning resources and their performance. In conclusion, this study revealed that E-learning

has been increasingly popular among students around the world, notably during the COVID-19 pandemic lockdown period.

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