National Edition

CHALLENGES AND REMEDIES IN ONLINE EDUCATION IN RURAL INDIA

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(10 & 11, February 2022)

Challenges and Remedies in Online Education in Rural India

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Preface

Covid-19 has struck us without a warning and all educational institutions are scrambling to respond to its exigencies. It has also created a need to creatively deal with such unforeseen transition from chalkboard teaching to prompt and flexible online teaching. Educational institutions of urban India easily adopts to Digital Education but the Tier III and rural areas of the country are still struggling to switch over to the Digital learning modes. The existing gaps in imparting education between urban and rural India has to be equated for the sustainable growth of the country. The digital education barriers in Rural India can be eliminated through the provision of affordable and accessible e-learning modes. Hence the focus of the Two Day National Seminar is to address the manifold barriers regarding to create education a complete online phenomenon in rural areas and provide an ingenious pedagogy, accessible educational devices, proper infrastructure and a quality ecosystem for the expansion of digital learning in rural India. The NAAC - Sponsored seminar on "**Challenges and Remedies in Online Education in Rural India"** has contributed fresh insights on the theme.

I sincerely thank the faculty members for contributing their papers and sharing their knowledge. I am grateful to the NAAC, Bangalore for the financial support. I thank Shri.A.P.Selvarajan, Secretary of our college for his support. I thank the Principal Dr.S.Krishnamurthy for his fullest cooperation. Dr.P.K.Balamurugan, Ms.R.Muthulakshmi (Vice Principals) and members of the IQAC extended their fullest support. I thank them collectively and individually.

Mrs.L.PRIYA
Editor

Report on NAAC Sponsored National Seminar
(10 &11th, February, 2022)
"CHALLENGES AND REMEDIES IN ONLINE EDUCATION IN RURAL INDIA"

The NAAC sponsored a Two-day National Level Online Seminar on "**Challenges and Remedies in Online Education in Rural India"** was organized on 10 and 11 February 2022 by the IQAC of Sri Kaliswari College, Sivakasi.

This Seminar started with the Inaugural programme on 10 February 2022 at 10.00a.m. It was inaugurated by Dr. S. Krishnamurthy, Principal of Sri Kaliswari College. Mrs. L. Priya, Co-ordinator - IQAC & Head - Department of Computer Science, welcomed the gathering to the inaugural ceremony. In the Inaugural address, the Principal assured that "The objective of the Two-day Online Seminar is to draw a holistic picture of ongoing online teaching-learning activities in rural India. Vice-Principals Dr. P. K. Balamurugan and Ms. R. Muthulakshmi felicitated the event. The two-day Online Seminar comprised 4 plenary sessions, with a keynote speaker per Session. Each speaker was given 15 minutes to present, followed by 5-10 minutes for questions.

Objectives of the Seminar

Technology is touching every phase of society and changing it considerably. It has extended its feet on the realm of Education that is an indispensable part of the society. Education has been tapped by new innovations and discoveries by the concept of E-Learning. Unlike the rural sections, the influence of the technology reaches rapidly in the urban regions. During the Covid-19 Pandemic and Post pandemic period, the entire education system of India- 1.4 million schools, 35,500 colleges, and 600 universities, have shifted to online mode of Education unexpectedly. Irrespective of rural and urban barriers, India's education sector is being revolutionized by this time. E- Learning is attaining significance in the world of pandemic and has a vital role to play in resolving the problems pertaining to education. Educational sectors from primary to higher education in rural areas are inadequate to adapt to the new trends in Education. They are little aware of these learning services and technology. Thus, government's initiative to promote Online Education in rural areas came into picture. Launch of Digital India Programme is a welcome step in this direction. E-learning interventions in the rural areas will undoubtedly pave way towards sustainable growth. Development of any society depends on its access to information and the same is applicable to rural India too. Hence So much more could have been done to bring the revolution in e-learning process in rural areas of India. The basic objective of this Two Day National Seminar is to throw light on the challenges and remedies of online Education in rural areas of India and bring the revolution in e-learning process in rural areas of India.

Discussion Themes

- Digital Education Barriers in Rural India
- Online education: Challenges faced by rural communities
- Rural education in India
- Covid-19 impact in Education of rural India

- Advantage and disadvantage of Digital Education
- Digital Literacy and Infrastructural Support
- Solutions for online education in Rural India
- Online education: Challenges faced by rural communities
- E-Learning in Rural India
- Changing rural education with adaptive learning
- Launch of e-learning hub for villagers

Host Institution

Sri Kaliswari College, the fastest knowledge disseminating light house among the Arts and Science College in South India, is a Self Financing, Co-educational Institution affiliated to Madurai Kamaraj University, Madurai. The college was established by Sri Kaliswari Trust, comprising a team of munificent philanthropists, in the industrial town of Sivakasi in 2000 A.D. to impart value-based quality higher education to the students in rural background. Since its inception, the college has crossed many milestones.

Sri Kaliswari College is recognized by the UGC under 2(f) (1 June, 2006) and 12(B) (4 October, 2010). It was conferred Autonomous status on 1 March, 2012. Sri Kaliswari College is the only Self Financing Institution to be approved by UGC under the Community College stream to start a Community College in 2015-2016. One more feather in its cap is A Grade with CGPA 3.11 in the 3rd Cycle of NAAC Re-accreditation. Sri Kaliswari College has carved a niche of its own in the realm of higher education. Right now, the College offers a record number of 17 Undergraduate Programmes, 9 Postgraduate Programmes and 5 M.Phil Programmes. A unique feature of the college is offering a host of 63 job orientated Certificate Courses in addition to the regular hours of the classes.

Participants, Speakers & Rapporteur

Participants

A total of 125 people attended the conference.

Keynote Speakers

Four keynote speakers inspired participants during the online seminar; they were

1. Dr.M.G Sethuraman, Professor, Department of Chemistry, The Gandhigram Rural Institute, (Deemed to be University), Gandhigram, Dindigul District.
2. Dr.Jyoti Pareek, Professor of Computer Science Gurajat University Navrangpura, Ahmedabad, Gurajat Challenges faced by Rural India in Online Education
3. Prof.R.Haresh, Assistant Professor of Commerce, Christ University (Deemed to be University), Bangalore.
4. Dr.K.S.Chandrasekar, Dean, Professor & Head, Department of Management Studies, University of Kerala, Kerala.

Rapporteur

Technical Session-I on Day 1 -Impact of Covid 19 in Education in Rural India - was moderated by Dr.V.Pradeepa, Assistant Professor, Department of Biotechnology, Sri Kaliswari College, Sivakasi.

Technical Session-II on Day 1-Pros and Cons of Digital Education- was moderated by Mr.K.Ganesh Babu, Assistant Professor, Department of BCA, Sri Kaliswari College, Sivakasi.

Technical Session-III on Day 2 -Challenges faced by Rural India in Online Education- was moderated by Mrs.J.Jasmine Bhastina, Assistant Professor, Department of Commerce (CS)Sri Kaliswari College, Sivakasi.

Technical Session-IV on Day 2 -Solutions for Online Education in Rural India- was moderated by Mr.P.Venkateshkumar, Assistant Professor, Department of BBA, Sri Kaliswari College, Sivakasi.

Technical Session I - Impact of Covid 19 in Education in Rural India - 10 February 2022

Keynote By: Dr.M.G.Sethuraman, Professor, Department of Chemistry, The Gandhigram Rural Institute, Gandhigram, Dindigul.

The Technical Session-I started at 11.00a.m. based on the thrust area "Impact of Covid 19 in Education in Rural India". The Session was chaired by the Resource Person, Dr.M.G.Sethuraman, Professor, Department of Chemistry, The Gandhigram Rural Institute, Gandhigram, Dindigul. Dr. M. Sujatha, Head, Department of Biotechnology welcomed the gathering and also introduced the Resource Person. The Resource Person, in his Keynote address, exclaimed, "Our education system is changing frequently with time. Earlier it was all about rote memory education. Later on it was book centred education. At last it became online education and now it has become self-education. The earlier methodologies were teacher centred and the students were taught what the teachers knew, but the present methodology is student centred and the whole world of knowledge is at their perusal". He further added that students learnt values such as respect, punctuality and obedience through on-campus classes which is lacking in today's online classes as the students never bother to attend. "An immediate feedback was possible during the offline classes whereas it is not possible in online classes. As a result, quality education becomes a big question and companies forego such candidates during recruitments", he said. The pros and cons are common to all but we become successful by imbibing only the pros, he added.

It was followed by paper presentation. 16 participants from various colleges presented their research papers. They throw light on various issues pertaining to Online Education and its impact. The session's presentations clearly exposed India's digital divide. Further they pointed out the lack of e-content resources in rural India. The research findings made it clear that rural population is not completely equipped with utilities like fast internet, uninterrupted power supply and electronic devices. Mr.G.Kannan, Head, Department of Tourism and Hotel Administration proposed a vote of thanks.

Technical Session II - "Pros and Cons of Digital Education"-10 February 2022

Keynote By : Dr.Jyotipareek, Professor, Department of Computer Science, Gujarat University, Gujarat.

The Technical Session- II- started at 1.00 p.m. based on the thrust area "Pros and Cons of Digital Education". Dr.S.Femina, Head Department of English, welcomed the gathering. The Session was chaired by Dr.Jyotipareek, Professor, Department of Computer Science, Gujarat University, Gujarat. In her, keynote address, she pointed out the importance of digital education and the way to implement the virtual learning as a new normal methodology in rural India.

She stated that though there are some disadvantages in online learning like students' limited attention span and lack of innovative learning materials it would be improved onwards if we try collectively. She also introduced some portals owned by ministry of education such as SWAYAM, NCERT, NPTEL to facilitate online education.

After the chief guest's address, participants and presenters from various colleges present their research work under the topic, E-learning methods, challengers and barriers. Some researchers pointed out that the absence of a physical classroom, teacher, and students can make the teaching-learning process slow and monotonous, further making online live sessions not so interesting for the learners. But many of the presenters proposed many innovative ideas to make the digital learning more interesting without getting fuss. Few participants suggested using various modes like presentations, video clips, pictures, and films to make learning productive.

Digital learning was a kind of barrier for the people who were in the rural and remote areas. Mr.A.Balaji, Head Department of Information Technology proposed a vote of thanks. Totally 16 participants were presented their research papers throughout the sessions.

Technical Session III : "Challenges Faced by Rural India in Online Education"-11 February 2022

"Keynote By : Prof.R.Haresh, Assistant Professor of Commerce, Christ University, Bangalore

The Technical Session-III started at 10.00 a.m on 11.02.2022. The Session focused on "**Challenges Faced by Rural India in Online Education".** Dr.C.R.Kumaran, Head, Department of Physics welcomed the gathering. Prof.R.Haresh, Assistant Professor of Commerce, Christ University (Deemed to be University), Bangalore was the Resource Person. In his address, he explained the reality of the Covid-19 pandemic by finding alternatives to the disruptions caused. He also pointed out that the crisis nudged students to pick up e-learning opportunities. Further he clarified that utilities like fast internet, uninterrupted power supply and electronic devices are not accessible to the rural students. Finally he concluded that even though there have been improvements regarding basic infrastructural facilities many rural areas in India are still grappling with their challenges to make educations completely digital or online.

It was followed by paper presentation. 17 participants from various colleges presented their research papers. They emphasized that many teachers and students in rural areas are not able to match up to the technical skills of educationalists and students in rural area. They also suggested that to overcome the barriers in online education, Government and Universities should provide affordable and accessible e-learning modes and orientation to teachers. Dr.M.Gurusamy, Head, Department of Commerce proposed a vote of thanks

Technical Session IV: "Solutions for Online Education in Rural India"-11 February 2022

Keynote By : Prof.Dr.K.S.Chandrasekar, , Professor and Head, Department of Management Studies, University of Kerala, Kerala

The fourth session was started at 2.00 p.m on the thrust area "Solutions for Online Education in Rural India". Ms.K.Lalithambigai, Head, Department of Mathematics welcomed and introduced the chief guest. Prof. Dr.K.S.Chandrasekar, Professor and Head, Department of Management Studies, University of Kerala, Kerala was the resource person for the fourth session. In his speech, he stated that, Our India is the third largest economy in the world by 2050, but most of

the populations are still living in rural areas. He said, there is an equal proportion of population growth in both urban and rural areas. The improvement in literacy rate in rural area is two times that in urban areas. The resource person highlighted that, India's rural FMCG market to reach a size of US$ 100 billion by 2025. 12.2% of the world market is in rural India. He quoted the 4A approach to marketing i.e Availability, Affordability, Acceptability, Awareness and this approach is very much important for education. During the lock down period, 11% of all rural families bought a new smart phone for online education. He informed about a survey of COVID Impact on education that only 8% of rural children attended in online classes and 37% are not studied at all. In addition, 56% of class V students and 31% of class VIII students from villages cannot read class II textbooks. He told about the nation's digital infrastructure platform – DIKSHA (one nation-one platform) and Swayam Prabha TV channel. He pointed out that already the states such as a Tamilnadu and Kerala have hosted curriculum-based video lessons on the Internet, after beaming them on television. He suggested that , the first step is to provide online teacher training for the revised classes. The teachers can go door to door in the villages to connect with students. New e-Commerce startups chasing numbers in rural India for boosting the online education he said. There are several initiatives taken by the Government to encourage online learning under the National Mission on Education through Information and Communication Technology (NMEICT). Up skilling teachers by providing them with teacher-training programmes on online and technology –based education would contribute to the expansion of digital learning in rural India, he concluded. In the fourth session, fifteen participants presented their research papers.

Valedictory Session

In the valedictory Session Dr. S.Krishnamurthy, principal of Sri Kaliswari College, delivered the valedictory address. In his address he pointed out that the whole world is adjusting to the reality of the Covid-19 pandemic by finding alternatives to the disruptions caused thus far. He further said that the challenges manifest the existing gaps for dispersal of digital education in rural India, there are several initiatives taken by the Government to encourage online learning that can promote the online learning a better medium. Seven participants submitted their experience with National seminar that make the At the end of the session, Mrs.L.Priya, IQAC Coordinator proposed the vote of thanks.

CHALLENGES AND REMEDIES IN ONLINE EDUCATION IN RURAL INDIA

Dr.B.Kayalvizhi,
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ABSTRACT:

The Educational world is affected by the pandemic COVID 19 which resulted in lockdowns worldwide which are still ongoing in some countries. This pandemic time restricted the movement of people and forced them to stay at homes for most of the time. This forced isolation increased the use of technology in our daily lives. Education was also compelled to shift from the conventional face-to-face medium to an online platform. Teachers adapted to this new method of teaching/learning so that the education and learning of the students are not interrupted. The future of education depends on both online and offline learning. Students can also benefit from online class as it is the need of the hour. Teacher is the permanent learner who ensures continuity in education by coming up with his or her own set of challenges and hurdles but overcomes all by preparing their lectures in such a way that they are more interactive and can hold the attention of the students. This paper focuses on challenges faced by the teachers, students in online education and remedies.

Keywords: Covid-19; online education challenges.

Paper:

The world of education fits into a new frame from the day 1 of Corona lockdown announcement. This pandemic time restricted the movement of people and forced them to stay at homes for most of the time. This forced isolation increased the use of technology in our daily lives. Education was also compelled to shift from the conventional face-to-face medium to an online platform. Teachers adapted to this new method of teaching/learning so that the education and learning of the students need not be interrupted. It is the best experience not only to the teachers but also to the students to explore new ventures in education. I am an assistant professor teaching English language to the budding engineers. We use technology and audio visuals from online you tube videos, BEC, IELTS(Audio), TOFEL(Audio). Activities related to LSRW are conducted through What is it? Study break, Word games, You tubers in British council, Presentation- Prezi, Microsoft forms. ICT tools is used for assessment especially Zipgrade. Sample is given below

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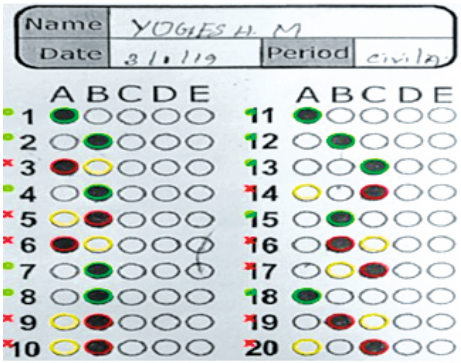
Student:	Yogesh.M
Quiz:	Preassessment
Eamed Pts:	10.0
Posible Pts:	20.0
%Correct	50.0%



#	Key	Stu	Pts	Poss
1	A	A	1.0	1.0
2	B	B	1.0	1.0
3	B	A	0.0	1.0
4	B	B	1.0	1.0
5	A	B	0.0	1.0
6	B	A	0.0	1.0
7	B	B	1.0	1.0
8	B	B	1.0	1.0
9	A	B	0.0	1.0
10	A	B	0.0	1.0
11	A	A	1.0	1.0
12	B	B	1.0	1.0
13	C	C	1.0	1.0
14	A	C	0.0	1.0
15	B	B	1.0	1.0
16	C	B	0.0	1.0
17	B	C	0.0	1.0
18	A	A	1.0	1.0
19	C	B	0.0	1.0
20	A	C	0.0	1.0

We face so many challenges due to this pandemic for conducting regular classes. Being technical teachers, we enjoy and accept the new challenges and explore a lot.

Channel creation was the first and foremost issue we faced when we started taking online classes through TEAMS platform which was done successfully with the help of technical support provided by the technical team in our college. We simply added students to the channel which was created by the technical team.

Maintaining students' attendance is also one of the issues. In self learning hour, attendance can be given for all the students. If we use MS form for self study, it will helpful for us to download attendance which also becomes solid evidence for the particular self learning hour. For regular classes, issues faced by the teachers are - calling the students again and again, asking them to unmute & speak, students answering their attendance late due to network issue. For such case, I suggest that teacher can take the attendance at the end of the hour or else ask students to report in chat box with their register number.

Maintaining discipline is one of the major issues faced by all the faculty members. Fellow teachers taught how to control the students in online class because some students were mischievous enough to mute other students or remove a student from a class. This issue was cleared by the proper usage of 'meeting option' in TEAMS where teacher can make him/her a presenter whereby he/she becomes an owner of the particular class. He/ she has the right to make the students as presenters.

The biggest challenge faced by all teachers globally is connectivity. Even an expert becomes fool before technology. This saying is applicable to all. This proves in our case also. Many a time we couldn't login the class within the allotted time due to network issue. After sometimes I learnt that not only I cheated by connectivity but also my colleagues. They also shared the same experience and everybody learnt that one cannot completely rely on technology.

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We need not cut a sorry figure if we inform the students priorly. I usually give standard instruction to the students regarding this issue- Class may begin 10-15 minutes late sometimes due to technical issue.

Self learning is the best remedy for this issue. We always have some materials saved in draft (mail) to help us in connectivity issue. If problem arises related to connectivity, we send that draft to the students immediately.

Next challenge is the lesson plan to be used and how to incorporate that into teaching/learning process. It is very difficult to choose the right materials, to make use of those materials to the need of the students. We depend on materials from British Council-LSRW which contain all levels of learning- Elementary, intermediate and advanced which cater to the needs of the students. For a content, if we watch a video from British council, below to that video, options like save video as, multiple choice, match it and gab filling exercises also available not only for teaching but also for evaluating students. It also breaks the monotony of the online class.

Being an English teacher, I feel that due to online classes, students are lack in writing skill rather than other three skills because in some colleges MCQ pattern is given for exams not a theoretical one. That is why students are even afraid to write offline mode in writing exams rather than online exams. This issue can be overcome by students through regular practices in writing. For example, after reading the news article from a news paper, students can summarize it. I am yet to overcome this issue and wish to know the remedy from the fellow members also.

Work life balance is the major difficulties faced by teachers due to online class. Teachers understand the responsibility of them and also realize this is the need of the hour. They become super humans by balancing both work and life by balancing their mental and physical strength. They should enhance their skills by participating in capacity building programs to get the knowledge of E-learning pedagogy.

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SINGLE VALUED NEUTROSOPHIC LOGICAL ANALYSIS OF ONLINE EDUCATION: CHALLENGES FACED BY RURAL COMMUNITIES

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Abstract:

COVID-19 epidemic situation has transformed the instructional method of education system into e-learning system , where teaching is undertaken on digital platforms all around the world. In real life , many of the educational institutions have effectively implemented e-learning process which also has certain uncertainty situation . Single valued neutrosophic logical analysis has been used to overcome the uncertainty aspects in e-learning process in the current scenario. In this paper, we present the single valued neutrosophic logical analysis of common challenges faced by the teachers and students belonging to rural areas. Also , we arrange the common challenges with uncertainties in e-learning such as adaptable to the online format, computer knowledge, technical problems, time management in a sequential order. This sequential order is helpful to overcome the challenges with uncertainty situation whereas the other approaches neglect this situation.

Key words: e-learning, single valued neutrosophic set, single valued neutrosophic logical operators AND & OR.

1. INTRODUCTION

COVID-19 pandemic situation has changed the entire education system. The need of online education is indisputable in today's environment. Teaching, learning and evaluation activities are usually done by teacher centered instructional method .In offline classes, there was a live interaction between teachers and students. From this face –to-face learning system, students get benefitted in a greater level. They show their progress in learning , ensure better understanding of subjects and remembrance of lesson content. Also it was a chance for them to bond with one another. Due to COVID-19 pandemic, education has changed with extraordinary rise of e-learning system in urban and rural areas. Teaching , learning and evaluation are undertaken on variety of digital platforms. At present, educational institutions have implemented their complete e-learning system. In real life,

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uncertainty situation do exists in each and every e-learning process . Single valued neutrosophic logical analysis has been used to overcome the uncertainty aspects in e-learning process in the current scenario.

Neutrosophic set was introduced by Smarandache[6] in 1995 as a mathematical tool for problems with uncertainties dealt with indeteminancy, vagueness, ambiguity, imprecision and inconsistent information in real life. In neutrosophic set, indeterminancy is quantified explicitly whereas the membership functions truth, indeterminacy and falsity are independent. From philosophical point of view, a neutrosophic set is a generalization of classical set, fuzzy set[5], interval valued fuzzy set[7], intuitionistic fuzzy set[1]. But from technical point of view, a single valued neutrosophic set[2] is the specified form of neutrosophic set and is also a generalization of the above mentioned sets. Smarandache[4] has extended the neutrosophic set respectively to neutrosophic over/ under/offsets. Maji[3]&[8] combined the concept of soft set and neutrosophic set together by introducing a new concept neutrosophic soft sets.Geetha et al.[9] has extended the concept of single valued neutrosophic over/ under/ offsets over soft sets and gave an application of single valued neutrosophic soft over/under/offsets in decision making problem. Nourand M.Radwan [10] dealt with neutrosophic applications in e-learning.

A neutrosophic set A defined on the universe U , x = x (T, I, F) A with T, I and F being the real standard or non-standard subsets of $]0^-,1^+[$. In the set A, T is the degree of truth-membership function ,I is the degree of indeterminacy-membership function and F is the degree of falsity-membership function. But in a single valued neutrosophic set A for each point x in the universe of discourse X, whose truth-membership function T_A, indeterminacy-membership function I_A and falsity-membership function F_A [0,1]. Geetha et al.[11] introduced some new operations, cross product, AND & OR on single valued neutrosophic sets with an example and proved De Morgan's laws on single valued neutrosophic sets with respect to the AND & OR operations.

In this paper, we present the single valued neutrosophic logical analysis of common challenges faced by the teachers and students belonging to rural areas using the single valued neutrosophic logical operators AND & OR with cross product on single valued neutrosophic sets. Also , we arrange the common challenges with uncertainties in e-learning such as adaptable to the online format, computer knowledge, technical problems, time management in a sequential order where other approaches neglect this uncertainty situation. In this paper, we have collected datas from teachers and students actively undergoing online education.

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2. SOME BASIC CONCEPTS IN SINGLE VALUED NEUTROSOPHIC SETS AND ITS OPERATORS

In this section, we have presented the basic definitions of single valued neutrosophic sets[2] and its operators[11].

Definition 2.1 ([2]). Let X be a space of points (objects), with a generic element in X denoted by x. A single valued neutrosophicset (SVNS) A in X is characterized by truth-membership function T_A, indeterminacy-membership function I_A and falsity membership function F_A. For each point x in X,

$T_A(X), I_A(x), F_A(x) \quad [0,1].$

When X is continuous, a SVNS A can be written as

$$A = \int_X \langle T(x), I(x), F(x) \rangle / x, \quad x \quad X$$

When X is discrete, a SVNS A can be written as

$$A = \sum_{i=1}^{n} \langle T(x_i), I(x_i), F(x_i) \rangle / x_i, \quad x_i \quad X$$

Example 2.2 ([2]). Let A and B be two single valued neutrosophic sets of X defined by

$A = < 0.7,0.2,0.5 > / x_1 + < 0.6,0.4,0.5 > / x_2 + < 0.8,0.4,0.6 > / x_3 + < 0.6,0.5,0.2 > / x_4$

$B = < 0.6,0.2,0.5 > / x_1 + < 0.8,0.3,0.5 > / x_2 + < 0.6,0.5,0.6 > / x_3 + < 0.7,0.5,0.3 > / x_4$

Definition 2.3([11]). Cartesian product of two single valued neutrosophic sets. Cartesian product of two single valued neutrosophic sets A and B in X is defined as $A \times B = \{ (< x , T_A(x), I_A(x), F_A(x) > , < y , T_B(y), I_B(y), F_B(y) >) / < x , T_A(x), I_A(x), F_A(x) > \in A, < y, T_B(y), I_B(y), F_B(y) > \in B \ \forall \ x, y \in X \}$ where $T_A(x), I_A(x), F_A(x) , T_B(y), I_B(y), F_B(y) \in [0 , 1]$.

Definition 2.4([11]). AND operation on two single valued neutrosophic sets. Let A and B be two single valued neutrosophic sets in X . Then 'AND' operation on A and B is denoted by $A \bigcirc\!\!\!\!7 B = \{ < z, T_C(\alpha\beta)(z), I_C(\alpha\beta)(z), F_C(\alpha\beta)(z) > / (\alpha\beta) \in A \times B, z \in X \}$ where $T_C(\alpha\beta)(z), I_C(\alpha\beta)(z), F_C(\alpha\beta) \in [0, 1]$ whose truth membership , indeterminacy membership, falsity membership functions are related to those of A and B by

$$T_C(\alpha\beta)(z) = \min (T_A(\alpha)(x) , T_B(\beta)(y))$$
$$I_C(\alpha\beta)(z) = \max (I_A(\alpha)(x), I_B(\beta)(y))$$
$$F_C(\alpha\beta)(z) = \max (F_A(\alpha)(x), F_B(\beta)(y)) \text{ for all } x, y \in X$$

Example 2.5([11]). Let A and B be two single valued neutrosophic sets defined in example 2.2 then $A \bigcirc\!\!\!\!9 B = < 0.6,0.2,0.5 > / (x_1 , x_1) + < 0.7,0.3,0.5 > / (x_1 , x_2) + < 0.6,0.5,0.6 > / (x_1 , x_3) + < 0.7,0.5,0.5 > / (x_1 , x_4) + < 0.6,0.4,0.5 > / (x_2 , x_1) + < 0.6,0.5,0.5 > / (x_2 , x_2) + < 0.6,0.5,0.6 > / (x_2 , x_3) + < 0.6,0.5,0.5 > / (x_2 , x_4) + < 0.6,0.4,0.6 > / (x_3 , x_1) + < 0.8,0.4,0.6 > / (x_3 , x_2) + < 0.6,0.5,0.6 > / (x_3 , x_3) + < 0.7,0.5,0.6 > / (x_3 , x_4) + < 0.6,0.5,0.5 > / (x_4 , x_1) + < 0.6,0.5,0.5 > / (x_4 , x_2) + < 0.6,0.5,0.6 > / (x_4 , x_3) + < 0.6,0.5,0.3 > / (x_4 , x_4)$

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Definition 2.6([11]). OR operation on two single valued neutrosophic sets. Let A and B be two single valued neutrosophic sets in X . Then 'OR' operation on A and B is denoted by $A \vee B$ and is defined by $C = A \vee B = \{ z, T_C(\alpha\beta)(z), I_C(\alpha\beta)(z), F_C(\alpha\beta)(z) > / (\alpha\beta) \in A \times B, z \in X \}$ where $T_C(\alpha\beta)(z), I_C(\alpha\beta)(z), F_C(\alpha\beta)(z) \in [0, 1]$ whose truth membership , indeterminacy membership, falsity membership functions are related to those of A and B by

$T_C(\alpha\beta)(z) = \max(T_A(\alpha)(x), T_B(\beta)(y))$

$I_C(\alpha\beta)(z) = \min (I_A(\alpha)(x), I_B(\beta)(y))$

$F_C(\alpha\beta)(z) = \min(F_A(\alpha)(x), F_B(\beta)(y))$ for all $x, y \in X$

Example 2.7([11]). Let A and B be two single valued neutrosophic sets defined in example 2.2 then $A \vee B = < 0.7,0.2,0.5 >/ (x_1, x_1) + < 0.8,0.2,0.5 >/ (x_1, x_2) + < 0.7,0.2,0.5 >/ (x_1, x_3) + < 0.7,0.2,0.3 >/ (x_1, x_4) + < 0.6,0.2,0.5 >/ (x_2, x_1) + < 0.8,0.3,0.5 >/ (x_2, x_2) + < 0.6,0.4,0.5 >/ (x_2, x_3) + < 0.7,0.4,0.3 >/ (x_2, x_4) + < 0.8,0.2,0.5 >/ (x_3, x_1) + < 0.8,0.3,0.5 >/ (x_3, x_2) + < 0.8,0.4,0.6 >/ (x_3, x_3) + < 0.8,0.4,0.3 >/ (x_3, x_4) + < 0.6,0.2,0.2 >/ (x_4, x_1) + < 0.8,0.3,0.2 >/ (x_4, x_2) + < 0.6,0.5,0.2 >/ (x_4, x_3) + < 0.7,0.5,0.2 >/ (x_4, x_4)$

3. SINGLE VALUED NEUTROSOPHIC LOGICAL ANALYSIS OF ONLINE EDUCATION: CHALLENGES FACED BY TEACHERS AND STUDENTS IN RURALAREAS

Education has been filled out with new innovations and discoveries by e-learning. There are many challenges faced by rural communities in e-learning such as adaptability in online learning, computer knowledge, virtual engagement, self motivation, time management, technical problems, social engagement and so on. In real life, uncertainty situation do exists in each and every challenges faced by teachers and students in all the aspects.

Here, we present the single valued neutrosophic logical analysis of common challenges faced by the teachers and students belonging to rural areas such as adaptable to the online format, computer knowledge, technical problems and time management which includes uncertainty situation in e-learning system. Now, we arrange the common challenges with uncertainties in e-learning such as adaptable to the online format, computer knowledge, technical problems and time management in a sequential order where the uncertainty situation is neglected in other approaches.

Some of the people in rural community are familiar in this new mode of online teaching and learning, some people are not familiar and rest of them are less familiar which leads to uncertainty. Many of the people in rural community are well versed in computer knowledge, some of them are enough good and some of them are not well versed which results in uncertainty. Most of the people have skills to manage time effectively in e-learning,some of them are less effective in management of time and

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some are not effective in time management which results in uncertainty.In online classes, people get frustrated due to technical problems.Some of the people get no technical issues,some of them have little issues and rest of them have more technical issues which leads to uncertainty.

According to the data collected from teachers and students, our problem is to analyse and arrange the common challenges with uncertainties in e-learning such as adaptable to the online format, computer knowledge, technical problems, time management in a sequential order. Here, we take the challenges such as adaptable to the online format, computer knowledge, technical problems, time management as parameters. Let $X = \{ x_1 , x_2 , x_3 , x_4 \}$, x_1 is adaptable to the online format, x_2 is computer knowledge, x_3 is time management, and x_4 technical problems is where $x_1 (T_1 , I_1 , F_1)$, $x_2 (T_2 , I_2 , F_2)$, $x_3 (T_3 , I_3 , F_3)$ and $x_4 (T_4 , I_4 , F_4) \in [0 , 1]$. The options of teachers and students could be a degree of truth membership, indeterminacy membership and falsity membership of challenges caused .

Let P and Q be two single valued neutrosophic sets of X defined by $P = < 0.577,0.45,0.218> / x_1 + < 0.505,0.381,0.114 > / x_2 + < 0.673,0.177,0.2 > / x_3 + < 0.236,0.482,0.255 > / x_4$ and $Q = < 0.35, 0.3,0.35> / x_1 + < 0.44,0.34,0.22 > / x_2 + < 0.43,0.34,0.23 > / x_3 + < 0.25,0.3,0.45 > / x_4$.

Even though, the relative importance of the above common challenges faced with uncertainty aspects caused in e-learning is not known well , we present an algorithm to arrange the parameters in a sequential order.

3.1. GEE-ANI ALGORITHM

1. Create a table for single valued neutrosophic sets P and Q.
2. Input single valued neutrosophic sets P and Q, find $R (\alpha_i , \beta_j)$
3. Compute $R (\alpha_i , \beta_j) = < \min (T_p(\alpha_i) , T_Q(\beta_j)), \max (I_p (\alpha_i) , I_Q(\beta_j)), \max (F_p(\alpha_i) , F_Q(\beta_j)) > = < P_{T,} \sigma_1 , \tau_F >$ for $i \neq j$.
4. For $i \neq j$, calculate $a_{ij} = p_{T,} \sigma_1 , \tau_F$
5. Develop a pairwise comparison matrix . Analyse and compare each pair of items and mark the preferred item.
6. Using rating technique , find w_j, $j = 1,2,3,4$ for the parameters
7. Find $x_i^{\text{WSM-score}} = \sum_{j=1}^{4} W_j a_{ij,}$ $I = 1,2,3,4$ for parameters.
8. Determine the ranking in a sequential order as per the maximum scores of the parameter.

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Let us use the algorithm to arrange the challenges with uncertainty in sequential order.

Table 1. Tabular form of a_{ij}

Q / P		$< x_1 , 0.35,0.3,0.35>$	$< x_2 , 0.44,0.34,0.22>$	$< x_3 , 0.43,0.34,0.23>$	$< x_4 , 0.25,0.3,0.45>$
	Weights (w_j)	0.47	0.26	0.26	0.01
$< x_1 , 0.577,0.45,0.218 >$	0.47	-	0.67	0.65	0.25
$< x_2 , 0.505,0.381,0.114>$	0.26	0.38	-	0.58	0.18
$< x_3 , 0.673,0.177,0.2>$	0.26	0.3	0.56	-	0.1
$< x_4 , 0.236,0.482,0.255 >$	0.01	0.368	0.463	0.463	-

Table 2. Pairwise Matrix for Parameter Analysis (i, j)

	1			
2	2	2		
3	1	3	3	
4	4	4	4	4

By comparing the relative importance of parameters construct prioritization matrix**.**

Table 3. Prioritization Matrix

	x_1	x_2	x_3	x_4	Row Total	Weights
x_1	-	5	3	7	15	0.47
x_2	0.2	-	1	7	8.2	0.26
x_3	0.33	1	-	7	8.33	0.26
x_4	0.14	0.14	0.14	-	0.42	0.01
Column Total	0.67	6.14	4.14	21	31.95	

Now, the score of x_i is calculated for each parameters as ;

$$x_1^{\text{WSM-score}} = (0.67)(0.26)+(0.65)(0.26)+(0.01)(0.25) = 0.3457 ,$$

$$x_2^{\text{WSM-score}} = (0.38)(0.47)+(0.26)(0.58)+(0.01)(0.18) = 0.3312 ,$$

$$x_3^{\text{WSM-score}} = (0.3)(0.47)+(0.26)(0.56)+(0.01)(0.1) = 0.2876$$

$$x_4^{\text{WSM-score}} = (0.47)(0.368)+(0.26)(0.463)+(0.26)(0.463) = 0.4137,$$

ranks for each parameter is estimated from the scores. According to the ranks, we obtain the sequential order of parameters as $x_4 > x_1 > x_2 > x_3$.

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Hence, we conclude that, with the use of Gee-Ani Algorithm for single valued neutrosophic logical analysis, common challenges faced by teachers and students in rural communities in online education are analysed and arranged in a sequential order as: technical problems > adaptable to the online format > computer knowledge > time management.

3. CONCLUSION

In this paper, we have analysed and arranged the common challenges faced by the teachers and students from rural community in a sequential order using single valued neutrosophic logical analysis of online education. This would be an easy way to overcome the challenges caused in online education corresponding to the priority given in sequential order. According to this sequential order, remedies may be carried out under the preference, to overcome the challenges which results in successful outcome of e-learning system in rural communities. This would be helpful in future to know about the corresponding remedies which overcomes the challenges faced with uncertainty situation in e-learning.

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COVID-19 IMPACT ON PASSION OF TEACHING AND LEARNING PROCESS IN INDIA

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ABSTRACT

COVID-19 has greatly disrupted access to education in India. It has brought about changes to the education system that impact teachers in multiple ways. Indeed, School closures have compelled education system to quickly devise and apply different modes of remote learning such as radio, TV and various other types of online tools. Teachers who are intimidated by technology now have to take the bull by its horns. But using a platform and its features to teach effectively and ensure that all students are indeed learning is paramount. The latest EdTech trends in 2020 -21 are being revolutionized with strong focus on connectivity, versatility and student-centered learning. Today students grow up with internet-connected devices at home and in the classroom, which changes the way they learn. Students pursuing this path need to gain the knowledge and skill that will let them apply new education technologies to maximize their benefits for higher secondary school students today and tomorrow. This Paper will discuss passion of teaching and learning through new pedagogical ideas and innovative technologies. This paper will helpful to educators to develop effective e-content with knowledge of technology usage.

Keywords: passion, teaching, learning, innovations, Technology, Digital, Phygital.

I.INTRODUCTION

Distance learning became the top 2020 educational technology trend overnight because of the rapid spread of covid-19 and school closures. Technology has made in possible for everyone to stay connected. Students and teachers connect, discuss, share their opinions and act upon situations collaboratively. True educators bring valuable knowledge to learners, both in theory and in real life. But smart educators are those who can create teaching from what learners want to learn.

EdTech is a process of integrating technology into education to build better teaching/learning experiences that result in higher learning outcomes. Besides, EdTech enables teachers to create online courses where students can learn their own space and at their own pace.

eLearning is education or training delivered electronically. With eLearning, educational content is delivered to learners through computers, laptops, tablets, or smart phones. Educators are using the advantages of technology to make learning more

effective. That's why more and more online courses are produced nowadays.

Videos, especially animated videos, are extremely beneficial to enrich lessons and make content comprehensible. It improves students' outcomes and reduces teachers workload. Many educational institutes have started using social media as a communication tool in which students can share study materials, discuss with others in a group. Or easily comment on someone else's post. Even an animated learning video could go viral on social media.

II.BACKGROUND OF THE STUDY

For the first time in the history of the Indian education system, there has been a shift from a face-to-face teaching model to a completely online one (Zimmerman, 2020). The extensive use of digital media is in place. Teachers across the section of the society variably or invariably have had to quickly get used to the online mode of teaching guided towards a digital mindset (Victoria, 2020).

The student community is also deeply affected. They have had to let go of their campus life, stay indoors, and attend online classes (Chaturvedi and Pasipanodya, 2019; Govindarajan and Srivastava, 2020).

Some researchers believe that students who adopt an online learning mode are slightly more receptive than those who "prefer to learn in a traditional face-to-face environment." However, some other researchers proved that the blended teaching mode yields the best results (Means et al., 2013).

The teaching community remains cynical about the success of online teaching and learning pattern. A study conducted on complete reliance on online mode of teaching based on the Technology Acceptance Model (Davis, 1989) has revealed that students and faculty share common concerns regarding the availability of the Internet, student-teacher engagement, and incessant workload (Wingo et al., 2017).

In line with this, the Unified Technology Acceptance and System Success (UTASS) model was proposed, which said that system quality, social influence, and facilitating conditions positively impact students' behavioral intention towards e-learning systems (Chaturvedi et al., 2018; Zhang et al., 2020).

To serve all these needs, the organizations need to turn to a blended model of education, which has been referred to as phygital mode (George, 2020) of education.

Moreover, such individuals are the ones who are the pioneers in adopting this new digital teaching pedagogy across the globe. The theoretical framework which can be used to understand the online teaching and learning process is the Community of Inquiry (CoI) model, which consists of three critical factors: Social element, Cognitive element, and Teaching element (Garrison et al., 2000).

III .BEST PRACTICES FOR PASSION OF TEACHING

- Both students and teachers described two kinds of teaching styles that occurred

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during the implementation process of the tablet devices, these teaching styles were labeled by the researchers as "instrumental teachers" (67%) and "innovative teachers" (33%). The results indicate that teachers' perceptions of the tablet devices have an impact on their teaching practices.

- The introduction of tablet devices has facilitated a shift from 'learning by heart' to learning through multimedia, social media and the integration of the personal world of children, all of which makes learning more meaningful. Finally, as reported by almost every student and teacher, a large benefit of using tablet devices for learning is that students seem to be more inclined to collaborate and share information with each other.
- Both teachers and students (age 11–18) stated that by using applications such as iMessage, Whatsapp, Telegram and Facebook, students establish online networks and discussion groups spontaneously. Furthermore, more than 75% of the students indicated that the ability to ask their peers questions aids their learning process. Nonetheless, a small number of teachers and students have stated they have concerns about this transfer of social contact to the digital world.
- Apart from the enhancement of communication between peers mutually, communication between teachers and students is more frequently reported. In addition, one of the central issues of tablets for students' learning is the blurring of the boundary between school and recreation. Participants claim that the traditional context of learning between the school walls has now extended to a digital learning environment, which allows children and teenagers to access content anywhere and at any time.

IV. EFFECTS OF COVID-19 ON TEACHING-LEARNING PROCESS:

4.1. ONLINE EDUCATION:

Due to Covid-19, there is no option without online education. As lockdown don't allows to open schools, colleges, so online education is only one option through which education can be continued.

4.2. USE OF APPS:

Different apps nowadays are used for online education. These apps are helpful for students and teachers to reach. Such type of apps are also used for meetings, online teaching learning process.**Eg. Voice Snap Messenger, Zoom, Google meet, Webex ,Google Classroom, Microsoft Teams, Teachmint etc.**

4.3. PLATFORMS FOR ONLINE EDUCATION:

There are different platforms available for online education. Through theses platforms, online classes can be taken, videos can be uploaded, recorded videos can be send. So these platforms are helpful to the students as well as teachers.

Eg. Swayam, Webex, Impartus etc.

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4.4. USE OF DIFFERENT E-CONTENT:

Due to online education there is no time limit as well as place restriction for learning. Anyone can learn from any place and at any time. So many type of education any one can take. And different e-contents are also prepared for students. These are helpful for them to enrich their knowledge.

V. ADAPTED SOME INNOVATIVE METHODS FOR PASSION OF TEACHING AND LEARNING IN PANDEMIC INDIA

5.1 E-LEARNING

E-learning is delivered through websites and the intranet. Provision can also be made for online guidance and discussion boards. Content could be distributed via PowerPoint, audio and video clips, drag-and-drop questions, Pdf, website links, and web-enabled platforms and educational communities.

5.1.1 E-LEARNING RESOURCES AT NATIONAL LEVEL

University Grants Commission (UGC) India's leading regulatory body for higher education, withthe collaboration of the Ministry of Human Resources Development (MHRD) Under the Govt. of India, has made continuous efforts to implement e-learning initiatives even during the COVID-19 pandemic in India. Some of the essential steps to incorporate e-learning are: -

(I) "Vidya-Daan," a programme focused on the crowdsourcing of teachers' content, was planned to synergies the country's innovations by supplying teachers and students from the various Metro cities to the remote areas or smallest villages for efficient qualitycontent for e-learning that can be downloadable at anywhere, at no price and at any time.

(ii) Weekly Practice Program is CCT(Creative and Critical Thinking) to improve learner cognitive skills and create interest by relating learning to real-life circumstances. Teachers can also use these things to facilitate conversations and involve learners in self-learning adventures.

(iii) Government of India's iGotprogramme uses DIKSHA for COVID-19 training of physicians, nurses, ASHA staff, NCC, NSS, NYKS volunteers. Between April and June 2020, more than 17 lakh individual training sessions have been performed and well, certified.

(iv) PM eVidya declared under the AtmaNirbhar Bharat policy that DIKSHA is the 'one nation; one digital platform' for education in India. DIKSHA is being converted into a forum for rich and diverse curriculum, linked to the e-content requirements of teachers and learners for all states and UTs, accessible via digital devices, to ensure continuity of access and learning experience.

(v) Online MOOC courses related to NIOS (classes 9 to 12 of open school) are

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uploaded to the SWAYAM portal; about 92 courses have begun and 1.5 crore learners are enrolled. Teachers and students can access all courses modules-text, videos, evaluation questions, etc. through SWAYAM. Various online software like Zoom, Google Meet, YouTube, etc. are used for online courses and teaching.

(vi) We can access e-Textbooks using the e-PG Pathshala digital platform and phone app (Android, iOS, Windows) for learners, mentors, teachers, and parents. Around 600 eBooks, which includes approx. 377 digital textbooks from class I to XII and 3,500 NCERT video and audio contents, is availablein different languages (Hindi, English, Sanskrit, and Urdu) in the public domain.

(vii) Apart from the preventative measures to be taken by academic institutions to deal with the rising situation of COVID-19, UGC has undertaken all steps to ensure that all higher educational institutions maintain regular interaction with students and teachers by electronic communication and keep them completely updated so that there is no distress among students, teachers, and teachers.

5.2 ICT TEACHING AND LEARNING

5.2.1 ICT TEACHING TOOLS

It includes simulation, Modeling, CD-ROMS, teacher web publishing, word processing, spreadsheets, data logging, databases, e-mail, smartboards, interactive whiteboards and internet browsing

5.2.2 APPROACHES FOR USE OF ICT IN THE SCHOOLS

- Interactive Boards
- Facilitate Experiments,
- Computer is used to facilitate experiments in natural sciences.
- Use of ICT is a way to improve the experiments and to make the processes more visible and in other cases the experiments would not even be possible to do without computers
- The schools can use standard programmes, teachers can also developed their own programmes to support experiments they want to do together with their students.
- As experiments are mainly a part of sciences subjects this was a methodology more commonly used in science subjects than in other subjects.
- Powerpoint
- Animations

5.2.3 LEARNING PLATFORMS

- Learning Platforms such as Moodle used as a means of communication between teachers and students are also used as a storage of the course content
- The schools use learning platforms only for blended learning instruction to Facilitate, support and organize classroom pedagogical practices

5.2.4 ICT CAN BE USEFUL FOR A TEACHER

(I) ICT helps a teacher to learn innovative

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methods of teaching. Teacher can work with the students on various project and assignments. It also helps them in providing teaching contents, home works etc.

(ii) Teacher may participate in various in-service training programs and workshops which are essential for his professional development with the help of ICT.

(iii)ICT helps a teacher to guide his students about the learning materials available on internet, e-books ,e-journals ,e-magazines and social sites like linked –in which are helpful in better learning of subject skills.

(iv)ICT also helps him framing curriculum of subjects. Teacher can study curriculums of different countries to study their pros and cons, challenges as well as sociological and psychological issues related to learners. All these things help him in framing a curriculum that leads to achieve the aims and objectives of subject of teaching

5.3 E-CONTENT DEVELOPMENT FOR TEACHING AND LEARNING

- E-content development is the heart of teaching learning process. Although content development plays a key role in e-learning, it is undoubtedly not an easy process. It requires expert knowledge in the subject area, patience in creating the necessary objects that make up quality and a high sense of creativity in structuring and sequencing the topics to make a complete whole.
- All the e-content materials should focuses on

(a) **Cognitive perspective** thatemphases on the cognitive processes involved in learning as well as how the brain works;

(b) **Emotional perspective** that gravities on the emotional aspects of learning, like motivation, engagement, fun,etc.;

© **Behavioural perspective** highlights the skills and behavioural outcomes of the learning process, role playing, and settings of job

(d) **Contextual perspective** that concentrate on the environmental and social aspects which can stimulate learning. The e-content development aspects Comprise of six stages described as follows (Natchimuthu 2012)

VI IMPACT OF SOCIAL MEDIA FOR PASSION OF TEACHING-LEARNING IN PANDEMIC SITUATIONS

- Social Media in education refers to the practice of using social media platforms as a way to enhance the education of students. Social Media is defined as a group of internet –based applications that build on the ideological and technological foundations of web2.0, and that allow the creation and exchange of user-generated content.
- Institutions are adapting many social media platforms into their educational

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systems to improve communication with students and the overall quality of student life. It provides schools or colleges with an easy fast method of communication and allows them to give and receive feedback to students.

- Youtube, Facebook, Whatsapp , Telegrams, Slideshare, Lecturenote, Linked-in, Flipbooks are some adapted social medias using for educational development in India.

VII. CONCLUSION

Use of ICT in today's scenario is very much helpful. To overcome the problem, these tools are very much helpful. Through these tools we can contact each other and continue education process. So ICT is nowadays on demad. Education is set of experience a huge level of reshaping from many emerging technologies.Teachers can use online course platforms to enhance the learning environment.The recent pandemic created an opportunity for change in pedagogical approaches and introduction of virtual education in all levels of education. This would involve upgrading the service platform to enable it to meet the required volume of educational demands of students. Virtual education is the most preferred mode of education at this time of crisis due to the outbreak of Covid-19. The post Covid-19 education seems to be an education withwidely accepted online/virtual education which may perhaps be a parallel system of education. This paper has not covered any statistical analysis on impact of Covid-19 on higher education however further in-depth study with statistical research may also be undertaken

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ONLINE EDUCATION IN INDIA

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ABSTRACT

Online education, without a doubt, has fixed its roots in the surface of education. With the increasing speed of internet connections, opportunities for multimedia training have arisen. Even social media has left a great impact on education and is evolving it constantly. Learning and educating can be very expensive, time-consuming and does not guarantee results, but online education has the baggage of solutions to every possible problem. To do the work, physical presence is not required now. Everything is available in the portable virtual world.

INTRODUCTION

Education is a constantly evolving sector. With it, the challenges come in bountiful. But the best part is, there is always room for improvement. In fact, the education sector has been witness to a sea of changes that have washed over it, making it more improved and accessible. One such predominant integration has been that of technology, which has given the traditional classroom model a dizzying spin. This initiated a shift in the learning paradigm, dissolving the hindrances posed and making way for a better future. It has given rise to one of the most popular forms of education of recent times. That's online education.

Online education is defined as acquisition of knowledge and skill using electronic technologies such as computer and Internet-based courseware and local and wide area networks. Broad definition of the field of using technology to deliver learning and training programs. Typically used to describe media such as CD-ROM, Internet, Intranet, wireless and mobile learning. Some include Knowledge Management as a form of online education. The term was introduced in 1995 when it was all called "Internet based Training"(IBT), then "Web-based Training"(WBT) to clarify that delivery could be on the Inter- or Intra-net, then "Online Learning" and finally e-learning, adopting the in vogue use of "e" during the dot com boom. The "e- " breakthrough enabled the industry to raise hundreds of millions from venture capitalists who would invest in any industry that started with this magic letter. Online Education is the computer and network-enabled transfer of skills and knowledge. Online Education applications and processes include Web-based learning, computer-based learning, virtual education opportunities and digital collaboration.

Content is delivered via the Internet, intranet/extranet, audio or video tape,

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satellite TV, and CD-ROM. It can be self-paced or instructor-led and includes media in the form of text, image, animation, streaming video and audio. It is commonly thought that new technologies can make a big difference in education. In young ages especially, children canuse the huge interactivity of new media, and develop their skills, knowledge, perception of the world, under their parents' monitoring, of course. Many proponents of online education believe that everyone must be equipped with basic knowledge in technology, as well as use it as a medium to reach a particular goal.

Even the National Education Policy (NEP) 2020 focuses on digital learning as a substitute to the traditional classroom model for interaction between teachers and students. While there are numerous benefits of digital education, the barriers are still manifold to make education a complete online phenomenon in rural areas. The present Covid-19 crisis has had a major impact on the digital divide in the country, particularly from the perspective of education with digital access. It has also brought into sharp focus the challenges that exist for digital representation of education in rural areas of the country.

Objectives of the Study

- To analyze opportunities of online education
- To find out the challenges of online education

Methodology

This study is based on secondary data. Secondary data were collected form books, journals, project reports and from internet sources.

Methods to online education

Synchronous Method: Synchronous, means "at the same time," involves interaction of participants with an instructor via the Web in real time. Asynchronous, which means "not at the same time," allows the participant to complete the WBT at his own pace, without live interaction with the instructor.

- ***Virtual Classroom****:* Virtual classroom duplicates the features of a real classroom online. Participants interact with each other and instructors online, instant messaging, chat, audio and video conferencing etc.
- ***Blended Method****:* Most companies prefer to use a mix of both synchronous and asynchronous e-learning methods according to their requirement. It is an amalgamation of synchronous and asynchronous learning methods.

Asynchronous Methods:

- ***Embedded Learning****:* Embedded learning is information that is accessible on a self-help basis. It can be delivered to the place of work, or to mobile learners. Electronic performance support system (EPSS) is a type of embedded learning. The advantage is that embedded learning

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offers learners the information they need whenever they need it.

Courses: The clear advantage of a self-paced course is convenience. Participants can get the training they need at any time. This can include just-in-time training where a participant gets exactly the training he or she needs to perform a task.

Discussion Groups: A discussion group is a gathering of conversations that occur over time. They are also called message boards, bulletin boards and discussion forums. Discussion groups can be used to support a group of participants taking the same class or can be used to support participants performing related tasks. A discussion group is a very competent way to supply expert answers to a large group people. A single answer to a common question can help many.

Opportunities of Online Education

Cost-effective and saves time: Online education courses do not demand students to be present in the classroom necessarily. Students can proceed with the courses from the comfort of their homes or any place they deem convenient. This cuts down the money on travel and saves a lot of time.

The self-paced aspect of Online education shines through all obstacles: The best part about online education is that you can study whenever you want. Be it in the bus, the bookstore, the coffee shop, at home, on the run, or absolutely anywhere you want. And you can learn it at your own pace. With online education, there is no need to rush through your concepts and your understanding.

Higher knowledge retention: To make education interactive and interesting, online education employs numerous methods like blended learning approach, gamification.

Tracking Course Progress becomes Easier: A well-implemented Learning Management System (LMS) makes tracking course progress more effective and easy. In addition, LMS makes assessing students' capabilities a piece of cake. Therefore, an online education system, which includes an LMS, can prove to be quite effective in 'tracking learners progress.

Provides ample room to be discreet: It so happens sometimes that a student lags behind in the class, while others find themselves quite in sync with whatever is being taught. And that student feels shy about questioning the incomprehensible, since that would shower him with unwanted attention. The whole situation ends up being extremely embarrassing. Such a situation can be completely avoided in online education and any failure can be kept from getting out in the open. Therefore, the chances of being jeered at can be reduced.

Encourages sharing: Online education provides students with a chance to share the knowledge acquired through online

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communities. A discussions forum can add value to the learning procedure, by incorporating scope for fruitful collaboration and conversation. Sharing of resources in online education is also an extremely healthy way for education to flourish.

Challenges of Online Education

The Internet is still a luxury in many parts of the country: A vast majority of the Indian population resides in rural areas. The lack of infrastructure in such areas gives rise to connectivity and accessibility issues. However, the Government of India has been instrumental in removing such barriers by implementing various measures.

Digital Illiteracy and No Infrastructural Support: A significant proportion of the rural population continues to fall short of the required internet bandwidth and knowledge to recognize devices and digital terminologies. Another major issue involves the absence of supporting infrastructural facilities such as a stable flow of electricity and unavailability of high-speed internet.

Access to proper devices and cost of data for rising use of content consumption: While talking about digital learning, it important to observe the accessibility of accurate devices for each student to avail digital content. In rural areas, only a nominal section of people have the privilege of accessing laptops and computers. Even students with access to desktops and laptops cannot avail the internet and the costs incurred in the procedure. Apart from that, the phone screens available to them are not favourable enough for long learning hours.

Inadequate Skills: The inadequacy of skills among the teachers of the rural areas to operate digital platforms is another key factor affecting the advancement of digital education. As the teachers lack the necessary training to use digital platforms, they are averse to adopt these educational methods.

Online Education does not cover a lot of certification courses: The certifications that come with conventional learning are somehow lost in the online education concept of education. The e-earning courses do not cover a lot of certification courses that are recognized by colleges and universities across India or abroad.

It would take some time to renovate the conventional educational system: The traditional education methods have enlightened generations for decades now. Even though you might feel that they have overstayed their welcome, it has become increasingly difficult for us to overthrow tradition completely and embrace newer methods of learning with open arms.

Not all learners are tech-savvy: Even though the online education courses are available in a wide range of platforms for learners to choose from, a basic knowledge of how to operate those devices is imperative

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to benefit from the courses. Therefore, before online education could be implemented, learners and educators need to be educated about the ins and outs of technology to facilitate a smooth learning curve.

Lack of awareness: Awareness plays a key role in making the proliferation of online education a joy ride. If a large part of the population isn't aware of the amazing benefits.

CONCLUSION

Online education involves the use of digital tools for teaching and learning. It makes use of technological tools to enable learners study anytime and anywhere. It involves the training, delivery of knowledge and motivates students to interact with each other, as well as exchange and respect different point of views. It eases communication and improves the relationships that sustain learning. So ICTs provide great opportunity for Education system in developing countries to improve their teaching and learning processes.

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COVID-19 IMPACT IN EDUCATION OF RURAL INDIA

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ABSTRACT

Education is a fundamental human right of every child. It creates opportunities; a ripple effect that influences generations to make the right decisions about their own future. It enables people to make well-informed decisions, pursue interests and gain an insight into different people and situations. It gives us a sense of responsibility; children not only learn literacy and numeracy but social and essential life skills. The corona virus has altered our lives, our realities, and forced us to change for the better. The biggest and most important impact has been on our younger generation, the future of tomorrow. The pandemic has opened our eyes and make us realise the need for major reformation in the education system. Rural schools face a number of challenges when it comes to the learning arena- enrolment and dropout of students, the number of teachers, infrastructural deficiencies, and technological barriers to name a few. Among the challenges, the drop-out of students plays an important role. Inadequate access to facilities, drastic change in earnings, and the movement of families due to the economic shutdown has worsened the situation for rural learners. This article aims to examine how corona virus has affected the education sector in rural India. We have some notable impacts in rural education as a result of lacking attention during the pandemic period.

Keywords: Covid-19, rural education, challenges

"The highest result of education is tolerance" - Hellen Keller

Education plays a fundamental role in achieving human potential, developing a notable progress in the life of every individual and also in promoting national development. Education paves many ways to get success and growth in life by providing number of platforms to the every individual. It empowers our mind to choose correct path in our life and helps everyone to conceive good thoughts and ideas. It helps not only to get knowledge in different fields like arts, science, history, technology but also to get social and moral values. It takes an important place in eradicating poverty and provides a bright future. It affords self confidence and turns dreams into reality.

Education plays a vital role in the progress of a country. It brings a great optimistic change in terms of economic growth, social justice and equality, scientific advancement, national integration, and cultural preservation. It helps to shape a

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better society to live in by making people to understand and respect rights, laws, and regulations. It also encourages people to take part in political participation, and makes them understand social equality, and environmental sustainability which leads a country to acquire a positive social change. Through education, a country could gain development in the field of science and technology, agriculture, communication, medicine, etc. It promotes a country to the highest position as a developed nation all over the world.

Education of a country covers both education in villages and education in urban areas. Since, it is of utmost important to concentrate in analyzing the level of education in rural India. The foundation to turn India into a strong nation has to be laid down at primary and rural levels and so the quality of education right from the beginning should be excellent. Majority of people living in villages could understand the importance of education and know that it is the only way to get rid of poverty. But due to lack of money they are not able to send their children to private schools and hence depend upon government schools for education. But in some of the government schools there is only one teacher for the entire school and if they don't show up at work, then it is a holiday. In some cases there is a lack of financing balanced takes place. It creates poor results and fails to find acceptability among India's poor. Sometimes investments made by the government yielded low impact. As a result rural schools remain poorly funded and understaffed.

Some government schools in rural India are overly packed with students, leading to a distorted teacher- student ratio. In such remote villages in India, it is impossible for teachers to pay full attention towards each and every student, even if they are willing to help. Some other villagers do not have schools which mean that students have to go to another village to get education. Owing to this parents usually do not send their daughters to school, leading to a failure in achieving rural education in India. As a result a very low number of students actually clearing their secondary education and taking admission in colleges for further studies. So the drop-out-rate at the secondary level is extremely high in villages. Only parents who can afford college education send their kids to secondary schools. If parents are not able to send their children for higher education then all their previous efforts get wasted as completing just secondary education means a low paying job and the person is again struck in the same never ending cycle of money, life and poverty.

Since people in rural areas speak only their native language, students from rural areas could not pick up their studies when they find their textbooks in English. This results in lack of their interest in studies. Education and text books should be made interesting. For rural students textbooks related to their culture, their traditions and values should also be there so as to create their interest in studies. Though some of the students from villages are really brilliant, as

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they have a wealth of practical knowledge and know how to survive even in very harsh conditions of life, difficultly in understanding their textbooks, lack of facilities and their poverty is a hurdle in their education. This makes a big difference between city and village student in terms of their initial environment, skills, learning ability, availability of infrastructure, and access to different facilities. All of these must be considered while making the curricula which should not be different but how it is going to be taught would make the difference.

Quality related issues are far powerful than poverty. Students are not at all encouraged to think but they are asked to memorize pre-defined questions for exams. So for many students clearing examination at the end of the session, passing their exam becomes more important than gaining knowledge.

In addition to this, the corona virus has altered our lives, our realities, and forced us to change for the better. The biggest and most important impact has been on our younger generation, the future of tomorrow. The pandemic has opened our eyes and make us realise the need for major reformation in the education system.

According to a recent article titled Education: From disruption to recovery by UNESCO (May 2020), nation-wide lockdowns are impacting over 70% of the worlds' student population. The report estimates that across 22 countries, over 290 million students shall be adversely impacted. UNESCO also estimates that about 32 crores of students are affected in India, including those in schools and colleges. The repercussions of the pandemic will continue to produce pronounced changes in teaching and learning practices for all levels of education. But how evenly will these issues be addressed across villages across India, is a matter of concern.

Since its outbreak two years ago, the COVID-19 pandemic has disrupted education systems globally, affecting the most vulnerable learners the hardest. Its impact was everywhere, which resulted in the closure of schools and other educational institutions. Lack of connectivity and devices excluded at least one third of students from pursuing learning remotely.

In India, many children came to school just because they can get food. The great midday meal scheme has helped many children who couldn't bring their food from the home to get their nutrition. Because of the Covid-19 schools were closed. So they were suffering from not having enough food for their survival. A school provides social protection, nutrition, health, and emotional support to the most disadvantaged, from low- to high-income. About 9.12 crore Indian children are not receiving their mid-day meal during school closure. These meals served as an important safety measure, as economists estimate that 75% of poor families' income is spent on food.

According to a survey report called the Annual Status of Education Report (ASER), more than 50% of the students in

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the 5th standard attending rural schools are not capable of reading a second standard textbook and do not know how to solve basic mathematical questions. As if there wasn't enough disparity between urban and rural education in the first place, the corona virus crisis has only further impacted our rural education system.

Rural schools face a number of challenges when it comes to the learning arena- enrolment and dropout of students, the number of teachers, infrastructural deficiencies, and technological barriers to name a few. Among the challenges, the drop-out of students plays an important role. The incomes and infrastructure in urban cities have enabled the easy introduction of e-learning modes, supplemented by the availability of devices and the internet, during the lockdown period. Inadequate access to facilities, drastic change in earnings, and the movement of families due to the economic shutdown has worsened the situation for rural learners. The reasons behind so many drop-outs in spite of free education should be found out in every village as this is a hurdle on the road to progress. Improvement in the condition of government schools, education quality, committed teachers and more salaries to these teachers should be part of development.

The Covid-19 not only affects the rural students' lives but also the lives of young, energetic and poor contractual teachers. They do not have any guarantee of future employment. In many villages in India, they were not receiving their salary for several months even before the pandemic broke out. It gives a big challenge in the rural education system and affects the continuity of the education of the children especially living in the rural India.

Amid these complications and obstacles, our government has taken full pledged efforts to impart quality education to the rural students by arranging reachable platforms like Kalvi Tholaikatchi TV and providing Laptops. With these facilities, the rural students could update their knowledge and learn by watching the lesson videos. It shows that though Covid-19 has disrupted the education ecosystem, at this moment it is an opportunity for transform. These new ways of teaching and learning ensure that all students have access to the related tools and infrastructure. Thus, the corona virus pandemic is teaching us how schooling is not equivalent to merely learning, but encompasses a social space, a social process, to learn, to live, to think and act for oneself.

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COVID 19 IMPACT IN EDUCATION OF RURAL INDIA

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ABSTRACT

Indian education system is still not mature at both the urban and rural area. Midday meal is the program organized to attract the students to get education. Under these circumstances government imposed nation wise lockdown on March 25th 2020 to combat COVID-19, has made severe impact on the education system. India has the world's second largest school system, after China. According to UNESCO, 63 million teachers were affected in 165 countries. A total of 1.3 billion learners around the world were not able to attend schools or universities, and approximately 320 million learners are affected in India alone. It has changed the traditional education system to the educational technologies model in which teaching and assessments are conducted online. Both the positive and negative impacts of COVID-19 on Indian Education system are observed. This paper aims to analyze the Impact of COVID-19 on Indian Education System, focusing on education during online teaching and assessment of students getting online classes in this pandemic from settings at home

INTRODUCTION

The COVID-19 pandemic has graphically illustrated the importance of digital networks and service platforms. Digital networks that deliver the internet to our homes, and the services that ride on those networks have leapt from an ancillary "nice to have" to something that is critical to economic activity and our daily lives. It is time to consider whether these companies are too important to be left to make the rules governing their behavior themselves. There is a new public health crises threatening the world with the emergence and spread of 2019 novel coronavirus (2019-nCoV) or the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The virus originated in bats and was transmitted to humans through yet unknown intermediary animals in Wuhan, Hubei province, China in December 2019. There have been around 96,000 reported cases of coronavirus disease 2019 (COVID-2019) and 3300 reported deaths to date (05/03/2020). The disease is transmitted by inhalation or contact with infected droplets and the incubation period ranges from 2 to 14 d. The symptoms are usually fever, cough, sore throat, breathlessness, fatigue, malaise among others. The number of confirmed COVID-19 cases in India crossed 80 lakh on October 28, according to data collated from various State Health Departments. As of 7 p.m. on

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October 28, the figure stood at 80, 01,583 with 1, 20,185 deaths. India's COVID-19 tally crossed the 20-lakh mark on August 7, 30 lakh on August 23 and 40 lakh on September 5. It went past 50 lakh on September 16, 60 lakh on September 28 and crossed 70 lakh on October 11.We may be social distancing physically but mentally and emotionally we are all still so connected. A pandemic like the COVID-19 may have restricted any form of outdoor activity and we are not complaining about it as much. There are two reasons for this: Surviving is a priority for all (of course!) and social media is not letting us miss out on anything! While we also spend most of our time on streaming platforms such as Netflix, Hot star, and Prime, there has been a definite change in the way we use social media. If there is one thing that we will remember in years to come about this pandemic is how we used social media to its full capacity.

OBJECTIVES

The overall objective of this study is to analyze the Impact of COVID-19 on Indian Education System. In particular, this study will examine:

i. How the Indian education system is facing the Impact of COVID-19, and highlighting the role played by teachers and students through online education

ii. How the positive impact helpful to student, parents and school teachers in the scenario of the online education

iii. How to reduce the negative impact of COVID-19 on students for their smooth education.

METHODOLOGY

Data and information presented in the study are collected from various reports and articles published by national and international agencies on impact of COVID-19 pandemic. Information is also collected from various authentic websites. Some journals are also referred relating to impact of COVID-19 on educational system are referred.

Purpose of the Study

All systems have strengths and weaknesses. Maximizing strengths and minimizing weaknesses in order not to miss the opportunity to move forward should be the goal. The main purpose of the study is to analyze the impact of COVID-19 on the Indian education system. It covers the impact of COVID-19 on rural and urban students, Higher education Institutions.

Digital Infracture in India

Before the COVID-19 lockdown in India, no one estimated that the face of the Indian educational institutions could change so drastically. Schools that never allowed students to carry an electronic gadget turned into learning centers for online classes. Both teachers and students are getting familiar to this new normal, which is definitely more challenging for the teachers to handle with this situation. The teachers also face challenges in designing effective lessons and changing of teaching when shifting to online learning; this can also be resolved through workshops and training

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Impact on Teachers and Students

Both teachers and students are facing many hurdles during online education. At home, a lack of basic facilities, external distraction and family interruption during teaching were major issues noticed. Educational institution support barriers such as the budget for purchasing advanced technologies, a lack of training, a lack of technical support and a lack of clarity and direction were also noticed. Teachers also faced technical difficulties. The difficulties were grouped under a lack of technical support; it included a lack of technical infrastructure, limited awareness of online teaching platforms and security concerns. Teachers' personal problems including a lack of technical knowledge, course integration with technology are damper their engagement in online teaching.

Positive Impact On Education System:

Though the outbreak of COVID-19 has created many negative impacts on education, educational institutions of India have accepted the challenges and trying their best to provide seamless support services to the students during the pandemic. Indian education system got the opportunity for transformation from traditional system to a new era. The following points may be considered as the positive impacts.

Develop the use of soft copy of learning material- In lockdown situation, students were not able to collect the hard copies of study materials and hence most of the students used soft copy materials for reference.

Improvement in collaborative work- There is a new opportunity where collaborative teaching and learning can take on new forms.

Rise in online meetings- The pandemic has created a massive rise in teleconferencing, virtual meetings, webinars and e-conferencing opportunities.

Enhanced digital literacy- The pandemic situation induced people to learn and use digital technology and resulted in increasing the digital literacy

Improved the use of electronic media for sharing information- Learning materials are shared among the students easily and the related queries are resolved through e-mail, SMS, phone calls and using different social medias like WhatsApp or Facebook.

Worldwide exposure- Educators and learners are getting opportunities to interact with peers from around the world. Learners adapted to an international community.

Better time management- Students are able to manage their time more efficiently in online education during pandemics.

Demand for Open and Distance Learning- During the pandemic situation, most of the students preferred Open and Distance Learning mode as it encourages selflearning providing opportunities to learn from diverse resources and customized learning as per their needs.

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Negative Impact On Education System:

Indian education system has suffered a lot due to the outbreak of COVID-19. It has created many negative impacts on education and some of them are as pointed below:

Educational activity hampered- Schools are closed and classes have been suspended. Different boards have already postponed the annual examinations and entrance tests across India.

Unpreparedness of teachers and students - Teachers and students are unprepared for online education; they were not ready for this sudden transition from face to face learning to online learning.

Parents' role- In urban area some educated parents are able to guide but some may not have the adequate level of education needed to teach children in the house.

Digital gadgets: Especially in rural area many students have limited or no internet access and many students may not be able to afford computer, laptop or supporting mobile phones in their homes, online teaching-learning may create a digital divide among students. The lockdown has hit the poor students very hard in India as most of them are unable to explore online learning according to various reports

Create Difference: This online teaching-learning method creates a big gap between rich vs poor and urban vs rural students.

Observation And Recommendation

This pandemic has revealed some of the major loopholes in the Indian education system. The closure of schools has made a severe impact on marginalized students. One of the critical trends that can be followed is the need to have a combined approach to online learning with increase in investment on the upgrading of the technology infrastructure of educational institutions. Stress needs to be given to training the teachers. All higher education institutes now are aware of the importance of technology and should take serious measures to conduct technology-driven education through the learning management system. It is recommended that educational institutions should use technology in all aspects. This pandemic shows the partnership between technology and education is going to stay forever. One more suggestion is that education Institutes can divide the courses into conventional teaching and online teaching, it will help in inculcating the technology into the classrooms. Online teaching will increase digital literacy among teachers and students which will increase their exposure and learning and making them more employable for the digital world-leading thereby contributing to social sustainability.

CONCLUSION:

COVID-19 has impacted immensely the education sector of India. Though it has created many challenges, various opportunities are also evolved. The Indian Govt. and different stakeholders of education have explored the possibility of Open and Distance learning by adopting different

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digital technologies to cope up with the present crisis of COVID-19. India is not fully equipped to make education reach all corners of the nation via digital platforms. The students who aren't privileged like the others will suffer due to the present choice of digital platforms. The priority should be to utilize digital technology to create an advantageous position for millions of young students in India. It is need of the hour for the educational institutions to strengthen their knowledge and Information Technology infrastructure to be ready for facing COVID-19 like situations. Even if the COVID-19 crisis stretches longer, there is an urgent need to take efforts on maximum utilization of online platforms. India should develop creative strategies to ensure that all children must have sustainable access to learning during pandemic COVID19. As online practice is benefitting the students immensely, it should be continued after the lockdown. Further detailed statistical study may be undertaken to explore the impact of COVID-19 on education system of India.

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INCREASING IMPORTANCE OF TECHNOLOGY IN TEACHING-LEARNING PROCESS IN COVID'19 PANDEMIC.

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ABSTRACT:

Online teaching tools have become an incredibly popular way for students and employees to advance their education or professional development. The access to online tools has resulted in bridging the gap in teaching-learning process especially in this Covid19 pandemic period. In the present decade especially after the sudden outbreak of Covid19, everything is found to be shaken. The world is supposed to be in a transition state. There is a shift in the working dynamics, be it in business, transportation, invention, education and tourism. The education sector worldwide especially in India, which was hitherto slow to change, has witnessed a massive transformation recently with changing job landscape, technological disruptions and demand for quality education. In the teaching-learning process the development of so called 21st century skills have become very mandatory skill for employment. The role of technology in grooming these skills among students is incredible. Modern technology has especially revolutionized how educators approach teaching. For one, information has become more accessible to students, who can now acquire education even without leaving their homes through online courses, online degree programs, and others. Nevertheless, a teacher still needs to be a good communicator. On that note, they have to espouse interactive learning to grab and keep learners' attention and to be "effective and efficient" in doing. The paper unfolds discussions on some important challenges faced by the education system in India in the post pandemic period such as path leading to quality relationship between student and educator, systemic intervention, redefining the role of teachers as 'edupreneurs', role of digital technology in impacting teaching-learning process, solutions to bridge the learning gaps in curriculum, pedagogy and assessments and strategies for ensuring sustainability of learning. This paper will also showcase the magnificence of ICT in Teaching-learning process in the past, present and its impact in the days to come.

Keywords: Technology, Pandemic, Interactive Tools, Education

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Online teaching tools have become an incredibly popular way for students and employees to advance their education or professional development. The access to online tools has resulted in bridging the gap in teaching-learning process especially in this Covid19 pandemic period. Teaching through online requires different methods from the traditional classroom, so it is important that the teachers adapt or develop their skills to the online learning environment, to make their materials effective and engaging for learners. The role of the teacher as a learning resource will be much related to the skills of the teacher to present the existing teaching materials through technology and make it interactive. In the present scenario especially the Higher Education Institutions are increasingly building or remodelling classrooms to provide flexible spaces that support learner-centred instruction. The students of 21st century are already comfortable with technology as it is more flexible and user friendly. Compared to the traditional teaching learning process, technology-based learning facilitates students to feel easy-to-access information, accelerated learning, and fun opportunities to practice what they learn. It enables them to explore on new subjects and deepen their understanding of difficult concepts. Technology is changing at a rapid pace and that means that a 21st-century teacher is right along for the ride. The latest technology, whether it's for lessons or grading, will allow the teacher and student to be able to learn better and faster.

Teaching is a profession where one can make a long lasting impact in other's life. The teacher-student connection is invaluable .Teachers stay positive for their students even when things can seem grim. A great teacher always has compassion for their students, good understanding of their personal lives, and appreciation for their academic goals and achievements. Hence the responsibility of a teacher has always been inevitably high. In this 21st century, teacher's responsibility has increased double fold. On one hand the teacher has to plan and provide Electronic Content for Learners and on the other hand has to create good relation between the teacher and the learner.

In the present decade especially after the sudden outbreak of Covid19, everything is found to be shaken. The world is supposed to be in a transition state. There is a shift in the working dynamics, be it in business, transportation, invention, education and tourism. The education sector worldwide especially in India, which was hitherto slow to change, has witnessed a massive transformation recently with changing job landscape, technological disruptions and demand for quality education. The pandemic caused further shocks to the system with schools and colleges forced to shut down during the lockdown period, and the migration of students and teachers to online teaching-learning. In India, around 250 million students were affected due to school closures at the onset of lockdown induced by COVID-19.

The pandemic posed several challenges before the educational institutions. Due to prolonged lockdowns,

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there was a rise in the number of dropouts, students' loss of interest in learning, behavioural changes and difficulties in complete reliance on digital learning. The paper unfolds discussions on some important challenges faced by the education system in India in the post pandemic period such as path leading to quality relationship between student and educator, systemic intervention, redefining the role of teachers as 'edupreneurs', role of digital technology in impacting teaching-learning process, solutions to bridge the learning gaps in curriculum, pedagogy and assessments and strategies for ensuring sustainability of learning. This paper will also showcase the magnificence of ICT in Teaching-learning process in the past, present and its impact in the days to come.

In this pandemic, no doubt there are challenges post in the teaching pedagogy especially in the 21st century. Country like India consistently is facing three kind of problems like Linguistic Problems, Psychological problems, large classroom and poor network especially in the rural areas. However, the implementation of online teaching tools, in the midst of many technical, geographical and financial setbacks have enabled and ensured continuous learning possible. In the middle of pandemic and lockdowns the world continues to function only because of ICT tools.

Information and Communication Technology (ICT) has its sway on education in the past. But due to limited availability and accessibility of ICT tools, cost factor and Infrastructure and inadequate awareness and hesitancy towards adaptability to digital tools had limited the use of ICT in Education. But in the present era, especially after the outbreak of Covid 19 pandemic and the ever increasing users of android Phones, Laptops, Social Medias like Whatsapp, Twitter, Instagram, Vchat, Youtube, Telegram has revolutionised the thinking and working culture of India as well as the world. Presently whether it is remote area or urban, small sector or big sector, all are welcoming technology and have understood it's multifaceted benefits. Besides in India the path-breaking scheme launched by P.M to propagate New digital services like Bharat, digital locker, e-education, e-health, e-sign, e-shopping and national scholarship portal has made the number of internet users in India growing by leaps and bounds.

India has established a vast and comfortable space in such a way that anybody can cherish its benefits. In this 21st century when it comes to education the vast development and dependence on at first posed a big challenge among the teacher fraternity. But now the scenario has changed vice versa. The final outcome of any education especially higher studies is to provide a holistic development among the students and thereby enabling them to be employable. Indian students are highly recruited in countries like USA, UK and other Eastern and Western countries. In the

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teaching-learning process the development of so called 21st century skills have become very mandatory skill for employment. The role of technology in grooming these skills among students is incredible. Learner while getting familiarised with their course content have to develop skills like **cognitive Skills**-critical thinking, Analysing, problem –solving, reasoning, logical skills, **Integrated skills** like Acquisition of communicative competence in English at global context, life sciences, **Employability skills** like leadership skills, interpersonal skills, flexibility, collaboration, multitasking technology and communication skills and finally the **Digital Competency** like technology collaboration.

ICT integrated learning at large extend would help to create an apt learning environment to suit the present need. However, it depends on the potential of the teachers to structure learning in new ways, to merge technology appropriately with a pedagogy, **develop socially active classrooms**, and encourage co-operative interaction and collaborative learning and group work.

While speaking the benefits of technology one cannot ignore the limitation in technology. The strain of flash light, ear phone, and long hours of working on laptops leads to health issues. *The Times* magazine dated September 2017 has recorded their finding that **Technology** has made our lives easier in countless ways. And there's no denying the fact that mobile phones and computers offer many conveniences. But for many people, the comfort and conveniences of cellular phones and computers have outweighed the hidden dangers of these devices. However, this is the world of technology and we have to use it but with proper precaution. It affects the vision and hearing ability. Still the benefits cannot be denied.

The interactive learning tool makes learning flexible and accessible from anywhere in the world. Interactive learning is an all-encompassing approach to education. By emphasizing student engagement with new material, interactive class structures are much more holistic. Classes that embrace interactive learning are less about regurgitating information and more about discussions, critical thinking, and open-ended questioning. As such, students with all manner of learning requirements are accommodated.

Google Classroom is created for teaching and learning. It is an all-in-one tool that makes learning flexible and accessible from anywhere in the world. The other gamming tools like Prodigy Math Game, Pear Deck, Flip grid, Edmodo, Canva and Blackboard are used to make learning more meaningful and interesting.

With regard to classroom learning, the benefits of interactive learning tools can be seen in improved performance. Modern technology has especially revolutionized how educators approach teaching. For one, information has become more accessible to students, who can now acquire education even without leaving their homes through

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online courses, online degree programs, and others. Nevertheless, a teacher still needs to be a good communicator. On that note, they have to espouse interactive learning to grab and keep learners' attention and to be "effective and efficient" in doing.

Interactive learning is now in use in many classrooms around the world. Educators are also utilizing different devices to enforce it. But this approach does not just apply to the academe: it can work in workplace settings, too. In fact, certain industries rely on interactive approaches to training to get their employees ready for any situation.

The future of ICT in teaching learning process will be more. The world is becoming digitalized. Today every information are digitalized. Soon the card system would be replaced digital more. The world is rocking by inventing new softwares, technology day in and day out. Hence, one has to get familiarised with the use of technology. One cannot imagine a world without technology. ICT in education improves engagement and knowledge retention. When ICT is integrated into lessons, students become more engaged in their work. This is because technology provides different opportunities to make it more fun and enjoyable in terms of teaching the same things in different ways.

CONCLUSION:

Interactive learning has been through many changes. It has gone from simple teacher-student and student-student interaction to digitized learning and interaction. Possibly, it will go through many changes in the near future as technological innovations continue to abound.

Though there may be resistance and barriers, both learners and teachers now rely on digital interactive learning to access information at their convenience. It has also augmented how they serve knowledge and enable students to understand concepts and topics better.

On the other hand, learners can use digital learning technology to better grasp ideas that they are at first unable to understand fully. They can also use it to discuss with their fellow students to exchange information, thus allowing for collaborative learning.

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IMPACT OF COVID-19 ON EDUCATION IN INDIA

"The roots of education are bitter, but the fruit is sweet." – Aristotle

"Live as if you were to die tomorrow. Learn as if you were to live forever."

- Mahatma Gandhi

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Abstract

The impact of pandemic Covid-19 is observed in every sector around the world. Education plays a pivotal role in all of our lives and paves the way for all of us to reach our highest potential. The Covid-19 pandemic brought a dynamic shift in the world education system. The imposition of lockdown led to the shutdown of physical classrooms and thus online education became the new norm. Although online learning has managed to keep education alive in these dire times, it cannot completely replace it. Both online and offline education have their own distinct set of advantages and disadvantages. In this paper, impact of pandemic covid-19 on education in India is explored.

Importance of Education

The modern, developed and industrialized world is running on the wheels of education. To be able to survive in the competitive world, we all need education as a torch that leads the way. Mentioned below are the various features of education which outline the importance of education in human life:

- **Safety against Crime**: The chances of an educated person getting involved in crime or criminal acts are very low. An educated person is well aware of his/ her surroundings and is less susceptible to getting cheated or be fooled.
- **Women Empowerment:** The empowerment of women is an essential and important pillar to optimize the good functioning of our society and nation as a whole. The fundamental right of Right to Freedom and Expression can only be achieved if the women of our country are educated and empowered. We can win the fight against the many social evils.
- **Removing Poverty:** Education is pivotal in removing our poverty from our society and our country. The clutches of poverty are very harsh and one of the main factors behind all the problems of our society. If a person if

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well educated, he/she can get a good job and earn money to sustain his/ her family.

- **Preventing War and Terrorism:** Education teaches everyone the importance of peace and brotherhood. The importance of staying united and spreading love is the need of the hour. To achieve world peace and prevent war and terrorism, education is important.
- **Maintaining Law and Order:** A good political ideology can only be developed if the citizens of our country are educated and taught the importance of following and respecting the law and order of our country. Law-abiding citizens contribute majorly in improving and sustaining the law and order of the country and the world.

It is important to realize the importance of education in today's society because even in the 21st century many fight for the right to education and are unaware of the importance of education in our society.

Impact of Covid-19 on Education

As the world becomes increasingly interconnected, so do the risks we face. The COVID-19 pandemic has not stopped at national borders. It has affected people regardless of nationality, level of education, income or gender. But the same has not been true for its consequences, which have hit the most vulnerable hardest. Education is no exception. Students from privileged backgrounds, supported by their parents and eager and able to learn, could find their way past closed school doors to alternative learning opportunities. Those from disadvantaged backgrounds often remained shut out when their schools shut down. This crisis has exposed the many inadequacies and inequities in our education systems – from access to the broadband and computers needed for online education, and the supportive environments needed to focus on learning, up to the misalignment between resources and needs. The lockdowns in response to COVID-19 have interrupted conventional schooling. While the educational community has made concerted efforts to maintain learning continuity during this period, children and students have had to rely more on their own resources to continue learning remotely through the Internet, television or radio. Teachers also had to adapt to new pedagogical concepts and modes of delivery of teaching, for which they may not have been trained. In particular, learners in the most marginalized groups, who don't have access to digital learning resources or lack the resilience and engagement to learn on their own, are at risk of falling behind. The COVID-19 pandemic has also had a severe impact on higher education as universities closed their premises and countries shut their borders in response to lockdown measures. Although higher education institutions were quick to replace face-to-face lectures with online learning, these closures affected learning and examinations as well as the safety and legal

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status of international students in their host country. Perhaps most importantly, the crisis raises questions about the value offered by a university education which includes networking and social opportunities as well as educational content. To remain relevant, universities will need to reinvent their learning environments so that digitalization expands and complements student-teacher and other relationships.

Impact of Covid-19 on Education in India

The pandemic of Covid-19 has utterly disrupted an education system that many assert was already losing its relevance. The education sectors of India are badly affected by this. It has enforced the country wide lock down creating very bad effect on the students' life. Around 32 crore learners stopped to move schools/colleges and all educational activities halted in India. For our country India, online schooling is a near impossible step for 67% of the population that lives in rural areas and only half has access to Internet. Availability of electricity is a significant challenge to taking advantage of education online. The changes brought on by Covid-19 created an evident distinction between the rich and the poor and while the students who are privileged to have access to better facilities can still have the opportunity to avail of study material, online lectures and information, those belonging to harder luck are still struggling to achieve the bare minimum. In rural area students have limited or no internet access and numerous students may not be able afford computer, laptop or smart mobile phones in their homes. Online schooling has created a digital split among students. The lockdown has led to extreme distress for students in India that come from an economically deprived background.

Positive Impact:

While online education is not a new phenomenon, its importance came to light after the pandemic. With the emergence of technology, the method of delivering education has forever changed. One of the greatest advantages of online classes is their accessibility from anywhere around the world. Students can simply log in from anywhere and gain access to learning material from the convenience of their home. Apps such as Zoom and Microsoft Team have allowed students to easily attend their lectures without having to leave the safety of their homes. Moreover, students do not incur any kind of transportation expenses. Hence, online classes provide the distinct advantage of location flexibility. As a matter of fact, online education has become a flexible instructional method of teaching wherein students can easily gain access to learning materials in the comfort of their homes as long as they have proper access to an internet connection. Moreover, online education provides an excellent opportunity for students who are unable to enroll in traditional classrooms as well as support students in setting their own pace for studying. It has changed the way of teaching.

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Online classes enables the teachers to reach out to their students more efficiently and effectively through chat groups, video meetings, voting, document sharing, audios, animations, virtual whiteboards, virtual conference rooms especially during this pandemic. The flexibility of classes is the main highlight of online classes. Online classes have a flexible schedule. It allows students to set their own learning pace without any additional pressure. Since students have access to recorded videos and online reading material, they can easily attend lectures as and when it is convenient. It also gives students more time to digest the study material and complete their work or research at their pace. In this mode, digitalized tools are used as method of teaching; communication and collaboration happens digitally. Education through online is cost-effective and time-saving.

In response to significant demand, many online learning platforms are offering free access to their services, including platforms like 'BYJUS, a Bangalore-based educational technology and online tutoring firm founded in 2011, which is now the world's most highly valued edtech company. Since announcing free live classes on its Think and Learn app, BYJU's has seen a 200% increase in the number of new students using its product, according to Mrinal Mohit, the company's Chief Operating Officer.

Negative Impacts:

The negative effects of Covid-19 can be seen in many ways the pandemic has had its impact on student life. This pandemic situation challenged the education system across the country and forced educators to shift to an online mode of teaching overnight. Many academic institutions that were earlier reluctant to change their traditional pedagogical approach had no option but to shift entirely to online teaching-learning.

- **Passive Learning by Students**

The sudden shift to online learning without planning – especially in our country India where the backbone for online learning was not ready and the curriculum was not designed for such a format – has created the risk of most of our students becoming passive learners and they seem to be losing interest due to low levels of attention span.

- **Unprepared Teachers for Online Education**

Online learning is a special kind of methodology and not all teachers are good at it or at least not all of them were ready for this sudden transition from face to face learning to online learning. Thus most of the teachers are just conducting lectures on video platforms which may not be real online learning in the absence of a dedicated online platform specifically designed for the purpose. In such a situation, learning outcomes may not be achieved and it may be only resulting in engaging the students.

- **Insufficiency of Practical Skills in Science and Technology**

While the move to online teaching has been difficult for most in higher education, it has

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been especially challenging for courses requiring practical, hands-on learning. Online education is purely theoretical and takes place entirely online. Subjects like Chemistry, Physics, Biology, Technology and Sports require students to be physically present and conduct live experiments or actively participate in the activity. Practical classes through online education do not allow teachers to monitor the responses and behaviour of their students and accordingly address them as and when required.

- **Inadequate Cognitive Skills**

In the later years of life, a lack of cognitive skills – poor concentration, the inability to focus and memory loss – is a common problem that accompanies us. Cognitive skills can be improved with training. Weak cognitive skills can be strengthened, and normal cognitive skills can be enhanced to increase ease and performance in learning. Cognitive learning can be described as learning through experience. In an online environment, it comes down to the instructor teaching the course to engage every student and encourage those who are not actively participating in the learning sessions. Getting students to collaborate with each other and work on group projects in an online environment is a difficult task.

- **Poor Time Management**

Students who attend online classes are faced with the big challenge of time management. Online learners are typically distracted by a multitude of tasks and they lack a proper schedule. Since online classes provide the advantage of self-paced learning, students may not have a proper schedule and may succumb to the habit of procrastination. Moreover, students are required to stay logged in to their online classes for an extended period of time which may lead to students surfing the web for distractions or checking their social media pages.

- **Technical Issues**

Online classes are always challenged by technical issues. Access to proper electronic equipment such as webcams, microphones, headphones and computers along with a proper internet connection is mandatory requirement for online classes. Additionally, technical issues such as slow internet connection or lack of availability of proper technical infrastructure may interfere with seamless learning. Students may face difficulty in attending live lectures or downloading videos or online notes.

- **Changing format of student Recruitment**

Universities and colleges are facing a major risk in the area of student recruitment and retention. The risk of losing students is so high that they will need to re-look at their admission process, admission process itself which will include, new methods of outreach and application process itself.

- **Psychological Impact**

Lack of social and peer interaction is causing a huge psychological impact.

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Students have less opportunity to express themselves whereas they store everything in their mind. The concentration levels of students dropped in online learning as the eye meanders elsewhere on the screen. This in response made it difficult for most students to keep with the teachings. The pressure to concentrate and produce the required results has resulted in great amount of stress and anxiety. The mental state of the students was fragile and tampered with.

- **Low Impart of Value Education**

Individuals in a society should be systematically trained on value education so that they can appreciate values such as love, respect, tolerance and honesty. The importance of peace education in our society determines the brotherhood in the nation. Institutes are the building blocks of a peaceful and progressive society. Students are the future of India, and this future of our country depends greatly upon the values imparted to them during their student life. Moral values pave the path for all their decisions in life, as without these values, students do not have any guidance and their life may seem directionless. It is the responsibility of the institutions to provide this moral education to the students to mould them into the person that we want them to be. Online learning limits the impartment of value education to the students.

CONCLUSION:

Both the positive and negative impacts of Covid-19 on education were discussed. The outbreak of Covid-19 has taught us that change is inevitable. It has worked as a catalyst for the educational institutions to grow and opt for platforms with technologies, which have not been used before. The education sector has been fighting to survive the crises with a different approach and digitizing the challenges to wash away the threat of pandemic. While some believe that the unplanned and rapid move to online learning – with no training, insufficient bandwidth, and little preparation – will result in a poor user experience that is unconducive to sustained growth, others believe that a new hybrid model of education will emerge, with significant benefits, we conclude that the integration of information technology in education will be further accelerated and that online education will eventually become an integral component of school education.

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COVID 19 IMPACT IN EDUCATION OF RURAL INDIA

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Abstract

India has the world's second largest school system, after China. Indian education system is still not mature at both the urban and rural area. COVID-19 brought forward a challenge to India's education system as never seen before. When the nationwide lockdown came into effect on March 22nd, all schools and other educational sectors were closed. According to UNESCO, 63 million teachers were affected in 165 countries. A total of 1.3 billion learners around the world were not able to attend schools or universities, and approximately 320 million learners are affected in India alone. It has changed the traditional education system to the educational technologies model in which teaching and assessments are conducted online. A majority of them in India live in the rural backdrop with minimal facilities, and education is one of them. Its key area of work is in low-income areas in rural India where literacy is lower and school dropout rates are higher than in urban centers. This paper highlights the positive and negative impacts of COVID-19 on education and challenges of online education in rural area are discussed.

INTRODUCTION:

Education is an essential right for children, young and adults and schools shut across India as part of a national lockdown in March 2020, due to the COVID-19 pandemic. The sudden outbreak of a deadly disease called Covid-19 caused by a Corona Virus (SARS-CoV-2) shook the entire world. Corona virus that originated in china, spread at an alarming rate throughout the world, took lives in thousands and put its adverse effects on millions. Around 32 crore learners stopped to move schools/colleges and all educational activities halted in India. The World Health Organization declared it as a pandemic. Indian government has announced the lockdown had a tremendous impact on the education system of the country, especially for students from rural areas. Educational institutions (schools, colleges, and universities) in India are currently based only on traditional methods of learning, that is, they follow the traditional set up of face-to-face lectures in a classroom. All educational activities like examinations, school admissions, entrance tests of various universities and competitive examinations,

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others, are being held during this period. The structure of the Indian education system i.e. learning methodology, teaching techniques & assessment methodologies, is quite affected, and this situation challenged the education system across the world and forced educators to shift to an online mode of teaching.

Objectives:

The present paper focused on the following objectives

- To highlight the positive impact of COVID-19 on education.
- To highlight the negtive impact of COVID-19 on education.
- Major challenges faced by students of rural India.
- Challenges of online education in rural india.

Positive impact of COVID-19 on education:

The coronavirus pandemic has wreaked havoc in everyone's life. There is no one in the world who has remained untouched by the effects of the virus. Some have lost their job; some have lost their family and friends. Children across the world have lost the school-going experience. However, it may not be all bad. After all, every cloud has a silver lining. Thus, COVID-19 has a positive impact on education as well.

Most of educational institutions had only choice to adopt e learning. Numerous institutions have leveraged online teaching opportunity to offer lessons in an interesting and interactive way to students.

SWAYAM is a programme initiated by Government of India and designed to achieve the three cardinal principles of Education Policy viz., access, equity and quality. Swayam will provide online study material to students free of cost and the courses will be taught via digital classrooms. The Swayam program offers digital classrooms with the help of internet and satellite connectivity to the remotest corners in the country. Swayam is essentially a portal which has been formulated as a solution to the problem of difficult access to physical educational infrastructure and teachers along with study material and textbooks.

The SWAYAM PRABHA has new content everyday for at least (4) hours which would be repeated 5 more times in a day, allowing the students to choose the time of their convenience. The channels are uplinked from BISAG, Gandhinagar. The contents are provided by NPTEL, IITs, UGC, CEC, IGNOU, NCERT and NIOS. The INFLIBNET Centre maintains the web portal.

The DTH Channels covers the following:

1. **Higher Education**: Curriculum-based course contents at post-graduate and under-graduate level covering diverse disciplines such as arts, science, commerce, performing arts, social sciences and humanities, engineering, technology, law, medicine, agriculture, etc. All courses would be certification-ready in their detailed offering through SWAYAM, the platform being developed for offering MOOCs courses.
2. **School education (9-12 levels)**: modules for teacher's training as well as teaching and learning aids for children of

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India to help them understand the subjects better and also help them in preparing for competitive examinations for admissions to professional degree programmes.

3. **Curriculum-based courses** that can meet the needs of life-long learners of Indian citizens in India and abroad.
4. **Assist students (class 11th & 12th)** prepare for competitive exams.

Impact on Students

COVID-19 has accelerated adaption of digital technology to deliver lecture. Educational institutions move towards blended mode of learning. The pandemic situation induced people to learn and use digital technology and it results increase in the digital literacy. Before such situation of lockdown students mostly used mobile for time pass, chatting, playing games, watching movies and so many unnecessary videos but now they change their way of thinking and attitude. Currently students are using mobile and technologies mostly to learn the new things like lectures related to use of Zoom, Google meet, Google class room. They also learn how to upload file, submit assignment in Google class room. Students tart watching different online lecture on their syllabus to learn the concept. They became smart and more conscious and prepare themselves for online examination by searching and solving multiple choice questions on each courses. This is the biggest change in students.. Also college students utilize their vacation period and completed online diploma courses on software like mat lab, C programming, R software, Java, Scilab etc, which will definitely help them to improve themselves and provide them Job opportunities in future. Even those who are preparing for competitive exams are being provided with an opportunity to avail online crash courses. Post graduate students are focusing on their study and prepare themselves for NET, SET ,GAT and other competitive examinations. In this way students are starting use of technology correctly and developing themselves.

Impact on teachers

Teachers are base of our educational system and hence the quality of teacher is very important for good education. Teachers have ability to adopt new technologies to update and upgrade themselves. They try to change themselves with situation for better education of students. Hence during pandemic situation they learn new method of teaching like through PPTs, videos, video Conferencing, online lectures on Zoom meeting, or other meeting applications. These are considered best medium of teaching. They prepare their own notes on each subject and provide to students for their convenience. They prepare the students for online exam by providing them question bank on multiple choice questions and explain them how to solve it in less time. They become more conscious about their students' health. So many times teachers call or message their students and ask about their problems and if they have any problems and try to solve it. The teachers and mentors also counsel their students to remove their stress

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and make them feel relaxed and help in managing stress. In this way the relation between students and teachers become strong and they come close to each other. Teacher also improve and developed their teaching skill and upgrade themselves by attending webinars on ICT, covid-19 pandemic, FDP on MOOCs and new pedagogical techniques .They enrich themselves with more knowledge related to their subjects, new teaching method, ICT. Moreover teachers learn many tools like quiz interesting for students. They form question papers on Google form to conduct online examination. Teachers also attend online refreshers and orientation courses and enrich their academic profile.

Impact on researchers

Some teachers pursuing Ph.D got sufficient time for their research work. They focused on research and published many research papers in different national and international reputed journal. At home researcher utilize their ideas to prevent spread of covid-19 and some statisticians predicted graph of covid-19 spread in future which will help the government to implement extra preventive measures and control the situation. Medical researchers across the globe started working hard to invent the vaccine at their earliest. New researchers get new ideas for research and set their topic based on problems we are facing today

Rise of blended learning methods

The pandemic forced educators across schools, colleges, and universities to adopt a blended mode of learning. Teachers have had to quickly adapt to technology and be trained in the same so that they are equipped to deal with this method of learning. This may well become a basic requirement for all teachers in the near future. This can also be seen as an opportunity for curriculum designers to improve upon the quality of the learning material.

All-round development over report cards

It is important to keep children engaged in various activities in the absence of being able to go out. Baking, drawing, painting, and gardening are some of the skills that children have picked up in the pandemic. All of these contribute to the overall development of children and thus open up the path to non-traditional curriculum.At the same time, it is important to understand that many children do not access to such opportunities. Due to this, returning to school is important for them.

Negative impact of COVID-19 on education

Schools are closed and classes have been suspended. Different boards have already postponed the annual examinations and entrance tests across India. Teachers and students are unprepared for online education; they were not ready for this sudden transition from face to face learning to online learning. - In urban area some educated parents are able to guide but some may not have the adequate level of education needed to teach children in the house. Especially in rural area many students have limited or no internet access and many students may not be able to afford computer, laptop or supporting mobile phones in their homes, online teaching-learning may create a digital divide among

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students. The lockdown has hit the poor students very hard in India as most of them are unable to explore online learning according to various reports. This online teaching-learning method creates a big gap between rich vs poor and urban vs rural students.

COVID-19 impact: 4 major challenges faced by students of rural India

When it comes to Online Education or E-Learning, rural population is not completely equipped with utilities like fast internet, uninterrupted power supply and electronic devices. There have been improve ments regarding basic infrastructural facilities but many rural areas in India are still grappling with these challenges to make education completely digital or online. Teachers and students in villages are becoming more accepting towards digital means of learning, but the infrastructural facilities there have not developed fully to become at par with what online learning require. Steady flow of electricity and lack of high speed internet still pose major problems for the rural population.

Limited availability of technological devices

Not a lot of people in rural India have access to personal laptops or computers, and phone screens are not conducive to long learning hours. Also, data packs and their costs can be a big deterrent both for teachers as well as learners, especially for live classes. Many students either don't have personal laptops/smartphones or they are available for a limited time. Hence, the learning remains restricted with the limited availability of technological devices.

Shortage of Teachers

Shortage of teachers or the poor teacher-to-student ratio in villages pose another challenge towards making learning entirely digital in such areas. To make complete digitization of education in rural areas, this ratio needs to be improved and a large number of skilled and well-trained teachers are required so that each and every student receives complete attention even during an online class.

Challenges of online education in rural areas

The biggest challenge of the online education system is poor internet connection. Due to these, there is a big challenge in the path of online education because studies cannot be done properly through poor internet connection.It is very difficult for rural students to do any kind of lab work or practical in online education system.Those who live in the rural area, there is no proper system of electricity, due to this student who living in the village cannot study through online education.Not every student has a laptop, computer, and smart phone, so if he/she wants to study through online then it can become a problem for him/her.There are many subjects on which students need practical learning but in e-learning system it is very difficult to teach such subjects due to which students are unable to take practical education.

Many not in class:

Only 28% of rural children studied regularly while 37% didn't study at all. The major problem for rural children who didn't study online regularly were the lack of online material. As 43% of parents in rural areas

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said no online material was sent by the school and 36% of their children did not have their own smartphone. Among those children who studied online, the majority of them said they faced connectivity issues and found online classes difficult to follow. Since the network has poor connectivity in almost all the rural areas of the state, both teachers and students have to face the communication problem. Many times, teachers and students either climb the hills or on the roofs of buildings or climb trees to achieve a strong network connectivity in their classroom hours.

Conclusion:

The severe impact of COVID -19 has shaken the world to its core. Further, most of the Governments around the world have temporarily closed educational institutions in an attempt to contain the spread of the COVID -19 pandemic. Through applications such as Zoom, video conferencing and have proved to be beneficial and with a lot of advantages. But at the same time, there is a disadvantage as exams have to be postponed. The educational institutions in India, from schools to universities, can use this present adversity as a blessing in disguise and make digital education a major part of the learning process for all learners in the future.

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LEARNERS PERCEPTION TOWARDS ONLINE EDUCATION DURING COVID 19

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ABSTRACT

The worldwide education system has been severely affected, following the shutdown of the educational institutions since March 2020 in order to prevent the spread of the virus due to the COVID-19 pandemic. Conventional classrooms shifted to online classrooms which profoundly impacted teachers' and students' closed interaction, making a paradigm shift in the teaching-learning process, inter alia. Against such a backdrop, it is relevant to analyze the perception of students and the challenges of online classes during this ongoing COVID-19 outbreak. The allegations of online learning versus face-to-face learning have been discussed for several years in higher education. This study examined the learners' perception toward online education in the study area.

INTRODUCTION

Education in rural India is a catalyst to improve the economic and social well-being of the nation. India has the world's second largest school system, after China. According to UNESCO, 63 million teachers were affected in 165 countries. A total of 1.3 billion learners around the world were not able to attend the regular classes, and approximately 320 million learners are affected in India alone. It has changed the traditional education system to the educational technologies model in which teaching and assessments are conducted online. Indian education system is dominated by classroom study, the present scenario has made the functioning of the educational institutions go very difficult. All educational activities are being held during this pandemic period. Due to the nationwide lockdown in March 2020 meant that children were disengaged with formal education for a prolonged period. The resulting talks around online education exposed India's digital divide, with only 24 percent of households having access to the internet. The disruption of education caused by Covid-19 has adversely impacted rural India wherein children could not cope up with the normal owing to lack of adequate digital infrastructural support. Nevertheless, COVID-19 has been a trigger for

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educational institutions worldwide to pursue creative approaches in a relatively short notice. During this time, most of the universities have shifted to online mode using Blackboard, Microsoft Teams, Zoom, or other online platforms.

REVIEW OF LITERATURE

1. Zahoor Ahmad Lone (2017) analyse issues of online education in India. Technology is touching every aspect of society and changing it dramatically. But there is one very important and indispensable part of the society that has also been tapped by new innovations and discoveries and that is the concept online education. It is an effective tool for development of educational sector in India.
2. Aman Jindal and Dr. B.P.S. Chahal (2018) in their study entitled "Challenges and Opportunities for Online Education in India", study understand the pros and cons of online education in comparison to face to face education and identified internet penetration; low cost of online education, ease of doing course, initiative by government, employer's recognition and bridging gap are the key factors the growth of online education.
3. Dr.Shreeda Shah and Dr.Tejal Jani (2020) in their study entitled "Online Education in India: Issues and Challenges", attempts to assay issues and challenges faced by the researchers themselves while conducting online sessions.

STATEMENT OF THE PROBLEM

This COVID – 19 pandemic has created a new crisis in the education system due to a huge digital divide, which leads to a loss of learning in the short run, while simultaneously increasing the chances of dropping out from education. In the long run, there will be a huge loss in human capital accumulation and economic development. However, this generated a lot of controversy and different opinion from the public, students and the teachers which they ascribed to lack of properly laid framework for the implementation of online education. Other perceived challenges identified includes lack of technological skills and experience and poor infrastructural facilities required for running online learning smoothly. Due to this, backdrop, it is significant to know the perceptions of learners in online education and policy makers to design better ways of learning and course structures post COVID-19 pandemic, as social distancing may become the new normal.

OBJECTIVES OF THE STUDY

- To cognize the importance of online education during the phase of ongoing pandemic.
- To determine the perceptions of learners towards online education during the lock down.

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METHODOLOGY

This study is quantitative as well as descriptive in nature and used both primary and secondary data for the analysis.

Primary Data

The primary data has collected with the help of Questionnaire.

Secondary Data

The secondary data were collected from various sources like news papers, web sites, reports and research papers.

Sampling Design

The sample for this present study is 100 learners by adopting the convenience sampling technique.

FINDINGS OF THE STUDY

TABLE - I

GENDER WISE CLASSIFICATION

Gender	No. of Respondents	Percentage
Male	56	56
Female	44	44
Total	**100**	**100**

Source : Primary Data

The mean age of the respondents was 23 years. There were more male respondents 56 (56%) than female respondents 44 (44%).

TABLE - II

AGE WISE CLASSIFICATION

Age (in Years)	No. of Respondents	Percentage
Below 20	17	17
20-30	75	75
Above 30	8	8
Total	**100**	**100**

Source : Primary Data

It is inferred from the above table that majority of the respondents 75% of them were within age group of 20 - 30 years. 17% were in the age of below 20 years and the rest 9% respondents were in the age of above 30 years.

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TABLE - III

EDUCATION WISE CLASSIFICATION

Education Level	No. of Respondents	Percentage
Under Graduate	44	44
Post Graduate	36	36
Ph.D.	20	20
Total	**100**	**100**

Source : Primary Data

From the above analysis shows that, out of 100 respondents surveyed, 44 respondents were studied the educational qualification of undergraduate level. 36 respondents were postgraduate level and the rest 20 respondents were studied the educational qualification of Ph.D level.

TABLE - IV

RESIDENTIAL STATUS

Residential Status	No. of Respondents	Percentage
Rural	60	60
Urban	40	40
Total	**100**	**100**

Source : Primary Data

Majority of the respondents were belonging to rural background 60 (60%) and whereas 40 (40%) were from urban areas.

TABLE - V

OPINION ABOUT ONLINE CLASSES

Opinion	No. of Respondents	Percentage
Flexitime	20	20
Comfortability	19	19
Emotional Respite	17	17
Spend Time with Family	16	16
Distraction	15	15
Procrastination	13	13
Total	**100**	**100**

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Study revealed several interesting facets of information regarding online education. Amongst the advantages of online learning, 20% of the respondent perceived flexitime, 19% considered comfort of home, 17% regarded as emotional respite, and 16% thought the ability to spend time with family. Amongst the disadvantages, 15% considered distraction, while 13% considered the tendency for procrastination.

TABLE - VI
PREFERRED DEVICE

Preferred Device	No. of Respondents	Percentage
Laptop	42	42
Smart phone	58	58
Total	**100**	**100**

Source : Primary Data

Various devices preferred by the respondents for attending online classes were Smartphone (58%) and laptop (42%).

TABLE - VII
SOURCE OF INTERNET

Source	No. of Respondents	Percentage
LAN	3	3
Mobile data pack	86	86
Wi-Fi	11	11
Total	**100**	**100**

Source : Primary Data

It is indicated from the above analysis that, out of 100 respondents surveyed, Mobile data pack was the source of internet for majority (86%) of the respondents.

TABLE - VIII
TYPES OF COMMUNICATION

Source	No. of Respondents	Percentage
Text message	15	15
e-mail	22	22
WhatsApp	63	63
Total	**100**	**100**

Source : Primary Data

It is to be noted from the above analysis, majority of the respondents (63%) said that WhatsApp was the best way to communicate class updates.

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TABLE - IX

NATURE OF ONLINE CLASS

Nature	No. of Respondents	Percentage
Live online Classes	19	19
Recorded Live Classes	27	27
Content Creation	54	54
Total	**100**	**100**

Source : Primary Data

Content creation is to be uploaded at the Institution website / You Tube / any other application was the most preferred (54%) class format, whereas 27% of the respondents preferred their live classes that can be recorded, 19% of the respondents have opined in favour of live classes. Majority of the respondents preferring content creation it can be used them a flexibility in learning.

TABLE - X

TYPES OF LECTURE

Types	No. of Respondents	Percentage
Using PowerPoint and whiteboard	72	72
Lecture Only	28	28
Total	**100**	**100**

Source : Primary Data

Regarding the nature of online classes, more than half (72%) of the respondents preferred the instructor to teach using PowerPoint presentations

TABLE - XI

POSITIVE PERCEPTION TOWARDS ONLINE LEARNING

Perception	Total Score	Average Score	Rank
Flexibility	384	3.84	1
Comfortability	368	3.68	2
Improves your technical skills	334	3.34	3
More interaction and greater ability to concentrate	216	2.16	4
Self-discipline and responsibility	199	1.99	5

Source : Primary Data

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'Flexibility' with the highest weighted arithmetic mean of 3.84 was found to be the most positive perception towards online education followed by 'Comfortability' with 3.68, 'Improves your technical skills' with 3.34, 'More interaction and greater ability to concentrate' with 2.16, and 'Self-discipline and responsibility' got the least rank with 1.99.

TABLE - XII

NEGATIVE PERCEPTION TOWARDS ONLINE LEARNING

Perception	Total Score	Average Score	Rank
Lack of connectivity	512	5.12	1
Data limit	452	4.52	2
Data speed	394	3.94	3
No face to face interaction	364	3.64	4

Source : Primary Data

'Lack of connectivity' with the highest weighted arithmetic mean of 5.12 was found to be the most negative perception towards online education followed by 'Data limit' with 4.52, 'Data speed' with 3.94, and 'No face to face interaction' got the least rank with 3.64.

SUGGESTIONS

- Online learning is an exciting new way to learn about almost anything. It has bought a positive impact on the lives of students as well as teachers. The increasing use of technology in the field of learning has improved the quality of education.
- Effectively implement in a country like India, certain things have to be taken note of. This includes strengthening infrastructure facilities, improvement in Internet connectivity, development of rural areas, bringing changes in the attitude of students. Colleges and other educational institutions are required to provide excellent training and support to the student regarding the usage of online classes that helps in increasing their comfortability.
- The study also proved that online education has a more significant role to play in the future, but it cannot be a replacement to traditional face-to-face classroom learning. A complete transition to online learning is quite tricky. However, we cannot ignore the benefits derived from online education. As such, there is a need to understand the obstacles that come in the way of accepting online learning and take corrective measures to overcome it.

CONCLUSION

To sum up, all these factors should be considered while developing an online education to make it more effective and productive for the learner. It's possible that once the COVID-19 pandemic settles down,

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we may see a continued increase in education systems using online platforms for study aids, albeit in a hybrid mode in combination with regular classes.

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RURAL STUDENTS' ATTITUDE TOWARDS ONLINE CLASS

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Abstract

Work from home is the talk of day and become the norm in the most of the industry. To reduce the spread of COVID-19, most countries around the world have decided to temporarily close in-person instruction and moved to remote learning and teaching from March 2020 onwards. However the educational sector takes concerted efforts to maintain learning continuity during this period. Students have to rely more on their own resources to continue learning remotely through the Internet, television or radio. Teachers also adapt new pedagogical concepts and modes of delivery of teaching, for which they may not have been trained. Likewise the learners in the most marginalised groups, who don't have access to digital learning resources or lack the resilience and engagement to learn on their own, are at risk of falling behind. The problems like poor attendance, lack of personal touch, and lack of interaction due to connectivity issues were not only faced by the faculty members but also by the students. It increases the stress level among the young generation and increases the negative attitude towards the education system. The present article highlighted the Rural students attitude towards online class.

Key words: Digital Learning, Engagement, Pedagogical concepts, Resilience and Work from home.

1.1. INTRODUCTION

The COVID-19 has affected people regardless of gender, caste, education, nationality or income. It affect each and every industry or sector as well as every activities of Individuals. Education is not exempted from this. More over education sector is worst affected sector than the any other sector during the pandemic situation. The COVID-19 lockdowns interrupted the traditional schooling system. It also leads many inadequacies and in equities in our education systems. Due to the misalignment between resources and needs, leads to nationwide school closures in most of the countries. Students from privileged backgrounds could find their way past closed school doors to alternative learning opportunities. Even though the country has been adapting to the new-age learning, but there still lies an obstacle in achieving entire success as only 45 crore people of our total population of the country have access to the internet/e-learning. The people residing in rural areas are still very much deprived of the technologies and therefore hampering the cause of online education. On the other hand the switch over from offline to online learning negatively affect the students, who have higher difficulties in adapting to the new learning

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environment. Similarly most of the student's communities are not having relevant learning digital resources, home learning environment support from their parents. All these factors make the students to hopeless in their education and it will affect their future growth and aim.

1.2. STATEMENT OF THE PROBLEM

Worldwide education system affected by COVID-19 by school and university closures. It results in the digital revolution in the education system through online lectures, , online examination, and interaction at virtual environments. Both the students and teachers are facing many problems in the online teaching learning process. Before the pandemic situation, online teaching was not a major form of education in schools. So most of the teachers have no or minimal experience in online teaching. Likewise in the conventional classroom teaching the students and lecturer shave face-to-face interaction. It increases the socialisation. Social issues like students involvement in group works, helping each other to perform assignments, and looking at the facial gestures of lecturers when explaining a point are instrumental to facilitate learning in the conventional classroom. These things are very low in an online learning situation. Problems in assessing course material, absence of socialisation and not possible to interact twith the course teachers and friends are increasing the stress level of the students.

1.3. OBJECTIVES OF THE STUDY

The main objectives of this study are:

1. To identify the affirmative factors towards the online classes.
2. To find out the challenges faced by the students in their online learning.
3. To understand the students' expectation in online classes.
4. To give suggestions to increase awareness about social insurance schemes.

1.4. RESEARCH DESIGN AND METHODOLOGY

The present study is an empirical one based on survey method. First-hand data were collected from the fields through interview schedule. The secondary data were collected from published documents, leading journals, magazines, newspapers, standard text books of related topics, and sources from internet.

The researcher decided to apply sampling techniques for the present study, because it is not possible to study the entire population. A total of 250 respondents were selected by the researcher by adopting simple random sampling methods.

1.5. RESULT AND DISCUSSION

1.5.1. Demographic Classification Of Respondents

The enquiry about demographic classification describes that among 125 higher secondary students 57.6 per cent of the respondents are boys students, 64 per cent of the students are studying in matriculation schools, 54.4 per cent of the respondents are belonging to arts group, 59.2 per cent of the students are living in urban area, 36.8 per cent of the students' family members are earning between Rs.15,001 and Rs.20,000. These particulars are portrayed in the following table 1.1.

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TABLE 1.1

DEMOGRAPHIC CLASSIFICATION

Demographic Factors	No of Respondents	Percentage
GENDER WISE CLASSIFICATION		
Boys	72	57.6
Girls	53	42.4
NATURE OF SCHOOL		
Government School	18	14.4
Aided School	27	21.6
Private/ Matriculation School	80	64.0
GROUP SELECTED		
Arts Group	68	54.4
Science Group	57	45.6
RESIDENTIAL AREA		
Rural	51	40.8
Urban	74	59.2
MONTHLY FAMILY INCOME		
Below Rs.15,000	42	33.6
Rs.15,001 to Rs.20,000	46	36.8
Rs.20,001 to Rs.25,000	21	16.8
Above Rs.25,000	16	12.8
Total	125	100

Source: Primary Data

1.5.2. MEDIA USED

The researcher gathered the information about the device used by the students to access the online classes.

The survey reveals that, out of 125 respondents, 62 per cent of the students preferred mobile phones for e-learning, followed by 21.2 percent of the respondents are using the Laptop for e-learning and the remaining 16.8 per cent of them are accessing the online class by using mobile phone as well as laptop. This information is depicted in table 1.2.

TABLE 1.2

GADGET USED

Gadget	No of Respondents	Percentage
Mobile Phone	77	62.0
Laptop	27	21.2
Both Mobile phone and Laptop	21	16.8
Total	125	100

Source: Primary Data

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Table 1.2 reveals that the majority (62%) of respondents are using mobile phone for their online education.

1.5.3. TIME SPENT FOR ONLINE EDUCATION

The Ministry of Human Resource Development (MHRD) has recommended time limit for the online classes as no more than two sessions per day for students in classes 1 to 8, and no more than four for students in classes 9 to 12, with each session lasting a maximum of 45 minutes. In order to find out the number of hours the students attend the online classes the survey was made. This information is depicted in table 1.3.

TABLE 1.3
TI ME SPENT ON ONLINE CLASSES

Time Spend	No of Respondents	Percentage
2 and less than 2 Hours	9	7.2
2 – 3 Hours	21	16.8
3 – 4 Hours	64	50.8
More than 4 Hours	31	25.2
Total	125	100

Source: Primary Data

The above table 1.3 makes it obvious that, 50.8 per cent of the students are attending online classes between 3 and 4 hours per day.

1.5.4. FACTORS INSPIRING TOWARDS ONLINE EDUCATION

The e-learning helps the students to learn subject at their comfort and requirement. The survey reveals that, out of 250 respondents 26.8 per cent of the informants felt that the online classes help them to know the latest technology, followed by 22.4 per cent of the students self learning process are increased due to online classes, 33.2 per cent of the students have identified online mode of attending classes as the alternative way for accessing the material, 11.6 per cent of the students feel that online classes are more comfortable than the traditional schooling system and the remaining 6 per cent of the students opined that the online classes save their time. It has been brought to the forefront in table.1.4.

TABLE 1.4
FACTORS INSPIRING TO LEARN THROUGH ONLINE

Inspiring Factors	No of Respondents	Percentage
Help me to know the latest technology	33	26.8
Increase the self-learning process	28	22.4
Identify the alternative way to access material	42	33.2
Feel comfort in Home than at school	15	11.6
Save the time	7	6.0
Total	125	100

Source: Primary Data

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From the analysis of the above table, it is understood that online classes helps the nearly one third (33.2%) of the students to identify the alternative way to access their study material.

1.5.5. STUDENTS' EXPECTATIONS

The researcher gathered the information about the students' expectations to carry out the online classes effectively and efficiently. The result of the study has been expressed in the following table 1.5.

TABLE 1.5
STUDENTS' EXPECTATIONS

Expectations	No of Respondents	Percentage
Interactive session	26	20.4
Multimedia Techniques	43	34.4
Simplified study material	21	16.8
Explanation in vernacular languages	18	14.4
Demonstration	17	14.0
Total	125	100.0

Source: Primary Data

Table 1.5 has brought to light that, more than one third (34.4 per cent) of the students are expecting multimedia presentation.

1.5.6. PROBLEMS IN ACCESSING ONLINE CLASS

The interviewer gathered the information about the problems faced by the students in accessing the online classes. By using Henry Garret Ranking Technique the total score and mean score were calculated and presented in the following table.

TABLE 1.6
PROBLEMS FACED BY RESPONDENTS

Problems	Total Score	Garrett mean Score	Rank
Network problem	7670	34.09	1
Unpleasant Environment	7587	33.72	2
Screening Problems	7389	32.84	3
Lack of support from the parents	7112	31.61	4
Voice clarity	6555	29.14	5
Electric/ Charging Problems	6554	29.13	6
Health Problems	6489	28.84	7

Source: Primary Data

The above table reveals that, for accessing the online, class the students require the quality and uninterrupted network; the network problems adversely affect the students' education and their concentration power and it ranked as 1st rank, and its total score and the mean score were 7670 and 34.09 respectively. The pleasant and supporting environment is necessary for education. The students are not effectively attend the class due to absence of supporting environment and it has scored as 2nd rank, where the total score is 7587 and the mean score is 33.72.

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1.6. SUGGESTIONS

1. The online classes required to identify, use the latest technology and alternative way to access the online material. Therefore the staff members help the students to access and operate the latest technology.
2. The staff members should increase their ICT technology to deliver their subject in an effective and efficient manner.
3. To attract and inspire the students the staff members must use the multimedia technology.
4. The teachers are concentrating on rushing up the syllabus. Instead the staff members should practically explain their subject.
5. The staff members must allow the students to ask their doubts and frequently ask the questions to identify whether the students properly listen the class as well as to verify whether they understand the topic or not
6. Like a conventional class the faculty members review the previous class before starting the session.

1.9. CONCLUSION

The disruption in learning caused by COVID-19 is unprecedented. The adoption of online classes is the only way to ensure the continuity of education following the physical closure of schools. The switch over from offline to online learning caused by COVID-19 is likely to affect negatively also. The online education is not only new to the students but also to many of the teachers. The success of online education depends on the teachers. Therefore teachers themselves must increase their knowledge on ICT. The online education also increases the self-learning concepts and technological knowledge among the students. To make online class more effective the staff members use multimedia technology. Moreover instead of time bound rushing up the syllabus the practical demonstration, clarifying the students' doubt and frequent interaction with the students make the online class more pragmatic and effective one.

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EFFECT OF ONLINE EDUCATION ON TEACHING AND LEARNING SYSTEM IN SIVAKASI DURING COVID 19

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ABSTRACT

Corona virus rash mediated pandemic impacted on most of the sectors worldwide. This includes the educational world that consists of millions of learners and teachers who formerly had habitual classes in their institutions, and due to the pandemic, got stuck at the home. To continue the education process, the online class was introduced in most of the countries, including India. In this mode, both teaching and learning happen through electronic strategies which are somewhat new to the entire teaching-learning society. This study aimed to understand how online classes had fared for the teachers and students in Sivakasi. More to the point, it tried to know the users' practice and the elite set of challenges that this mode of education brings. Four separate questionnaires were shaped for school students, school teachers, college students, and college professors. The questions inquired about various aspects of online classes such as setting up online education at home, knowledge transfer, comfort, evaluation, and future aspects. The questionnaires were circulated electronically as Google forms. The responses were received from the teachers (school teachers and college professors) and learners (school and college students) of various educational institutions from corner to corner Sivakasi. The study addresses the participant's compliments and grievances of online education compared to regular classes. This further enlightens how to improve the technologies to make them use more efficiently.

INTRODUCTION

The COVID-19 in due course jostled our day-to-day routine and led to a new custom of life within the curbs to cease the spread of this virus as it is seriously contagious. As a result, the complete lockdown has led the educational institutions to resort to online methods in quick action to ensure continuity of learning in students as traditional face-to-face learning was not possible in this unprecedented situation. In developing countries like India, traditional education methods were far and wide accepted before the emergence and spreading of COVID 19. However, the closure of institutes and demands to complete the prescribed syllabus in a predetermined time frame in line with the educational calendar forced the educational institutions to abandon their concerns and compelled them to adopt emergency remote education. The central government of India

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on March 16, 2020, announced the closure of all the educational institutions including schools, colleges, and universities as the number of positive cases of corona virus in India has increased to 114, to control the spread of corona virus infection. The centre has also sent a letter to all Chief Secretaries to promote online education to compensate for the closure of the educational institutions and in favour of students in continuing the education. It was for the first time in India online classes have been conducted on this massive scale. The commencement of online classes led to various difficulties for both teaching and learning communities, though, the internet is a major technological advancement reshaping society and universities worldwide. The online learning environment varies from the traditional classroom situation.

Objectives of the Study

The objective of this study is to measure the teacher's and learner's outlook towards online teaching. This study analyzed the survey responses gathered from the participants ranging from school students to college students and school teachers to professors covering the entire focused classroom community. It is expected that the findings of this study will be useful in following.

I) getting better the current scenario of groundwork, comfort, facts transfer, and evaluation pattern

ii) enlighten the teaching and learning community to approach and get the best out of the online education and

iii) recommend valid points to government and policymakers to modernize the current rules or frame novel rules in lower and higher education.

Data Collection and Analysis

After the preparation of questionnaires, the Google Forms were circulated among the target groups through email, WhatsApp, Telegram, and other messaging and social media platforms.

Data Interpretation

The responses were analyzed as two groups, firstly the learners that include students from schools and colleges and secondly the teacher's group consisting of school teachers and professors. The results of all the questions were studied and various opinions and problems raised by the respondents were compiled, compared, and interpreted.

Results And Discussion

The observations and discussions start from students' – the learners followed by the teachers' view, and the order is from lower to higher education system. These results were then expressed in the form of a discussion focusing on the following major aspects.

a) Preliminary information

b) Method of Teaching and setting up online classes at home and

c) Level of comfort.

Learners from lower Education - The School Students' view Preliminary Information

The questionnaire for school students was circulated across various schools in Sivakasi, comprising students in standard 12.

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Method of Teaching and Setting up Online Classes At Home

School students were asked a question with multiple choices about the methods by which they are being taught. The common methods of teaching included recorded (70 %) or live online lectures (20 %) using television and various applications such as Google Meet, Zoom, WhatsApp, YouTube, Microsoft teams, WebEx. Whatsapp was the most preferred platform (68 %) as they are easy to handle and don't require any technical skills for operating, especially by school students. When students were asked how they arranged the electronic devices required for online classes, the responses show that a majority (89 %) already had the required devices (television, smartphone, laptop, etc.) at their home, 9% purchased new devices while 2 % borrowed from other people.

Concerning the management of electronic devices, 84.1 % said that they could operate on their own. In this regard, students were asked to rate the involvement of their parents in their online classes and studies on a 1–5 Likert scale, where 1 marked the least and 5 marked the highest involvement. About 33 % and 27 % chose 5 and 4 respectively which suggests that more than half of students' parents were involved in their online mode of education. Attending classes from home seemed to increase parents' participation in their children's classes.

Students were asked what they thought were the causes of occasional impedance to their online classes, in such a way that they could choose multiple problems. Network connectivity issues (76 %) were the most opted choice. Students in rural areas particularly might have been facing issues of bad network coverage.

Level of Comfort in Online Classes

The level of comfort was assessed based on the tightness of the schedule, refreshment intervals, physical pains, and mental stress. only13 % of the students weren't getting enough time to refresh in between classes. Overall, the majority of students had a relaxed schedule with fewer amounts of class hours compared to regular classes.

Moreover,18 % did report having some physical and mental discomforts which include severe headache, strain, and irritation in the eyes, lack of concentration, etc. More time in front of screens could be a cause of these physical stresses. A majority (94 %) found regular classes more comfortable than online classes. However, there were a few students (4%) who reported for the reverse case.

It is also observed that the numbers of classes are positively correlated with the ascending order of the class that the student belonged to. Among, nearly half of the students (48.7 %) were taught 1 subject per day and 46.9 % had 2–3 subjects. This showed that the duration of online classes and subjects taught per day was found to be very less than regular classes on average.

Lack of direct interaction between students and teachers remains one of the biggest challenges that the online mode of education faces. “Students don't get to see the professor or class members face to face” is one of the main problems where 92.1 % of

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students believed that direct student-teacher interaction is essential for proper learning when asked about it.

It was found that about 65 % of the students agreed with the idea of conducting exams under these circumstances. The questions on evaluation and gradation were framed to have multiple options, which include assessment through online exams, assignments and homework, and viva voce.

Learners From Higher Education–the College Students' View Preliminary Information

Institutions of higher education were found to utilize alternative means of learning effectively in this unprecedented situation shifting away from the traditional means. The questionnaire to evaluate the perspectives of college students was prepared and circulated among college students about online classes. This includes all undergraduate and postgraduate. According to the respondents, 95 % had some form of online classes during the lockdown period.

Method of Teaching and Setting up Online Classes at home

Live video classes were the most popular means of teaching (73.1 %). Recorded lectures were also used (16.8 %) along with assignments, notes, and homework to supplement their studies (see Fig. 1). Alternatively, many college students reported that all of the above methods were used. The online classes were arranged using the online platforms of Google Meet, and Google classroom majorly, and Zoom and Microsoft teams, minor which supported live lectures. Live classes allow more real-time interaction, instant feedback making online learning more dynamic.

Level of Comfort in Online Classes

When the college students were asked about their learning environment at home, only 1 out of 10 students thought it was better than in the institute. A majority (63 %) reported the situation was not comfortable, and the remaining students felt the conditions were identical. When students were asked to identify the significant challenges faced in accessing online classes, lack of individual attention and socialization, poor internet connectivity (affecting 36.3 %), technical issues (17.2 %), limited data (32.2 %), and lack of practical sessions.

When asked if teaching is as efficient as before online classes or whether there is sufficient knowledge transfer from professors to college students, There are only 4% of students who believed online classes are better, with 28.6 % stating it is the same as before. About 64.4 % believed that interaction with teachers was less in online classes and 14.4 % said there was more interaction.

College students were also asked to rate how beneficial online classes were for them. Only 3.7 % felt it was excellent. While 31.15 % said it was good, and 17.6 % of students said it was poor.

Teacher's from Lower Education – School Teachers' View Preliminary Information

Out of the teachers who responded, the percentage of those who taught in schools

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belonging to the state boards and CBSE were 84.2 % and 15.8 % respectively.

Method of Teaching and Setting up Online Classes at home

When the school teachers were asked about the methods that they adopted for teaching, in such a way that they could choose multiple choices, the majority of teachers (62 %) said they use to delivered a live classes through video conferencing apps such as Google meet, Microsoft Teams, and Zoom. About 91 % of teachers reported that they are taught from home, 7% of teachers are taught from their schools and the rest of them taught from both home and school. About 89 % owned the required devices for conducting online classes, 7% had to purchase new devices for arranging the classes and a few (4%) had their schools sponsored the devices. So, the availability of electronic devices to conduct online classes wasn't a problem for the school teachers compared to the school students. Eight out of ten faced network connectivity problems. Disrupted Electricity (26 %) was the second most common problem followed by a limited data plan (9%) and problems with electronic devices (9%) that denied access to online classes on certain occasions.

Level of Comfort in Online Classes

Teachers were asked how many hours of online classes they held each week. More than half (54.9 %) took 3- 4 h, whereas 27.5 % taught for 4 - 8 h and 9.8 % taught for 8-12 h range and the remaining 7.8 % of teachers took classes for more than 12 h. This completely depends on the students to teacher's ratio that the school maintains. About 9 out of 10 school teachers felt as regular classes are more comfortable than online classes. Only 3% said online classes are the same as regular classes with none felt online mode as a comfortable platform. half of school teachers (52.7 %) reported having physical (headache, neck pain, numbness of hands, strain in eyes, etc.) and mental discomforts (lack of satisfaction due to the absence of direct contact with students) as a consequence of conducting online classes. Almost all school teachers (98.2 %) said direct student-teacher interaction is essential for proper learning. This indicates that school teachers place a high value on interaction with students and think that it is a must factor for an effective teaching-learning process.

More than half of the school teachers (57.1 %) believe that exams should not be conducted under these circumstances. The pandemic-based inconveniences made the assessment and grading of the students, difficult

Teachers from Higher Education - Professors' view Preliminary Information

The results depicted here were obtained from a survey conducted for professors in various institutes in Sivakasi, Among the responded professors, 54.7 % are in centrally funded institutes, 39.7% in autonomous, and 5.6 % in private colleges.

Method of Teaching and Setting up Online Classes at home

All of the respondents in this survey had faced transition to online classes from

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regular classes. The platforms and methods used were quite diverse, which ranged from using various video-conferencing apps such as Google meet, Google classroom, WhatsApp, MS teams, Zoom, WebEx, etc.

some professors (34 %) opted to record the lectures, 9% of them tended to rely on various digital courses through the web such as SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds), digital courses through TV such as SWAYAM-PRABHA, e-books, etc. Out of the total respondents, 64.6 % used their own devices, 20.8 % used the devices from their college and the remaining 14.6 % had to purchase the devices for conducting the classes. The majority of the respondents had network connectivity issues (44 %), followed by nearly 1 out of 5 having problems with electronic devices (20 %) or disrupted electricity, Many of the professors were concerned about not receiving proper feedback from the students and felt that was the major hurdle in online classes. All these factors, in turn, may decline the quality of education being provided to the students as well as the moral satisfaction of the teachers from higher education.

Level of Comfort in Online Classes

About 3–4 h of class per week was found to be the most common (54 %) class duration adopted by the professors, followed by 4 8 h (35 %) with a few more than 8 h per week. Nearly, 44 % of the respondents couldn't adapt comfortably to the shift of education to online mode and directly suffered from some kind of mental or physical discomforts. These include headaches, strain in the eyes due to longer time spent in front of computers, backache; lack of motivation to teach, anxiety, and stress. The online mode of teaching seemed to be uncomfortable for 87.5 % while only 4.2 % agreed that online classes are better. An overwhelming 95 % of them agreed upon the importance of direct student-teacher interaction in a class. Although a few neutrals, none of the professors entirely rejected this view. Professors felt that they were unable to communicate efficiently with students in an online environment. More than half of them (58.3 %) couldn't clarify students' doubts better than in a regular class. the majority (76.6 %) reported that students in online classes were less attentive.

Considering all the inconveniences in the evaluation, 52.1 % agreed that exams should be conducted under these circumstances, while the remaining preferred for exams to be not conducted.

FINDINGS AND SUGGESTIONS

- The learning group and the teaching group reported regular classes are better in terms of knowledge transfer and learning efficacy.
- Even among the general negative feedback, few students reported they were more attentive in online classes, probably owing to favourable situations at home. This highlights how learning environments can influence the quality of online learning and teaching.
- Students and teachers are facing many physical and mental discomforts during these tough times which affect the

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learning and teaching process. Any such issues should be handled sensitively.

- The aspect of communication and clearing doubts should be made more effective. Platforms that help with this are not used adequately and need improvement.
- There is a need for more investment in technology and basic infrastructure which will ensure uninhibited access to online classes for students and teachers belonging to all strata of society.

CONCLUSION

Although COVID 19 pandemic struck hard in every walk of life, teachers and students resumed their journey soon by setting up emergency remote learning platforms using various online collaborative tools in hand, even without a pre-planned course structure or proper training to teachers or students for adapting to the change. Both the learners' group and teachers group were predominantly in favour of regular classes. Most felt regular classes were better in terms of efficiency, interaction, and overall understanding. Although there is some level of comfort in learning/teaching from home, various technical issues and the extra effort one has to put in make the process taxing on students and teachers. Although most of the responses tilted in favour of traditional learning, we can presume that this was because of the unprecedented circumstances and the lack of preparation of teachers and students towards shifting to this mode of learning. Online education has the potential to dominate the educational field if a proper initiative is taken from the government and authorities of educational institutions. Hence, we can hope that online learning gets the attention and the resources it needs to thrive and will be of much importance in the future of education. The significance of this study lies in its in-depth understanding of teachers' and learners' perceptions of online classes, which immediately seeks government attention to mitigate the deficits and to ensure an effective online learning platform in the future, temporarily or permanently.

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IMPACT OF INDIAN EDUCATION SYSTEM DURING THE COVID-19 PANDEMIC PERIOD

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Abstract

The aim of our present study mainly focus on investigate and analyze the state wise problems faced by school students in the Indian education system, which has been implemented during the Covid-19 pandemic periodof 2020-2021. The whole education sectors totally affected not only India and also in worldwide especially in developing countries.India has second largest schools system in the world. According to the UNESCO report more than 14 croresof primary and secondary school students are affected in India. Approximately there are 32 crore learners stopped the educational activities and alsotolacked condition of the schoolstudentsthroughout in India. In order to collect the data from 75thNational Sample Survey Agencyregular education system has been changed into another way by using recent technologies including different models in which teaching and assessments are conducted through online/offline. Further we have going toobserve the positive and negative impacts of Education system in future.

INTRODUCTION

Indian government has announced the lockdown and closure of educational institutions such as schools and Colleges is a logical solution to enforce social distancing within communities. The nationwide lockdown had a tremendous impact on the education system of the country, especially for students from rural areas. Since the Indian education system is dominated by classroom study, the present scenario has made the functioning of the educational institutions go very difficult (Pravat, 2020a).Under these circumstances government imposed nation wise lockdown on March 25th, 2020 to combat COVID-19, has made severe impact on the education system. India has the world's second largest school system. According to UNESCO, 63 million teachers were affected in 165 countries. A total of 1.3 billion learners around the world were not able to attend schools or universities, and approximately 320 million learners are affected in India alone (Rawal, 2021). All educational activities like examinations, school admissions, entrance tests and competitive

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examinations and others, are being held during this period. As the days are passing by with no immediate solution to stop this outbreak, the closure of schools is hugely affecting the learning across the country.

The structure of the Indian education system example for learning methodology like Zoom, Google meet, Facebook, Youtube, and Skype etc., teaching techniques and assessment methodologies, is quite affected, resulting in a shift to online education with most focus on virtual education to accomplish the set aims and objectives. But only a handful of schools could adopt such methods and the low-income private and government schoolstudents are quite insufficient to adopt the same, thus resulting in a shutdown (Pravat, 2020a).The objective of this present study is to analyze the Impact of COVID-19 on Indian Education System.

- How the Indian education system particularly in Tamilnaduis facing the Impact of COVID-19, and highlighting the role played by students through online/offline education
- How the positive impact helpful to student in the scenario of the online/offline education
- How to reduce the negative impact of COVID-19 on students for their smooth education.

METHODOLOGY

Data collection tool

All the data's and information are collected from various reports and peer reviewed articles published by national and international agencies on impact of COVID-19. Additional information that also collected from various authentic Government websites such as Swayam Prabha, e-PG Pathshala, Diksha portal, e-Pathshalais an e-Learning app by NCERT, and National Repository of Open Educational Resources (NROER).

All systems have strengths and weaknesses. Maximizing strengths and minimizing weaknesses in order not to miss the opportunity to move forward should be the goal. The main purpose of the study is to analyze the impact of COVID-19 on the Indian education system. It covers the impact of COVID-19 on rural and urban students, Higher education Institutions.

Results and Discussion

In this study investigating the problems faced by students in a secondary school education and higher institution during the Covid-19 pandemic period, as a result of the data analysis.

Digital Sources in India

Before the COVID-19 lockdown period in India, no one estimated that the face of the Indian educational schools and institutions could change so drastically. Schools that never allowed students to carry an electronic gadget turned into such as learning centers for online classes. Students are getting familiar to this new normal, which is definitely more challenging for the teachers to handle with this situation. According to the key indicators of Household Social Consumption on Education in India report, based on the 2017-18 NSSO, fewer than 15% of rural Indian households have internet access (Table.1).

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Table: 1. Source: 75th round of National Sample survey

S.No	State	Rural area	
		Operate Computer (%)	Access Internet (%)
1.	Andhra Pradesh	1.5	10.4
2.	Assam	3.7	12.1
3.	Bihar	2.7	12.5
4.	Chhattisgarh	3.2	10.6
5.	Delhi	NA	NA
6.	Gujarat	4.4	21.1
7.	Haryana	5.9	37.1
8.	Himachal Pradesh	10.5	48.6
9.	Jammu & Kashmir	3.5	28.7
10.	Jharkhand	1.3	11.9
11.	Karnataka	2.0	8.3
12.	Kerala	20.1	46.9
13.	Madhya Pradesh	2.3	9.7
14.	Maharashtra	3.3	18.5
15.	Odisha	1.8	5.8
16.	Punjab	9.4	39.4
17.	Rajasthan	6.4	18.5
18.	Tamilnadu	11.6	14.4
19.	Telangana	1.6	9.9
20.	Uttarakhand	7.0	35.2
21.	Uttar Pradesh	4.0	11.6
22.	West Bengal	3.3	7.9

Availability of electricity is a significant challenge to taking more advantage of education online system. In a recent survey, the Ministry of Rural Development found that only 47% of Indian households receive more than 12 hours of electricity and more than 36% of schools in India operate without electricity.

This study suggests that while students from families with better means of living can easily bridge the transition to learning, students from underprivileged backgrounds are likely to accede to inefficiency and a lack of adaptation, such as inaccessibility of the low education of their parents to guide them through online tool applications.

Impact on Indian Students

Students are facing many hurdles during the online education system. At home, a lack of basic facilities, external distraction and family interruption during teaching were major issues noticed. Educational institution support barriers such as the budget for purchasing advanced technologies, such as laptop/Desktop computers, a lack of technical support and a lack of clarity and direction were also noticed.

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Positive impact on education system

Though the outbreak of COVID-19 has created many negative impacts on education, educational institutions of India have accepted the challenges and trying their best to provide seamless support services to the students during the COVID-19 pandemic period. Indian education system got the opportunity for transformation from traditional system to a new era like Develop the use of soft copy of learning material, Improvement in collaborative work, Rise in online meetings,Enhanced digital literacy, Improved the use of electronic media for sharing information,Worldwide exposure, Better time management and Demand for Open and Distance Learning.

Negative impact on education system

Indian education system has suffered a lot due to the outbreak of COVID-19. It has created many negative impacts on education like educational activity hampered, un-preparedness of teachers and students, Parents' role, Digital gadgets and Create Difference.

CONCLUSION

COVID-19 has impacted immensely the education sector of India. Though it has created many challenges, various opportunities are also analyzed. The Indian Government education have explored the possibility of Open learning by adopting different digital technologies to cope up with the present crisis of COVID-19. India is not fully equipped to make education reach all corners of the nation via digital platforms. The students who aren't privileged like the others will suffer due to the present choice of digital platforms.The COVID-19 situation, there is an urgent need to take further efforts on maximum utilization of online platforms. India should develop creative strategies to ensure that school children must have sustainable access to learning during pandemic period of COVID-19. As online practice isbenefitting the students immensely, it should be continued after the lockdown.

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IMPACT OF COVID19 IN E-LEARNING RURAL EDUCATION

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ABSTRACT

Mobile phones, internet, tablets, IPads, their applications, social media even travelling, cooking, communication etc are part of our lives from the start till the end of the day. Technology is touching every aspect of society and changing it dramatically. But there is one very important and indispensable part of the society that has also been tapped by new innovations and discoveries and that is education with the concept of E learning. Like all other areas, in this case also urban areas are influenced to a greater extent than rural one. So much more could have been done to bring the revolution in learning process in rural areas of India. In this research paper development through E learning in rural India is observed. If it planned properly then proper results will be affecting positively. In this research paper, we observed that E-learning is an effective tool for development of educational sector in India. E-learning is learning, utilizing electronic technologies to access educational curriculum outside of a traditional classroom. In most cases, it refers to a course, program or degree delivered completely online. The basic objective of this research paper is to understand concept of e-learning and to examine the type of e-learning. The research paper focused on classroom learning and e-learning in rural India.

Keywords: Education, educational development, e-learning, formal e-learning, informal e-learning

INTRODUCTION

India is a young country on the move. More than half of the country's population is under 25 years of age and every year 10 million people join the workforce. India already has one of the largest education systems in the world. The country has 1.4 million schools, 35,500 colleges, and 600 universities. Right to Education is the primary right of every citizen of India, whether a child resides in a high profile society or in a far away not so developed secluded village, according to the Article 45 of Indian Constitution the basic elementary education must be provided to all the children up to the age of fourteen years. Even after 68 years of independence some States in India are still struggling to achieve Universal enrolment, retention and quality education. There are more than one million rural schools among 6,38,000 villages in India. Schools in rural areas are promoted to raise the level of education and literacy in rural India. The main aim of running these

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types of schools in India is to increase the rate of literacy in rural areas. More than 30 percent of India's population is illiterate and cannot read or write. Schools in rural areas are inadequate and often equivalent to being non-existent. Thus, government's initiative to set up schools in rural areas came into picture.

India's education sector is being revolutionized by rapid increases in Internet penetration and the availability of low-cost mobile devices. Technology has the potential to multiply reach. E-learning is a combination of learning services and technology to provide high values. Internet plays a vital role in e-learning. E- Learning is attaining significance in the world of internet. Due to the advantages of in internet, e-learning reached at anytime and anywhere. E-learning clearly has a role to play in resolving the problem. The sector is expected to grow rapidly at a CAGR of 17.4 per cent between 2013 and 2018. To put things in perspective the market in India is predicted to grow more than twice as fast as the global average of 7.9 per cent.

PROBLEMS FACED BY THE RURAL EDUCATION

Teachers of rural schools in villages and small towns receive low income so there is a possibility that teachers give less attention to children.

- Most of the schools do not have proper infrastructure. So they do not get most of the facilities such as computer education, sports education and extra-curricular activities.
- There are no proper transport facilities so children don't like to travel miles to come to school.
- There is no access to supplemental education. Providing quality education to a growing number of students means more teachers need to be trained to maintain adequate levels of personalized student teacher engagement.

REVIEW OF LITERATURE

According to Deepali Pande, et al (2016) with respect to e learning, poor quality procurement practices (in all sectors but especially in the public sector) are a barrier to growth and adoption. So it is necessary to make a thorough evaluation when it comes to choose an e learning software for education in order to improve the knowledge of learners, the learning outcomes, the performance outcomes, the business and policy impact and in order to value the money spent.

Hardik Patel, et al (2014) Using E-Learning Tools you can tremendously improve learning process and earn learn in very easy hassles free environment. Another major benefit of the ELearning is that you can make learning always ON. ELearning is not restricted to any place and environment; you just need to connect with group or community, after you will receive all updates.

Deep shikha Aggarwal (2009) The social implications of online learning center around one primary requirement that students need to feel a part of the class,

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regardless of where they are located physically or geographically. The ―missing of connection ‖ to the other students in the class and with the institution can impact the success of an online student. Bottom line: the Indian market is still young, but it will continue to adopt the concept of e learning in order to meet its communication needs and seize business opportunities.

OBJECTIVE OF THE STUDY

1) To understand the concept of E learning
2) To examine the type of E-learning.
3) To study current state of e learning in rural India.

RESEARCH METHODOLOGY

This research paper is conceptual and Exploratory in nature. In order to meet such objective secondary method is adopted. The secondary data was collected through books, periodicals, journal and published material related E-learning for the study.

Concept of E- Learning

E–learning is defined "as acquisition of knowledge and skill using electronic technologies such as computer and Internet based courseware and local and wide area networks." The term was introduced in 1995 when it was all called "Internet based Training", then "Web-based Training" (to clarify that delivery could be on the Inter- or Intra-net), then "Online Learning" and finally e-learning, adopting the in vogue use of "e" during the dot com boom.

Types of e- learning

1) **Synchronous training:** means "at the same time," involves interaction of participants with an instructor via the Web in real time. a. Virtual classroom: Virtual classroom duplicates the features of a real classroom online. Participants interact with each other and instructors online, instant messaging, chat, audio and video conferencing etc.
2) **Asynchronous training:** which means "not at the same time," allows the participant to complete the WBT at his own pace, without live interaction with the instructor.
3) **Embedded learning:** Embedded learning is information that is accessible on a self-help basis, 24/7. It can be delivered to the place of work, or to mobile learners. Electronic performance support system (EPSS) is a type of embedded learning. The advantage is that embedded learning offers learners the information they need whenever they need it.
4) **Courses**: The clear advantage of a self-paced course is convenience. Participants can get the training they need at any time. This can include justin-time training where a participant gets exactly the training he or she needs to perform a task.
5) **Discussion groups**: A discussion group is a gathering of conversations that occur over time. They are also called message boards, bulletin boards and discussion forums. Discussion groups can be used to support a group of participants taking the

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same class or can be used to support participants performing related tasks. A discussion group is a very competent way to supply expert answers to a large group people. A single answer to a common question can help many.

6) **Blended learning:** Most companies prefer to use a mix of both synchronous and asynchronous e-learning methods according to their requirement.

E-LEARNING IN INDIA

Although the foundation of education is still reading, writing and arithmetic, today's students need broader education. Contemporary classroom, hence, needs to deliver live instruction, video content delivery, student to- student interactions via videoconferencing, remote test administration, up-to-date materials, self-learning etc. Digital India campaign is likely to benefit education by bringing many of these and other important elements together.

Even as the previous government tried to bridge the digital divide, Modi's masterstroke offers a lot of positivity for the Indian education market which is estimated to be worth Rs 5.9 trillion in 2014-15 against Rs. 3.33 trillion in 2011-12. With nearly half the population of India below the age of 25 and increasing penetration of Internet and mobile devices in this demography which is expected to reach 250 million soon, rivaling the US and second only to China, India's potential as a huge market for e-learning is enormous.

Indian corporate sector having hold on tech world such as Intel, Qualcomm and Tata are also making strides in this direction. Intel recently launched 'Digital Skills for India' initiative under which it introduced Digital Skills Training Application that is comprised of modules on Digital Literacy, Financial Inclusion, Healthcare and Cleanliness in five Indian languages. Qualcomm has launched Play 'n' Learn program for school children ages 5-8. It is providing 3G tablets under the Qualcomm wireless Reach initiative.

Likewise, Tata, Reliance and BSNL are among the prominent Indian names that are going big on this sector. While Tata is expanding its school education solution, 'Classedg', Reliance has picked up over 38.5 per cent stake in digital education company, Extra marks Education Private Limited, through its subsidiary, Infotel Broadband Services Limited. Government owned enterprise BSNL has tied up with Grey cell 18 Media Private Limited, to launch its online education service 'Topper Education'. Other noteworthy names in this segment include the likes of Data Wind, Merit nation, and Class teacher. Even some of the e-commerce players have expressed their willingness in this segment. Needless to say, if the e-learning/education market takes root in the country, it will definitely improve the education scenario which desperately needs a shakeup. Even the government is in strong supporter of elearning and the Department of Electronics and Information Technology

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(Deity) has been actively developing tools and technologies to promote it, what we need is more devices and an ecosystem. There is a need for a greater participation from the industry and stakeholders. For this to happen, the tech companies have to take the lead and help enable a strong ecosystem. We also need more applications and services to strengthen the ecosystem. The developers and content providers are going to be encouraged only when there is a plenty of devices, more importantly interest of tech companies. Apparently, there is a huge opportunity yet to be tapped, even as infrastructure and regulation issues might be slowing down the otherwise accelerating education space in India.

Digital India (DI) programme is a GoI initiative to electronically integrate the government departments and the people of India. This move aims at ensuring that government services are made available to citizens electronically. It also includes a massive plan to connect rural areas with high-speed internet networks. Digital India has three core components. These include: Digital infrastructure, Digital service delivery and Digital literacy.

The project was officially launched on July 01, 2015 and is slated for completion by 2019. The scheme will be monitored and controlled by the Digital India Advisory group which will be chaired by the Ministry of Communications and IT. It will be an interministerial initiative where all ministries and departments shall offer their own services to the public Healthcare, Education, Judicial services etc.

The initiative is commendable and demands full support and confidence of all stakeholders. However, it has scope for improvements regarding many crucial components like a legal framework, privacy and data protection laws, insecure Indian cyberspace, etc. So these issues will have to be managed simultaneously. But despite its shortcomings Digital India project is worth exploring and implementation and will raise India to newer heights on the international scene. The availability of high-speed internet to every citizen , easy access to government services through CSCs and allocation of private space on public cloud are some the DI features that will revolutionize the lives of rural populations pan India.

While the government's aggressive National Optical Fibre Network (NOFN) is all set to be spine of the Digital India drive, spreading out of broadband connectivity is going to aid growth of e-learning. There are three components of technology-enabled modern education; Digital Content, Technology platform and delivery infrastructure, or say the Internet. But there is a scarcity of internet infrastructure. Availability of high quality wireless internet speed is still a challenge. Penetration is also an issue. A correct ecosystem can be created when we will be able to empower better quality mobile based Internet.

Increasing internet footprint will also help to create the right ecosystem which can

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be easy achieved through Gi – Fi technology as it provide high speed data transfer, low power consumption, high security, low cost and High level of frequency re-use enabled. It can be used to meet communication needs of multiple customers within a small geographic region can be satisfied thus making it useful to rural India where still there are issues of power supply, private telecom company are reluctant to provide competitive services.

Challenges

- Lack of Infrastructure and hardware facilities which hamper reliability of e learning
- Lack of policies, strategies, schemes, monitoring and control that ensure cross-sectoral and multi stakeholder involvement
- Lack of awareness about E-learning material usage and services offered
- Lack of citizen (user) focus in G2C2G initiatives. i.e. services which listen and change as per peoples expectations. Products with a focus would develop a sense of "ownership" in local rural governance
- Problem in finding willing skilled manpower to training illiterate rural areas of India.
- No computer based courses/skills taught to students in primary schools to increase their knowledge about ICT importance in rural development
- Lack of skills in trainer or kiosk operators
- Community based participation (which fully understands and delivers the user needs) is not encouraged.
- Content development is not relevant and participatory.
- Services delivered to rural areas are not available using local language and this will affect their longterm sustenance due to low interest in their usage
- Capabilities are not adequately transferred to end user. This prevents them from using the applications independently.

LEARNERS PERSPECTIVE

- The students believe that online learning is used and that one of the most considerable uses is a imitation of the scientific method learned on electronic forms.
- The students consent that learning is useful and that it helps them to be safe and improved their academic standards.
- The students declare that the introduction of e-learning is difficult and that the low-quality of internet services is the biggest obstacle to its application.
- The students express that there are limitations to e-learning and that the biggest drawback is that it decreases the workload for teaching staff and raises the pressure on students.

INSTRUCTORS PERSPECTIVE

- The teaching staff believes that e-learning is beneficial and that helping to develop students' technological skills is one of the most critical positive elements.

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- The teaching staff agrees that the use of e-learning is common and that the possession of faculty members via e-mail and other e-services is the most significant use.
- The teaching staff agrees that there are barriers to the introduction of e-learning and that the high cost of its implementation is one of the main difficulties.
- The teaching staff accepts that e-learning has disadvantages and that the biggest downside is that, relative to traditional learning, it requires financial support.

CONCLUSION

Development of any society depends on its access to information and the same is applicable to rural India too. E learning can work wonders in this direction and help the socially marginalized community to attain their entitlements. Launch of Digital India Programme is a welcome step in this direction. It is anticipated that with dedicated leadership, willpower and control and an integrated framework comprising of the government, technology industry and society, E-learning interventions in the rural areas will undoubtedly pave way towards sustainable growth.

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COVID-19 IMPACT IN EDUCATION OF RURAL INDIA

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ABSTRACT:

COVID-19 has completely driven the people lives of India as well as rest of the world, totally in a different way. Economically, India was already in a horrible situation prior to the outbreak of the epidemic, and now the crisis has exacerbated the people's misery. All the people lives of both urban and rural areas are deadly affected by this pandemic crisis. In that situation, both government and public health care sector are collapsed due to heavy COVID-19 patients. COVID 19 has an impact not only on human life and industrial progress, but also on education. Education in rural India is a catalyst to improve the economic and social well-being of the nation. In education physical class room system is totally changed into online class room system and learners in rural areas. The education is greatly affected in rural areas and the student's knowledge level has been greatly decreased. The disruption of education caused by Covid-19 has adversely impacted rural India wherein children could not cope up with the normal owing to lack of adequate digital infrastructural support.

INTRODUCTION

"Education is the key to unlocking the world, a passport to freedom"

- Opray winfrey

The COVID-19 pandemic has badly impacted on India in an enormous way, especially on the overall health systems, education and economic activities. The informal economic system of India has now suffered as a result of the socioeconomic imbalances that split the country in this dreadful scenario. Nowadays, numbers of people dying from hunger and death toll poor health infrastructures are extremely increasing day by day. This pandemic crisis deadly effect on the people lives of both urban and rural areas. In this time, this disease is completely transmitted from urban to rural sectors of India and creates a real traumatized situation. During this lockdown and unlock period, educational institutions (school, college and universities and many others) were closed which hampered the actual face to face teaching-learning process of education. Though today's time, it is going on through online method by using mobile and computer basically in urban areas, resulted online running school, where rural parts also remained deprived. The impact of COVID 19 bought many changes in education in rural areas. Though schools are closed, students are attending their classes

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through various education initiatives like online classrooms, radio programs. Though it is a good thing happening on the other side, there are lots of students who didn't own the resources to attend the online classes suffer a lot. Many students are struggling to obtain the gadgets required for online classes. **After China, India belongs to world's second largest school education system which comprises a network of about 1.5 million schools.** But NSSO report in 2014 says that about 32 million children in the country were already out of school before this pandemic. The majorities of them are belonged to economically and socially disadvantage class in the country. Though the Indian government supports the recently drafted new education policy's digital revolution, there are many questions about how this policy will be implemented in a diverse and multilingual country, because e-learning platforms cannot replicate the variety of contexts and dialects with diverse lived experiences that are easily possible in physical classrooms.

COVID 19's Economic Impact on India:

The analysis of education as an economic commodity has a long history. Within development and growth economics, the importance of education as an economic variable also has a distinguished history beginning with Lewis(1962). The economic condition of India (a developing market) has already been gone through a crisis phase from the last year 2019 (reduced to 4.9%).. This caused negative impact on various growing industry, lowering the demand of vehicles sale in India. Tourism of India is also one of the most powerful sectors which ranked 34th among 140 countries, also experienced downward condition (Kaur, 2020). So, the overall lockdown effect was cruelled to small, medium and large enterprises of the country, leading to jobless and economic downward situation (Sharma & Mahendru, 2020). However, most of the private and government sectors were advised a new direction of workplace i.e. work from home (WFH). Though it is suitable for urban upper and middle class people but challenging for those people who belongs from rural agriculture based sectors. This is due to the improper facility and lack of knowledge of computers, mobile and internet .

Transpose in the field of education

About six months were going on, but we cannot found any immediate solution to stop the outbreak of COVID-19. So school, college and university closure will not only give a short or long term impact on the continuity of learning for approximately 285 million students in India, but also produce far reaching effect on economic and social consequences. This closure has direct effect on the structure of schooling and learning process, including teaching and assessment methodologies. In this scenario, only handful private institutions have adopted this online teaching method. On the other hand, government and low-income oriented private schools cannot adopt this

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e-learning process properly. In government schools, there are some students which already have missed opportunities for learning and some does not have access healthy meals during this time and thus fell economic and social stress. This pandemic has significantly created a disorder situation also for higher education sectors as well, which in term determinate economic failure of the country. A large number of students who already enroll or willing to enroll themselves in abroad universities is highly affected by this pandemic crisis. If this situation persists in long term, the wishing demand for international higher education for those upcoming students will be stopped.

Mode of education followed during COVID 19:

On the outbreak of Covid 19 virus the education system has been changed to digital mode. . Whole education system of India is deadly affected and facing a crucial situation. All the private, government school, college and universities were closed and final semester examinations are going through online examination process. Overall, all the students and their teachers are faced many challenges in education system like classroom interruption of teachers with the learning students. Additionally, admission process and actual evaluation of internal assessment are hampered in this dreadful situation. The Government of India initiated a new platform called online Digital Learning for giving education to all. Overall, various tools like Google Meet, Google classroom, WebEx etc are used to overcome this situation.

Challenges faced in online rural education:

Online teaching was not a common method of instruction prior to school closures, and limited access to digital services made it difficult for many to transition to this form of instruction. **68% of schools reported inadequate access to digital services.**

- Approximately 13% of schools took external or professional guidance in equipping their teachers with modes of online delivery, while the remaining 87% took no action for online classes or teacher education.
- Over 70% of schools reported that teachers helped to equip each other internally to connect with students online.
- In online instruction, 57% of schools find it difficult to engage with students and hold their attention and 41% fear that students' focus and interest in learning is decreasing.

Direct and Indirect effects on education:

A look at the recent emergencies in the country reveals the direct and indirect impacts of natural disasters on school education. Direct impacts include the destruction of school buildings and damage

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to roads connecting to schools, resulting in uncertainty of reopening and irregular attendance. Indirect impacts include long-term closure of a school due to temporary conversion of the school building to a rehabilitation centre, silent exclusion of children belonging to families in distress through displacement or migration, resulting in child labour, child marriage, and child trafficking.

The current state of the educational system is as follows:

- About 285 million learners are adversely affected by this pandemic and transmitted into online education.
- This transition has not been possible for all students because of huge regional and household inequality in India for accessing internet and technology.
- The rapid shift of this online education system has created a long-term issue of inequality with digitally divide in India which will finally affect the future economy, education and digitalization policies.
- Overall this short term learning outcomes will result a loss in human capital and also decreased economic opportunities in long term.

During pandemic, the situation of rural schooling is as follows:

Rural schools face a number of challenges when it comes to the learning arena- enrolment and dropout of students, the number of teachers, infrastructural deficiencies, and technological barriers to name a few. One reason why urban schools are far ahead in the race is, due to the way of teaching and administration that differs. While the teaching methodology in rural schools is still primitive, urban schools have always been keen on adopting modern ways of teaching like concept learning and focus on the development of each student through holistic activities. This is complemented by regular interventions and audits by authorities, which becomes comparatively difficult when it comes to accessing villages in far off areas. The incomes and infrastructure in urban cities have enabled the easy introduction of e-learning modes, supplemented by the availability of devices and the internet, during the lockdown period. Inadequate access to facilities, drastic change in earnings, and the movement of families due to the economic shutdown have worsened the situation for rural learners.

Annual State of Education Report (ASER):

- There is a discernable gap between rural and urban education system for which rural children face many difficulties.
- According to the Annual State Education Report survey, two thirds of rural children in India reported they did not receive learning materials or activities at all during the period of the pandemic.
- Education in rural India is a catalyst to improve the economic and social well-

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being of the nation. According to the Annual State of Education Report (ASER) 2019, only 16% of children in Class 1 in 26 surveyed rural districts In India can read the text at the prescribed level, while almost 40% cannot even recognize letters.

- To achieve the dream of Skilled India, there has to be an enhanced focus on upgrading the rural education system.

Against the backdrop of a yawning rural–urban digital divide, state governments employed a mix of methods to implement distance learning for rural school children. The ASER 2020 survey highlights that these efforts have yielded disappointing results. During the reference week, approximately

- 20 per cent of rural children had no textbooks at home
- 28 per cent of students had received no educational assistance from family
- 29 per cent of children had not engaged in any educational activity
- 66 per cent of children had not received any instruction from their school
- only 11 per cent had attended live online classes
- 32 per cent of children with smart phone access had not received any materials.

Crucial challenges faced by students of rural India:

(I) Digital Literacy and Infrastructural Support

These are prominent hurdles that come in the way of enabling online education in the rural regions of India. Though the power and network infrastructure have improved leaps and bounds in the remote areas of the country, there is still a room for improvement. Teachers and students in villages are becoming more accepting towards digital means of learning, but the infrastructural facilities there have not developed fully to become at par with what online learning require. Steady flow of electricity and lack of high speed internet still pose major problems for the rural population.

(ii) Limited availability of technological devices

While we look at the domain of digital learning, it is imperative to consider the availability of the right devices to every student for accessing digital content. Not a lot of people in rural India have access to personal laptops or computers, and phone screens are not conducive to long learning hours. Also, data packs and their costs can be a big deterrent both for teachers as well as learners, especially for live classes. Many students either don't have personal laptops/smart phones or they are available for a limited time. Hence, the learning remains restricted with the limited availability of technological devices.

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(iii) Lack of Familiarity with Digital Technology

While Smart Classrooms and Digital Learning have already made a way in urban educational setups, some rural countries still rely on traditional teaching methods for their lessons. Therefore, shifting from traditional pedagogical methods to the digital one cannot happen overnight. Teachers as well as students require proper training and more user-friendly platforms to make them familiar with digital technology so that they can be comfortable teaching/learning using them.

CONCLUSION:

"Education is not the learning of facts, but the training of the mind to think" - Albert Einstein

With the Covid-19 putting a halt on classroom learning sessions, online learning has paved a new way to retain normalcy for students and teachers. It is heartening to see that not only urban educational institutes, but the state-run schools in rural areas have also gone digital and resorted to online classes to avert academic losses. Although, not every village and town in India is infrastructural developed to sustain online education, it is motivating to see many rural schools and colleges adapting completely to e-learning during these times. Also, many affordable and low-bandwidth e-learning solutions are coming up with multi-lingual platform to facilitate easy and convenient online learning classes in rural India.

In the last few years, we have observed substantial changes in rural India regarding education, infrastructure and other facilities. With the continuous support from government and innovations coming up in digital technology, online learning will be made affordable and accessible.

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INVESTIGATIONS OF ACADEMIC STRESS FACED BY STUDENTS IN ONLINE EDUCATION

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ABSTRACT

Nowadays, we are forced to practice online education due to Covid-19. The transition from chalkboard teaching to prompt, flexible online teaching requires appropriate technology-enabled learning. Digital education has often been considered a viable solution for Rural India to address the existing gaps in imparting education. The present Covid-19 crisis has a major impact on the digital divide in the country, particularly from the perspective of education with digital access. It has also brought into sharp focus the challenges that exist for digital representation of education in the rural areas of the country. While an educational sector moves from chalkboard teaching to online teaching, it faces the both flexibility and difficulty. The online education faces the serious barriers in implementation. This work is an effort to list out these barriers. The motto of this article is to find out the role of for academic stress of students in rural India during the lockdown caused by COVID-19.

Keywords: Online Education, Rural India, Barriers, Lack of Energies and Academic stress

INTRODUCTION

Online leaning is not a novel discovery, hints on online universities degrees surface as far back 1980s, coupled with 1990s and 2000s as optimal maturation time for online education and another undeniable fact is that online education has regularly been viewed from the perspective of good-to-have alternative but not a serious-mission [1]. The global acceptance of social distancing policy, as announced by WHO as ameasure to curb the spread of Covid-19, has forced schools to close their doors, and this hascaused unexpected disruption of traditional teaching and learning method. So, this pandemic has successfully forced global shutdown of several activities, including educational activities and migrate to online platforms [2]. The teachers and students are active medium to run the educational activities with the support of some passive mediums like Information and Communications Technology (ICT). The digital migration in higher education is a recent phenomenonwhere ICT has been applied in classroom delivery, assessment tasks, and conducting examinations using e-Pads, it was rapidly adopted during the pandemic with externally assisted migration online platforms such as Microsoft Teams, Zoom, GoToMeeting, Google Meet, and RingCentral video [3].

According to the Father of the Nation, Mahatma Gandhi, “True education must

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correspond to the surrounding circumstances, or it is not a healthy growth". These words reflect the ceaseless need for educational institutions to keep evolving and comprehending the imperative demand of students by providing them with necessary means. Even the National Education Policy (NEP) 2020 focuses on digital learning as a substitute to the traditional classroom model for interaction between teachers and students. While there are numerous benefits of digital education, the barriers are still manifold to make education a complete online phenomenon in rural areas [4]. While an educational sector moves from chalkboard teaching to online teaching, it faces the both flexibility and difficulty. The online education faces the serious barriers in implementation in rural India. Among the barriers of online education, the academic stress is the major role and it is discussed in this article.

Review of literature

2.1 Benefits Associated With Online Teaching and Learning

Digital education has often been considered a viable solution for Rural India to address the existing gaps in imparting education. It is believed that digital education can reduce the issues related to quality education delivery, the inadequacy of teachers in rural schools, high rate of drop-outs, insufficiency of innovative teaching-learning methods and lack of standard learning material [5].

- Rapid developments in technology have made distance education easy.
- The possibility to learn from anywhere, anytime, in any rhythm, with any means
- The teaching–learning process more student-centered, more innovative and even more flexible.
- The learning experiences insynchronous or asynchronous environments using different devices (e.g., mobilephones, laptops, etc.) with internet access.
- In these environments, students can be anywhere (independent) to learn and interact with instructors and other students.
- There is a possibility of instant feedback.
- Learning content is not available in theform of live lectures or classes; it is available at different learning systems and forums.
- Instant feedback and immediate response are not possible under such an environment.
- Synchronous learning can provide a lot of opportunities for social interaction.
- Possibility of watching already recorded lectures.
- Instant feedback from students can be achieved.
- Materials (Assignments) can be taken

2.2 Problems Associated With Online Teaching and Learning

There enormous number of technologies available for online education but sometimes they create a lot of difficulties. These difficulties and problems associated with modern technology [5].

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- Downloading errors, issues with installation, login problems, problems with audio and video, and soon.
- Online learning has so much of time and flexibility that students never find time to do it.
- Personal attention is also a huge issue facing online learning.
- Students want two-way interaction which sometimes gets difficult to implement.
- The learning processcannot reach its full potential until students practice what they learn.
- Sometimes, online content is all theoretical and does not let students practice and learn effectively.
- Simple course content is also a major issue.
- Sometimes student finds online teaching to be boring and unengaging
- Students feel that lack of community, technical problems, and difficulties in understanding instructional goals are the major barriers for online learning
- Students are not sufficiently prepared for balancing their work, family and social lives with their study lives in an online learning environment.
- Students were also found to be poorly prepared for several e-learning competencies and academic-type competencies.
- Also, there is a low-level preparedness among the students concerning the usage of Learning Management Systems.
- Language Barrier
- Inadequate Skills
- Access to proper devices and cost of data for rising use of content consumption.
- Digital Illiteracy
- No Infrastructural Support
- Gender Inequalities and so on.

The rural connectivity use-cases, state of the art projects and initiatives, challenges and technologies to improve digital connectivity in rural parts of India are surveyed. In India, around 50% of the population has poor or no connectivity to access digital services. Different solutions are being tested and trialed around the world, especially in India [6]. The COVID-19 pandemic period caused a strain on pediatric mentalhealth resources across the globe. This was primarily due to the stress of lockdowns, loss of caregivers, and school interruptions [7]. A few scientific publications, such challenges (from online education) were spot lighted by multiple media reports of student suicides in the context of online education. The association between student suicides and online education through a thematic analysis of the media reports are collected [8].

Academic stress

Distress in online classrooms and problematic internet use are two issues that have caused student burnout and affect perceived learning during the COVID-19 pandemic and it is shown in Figure.1.

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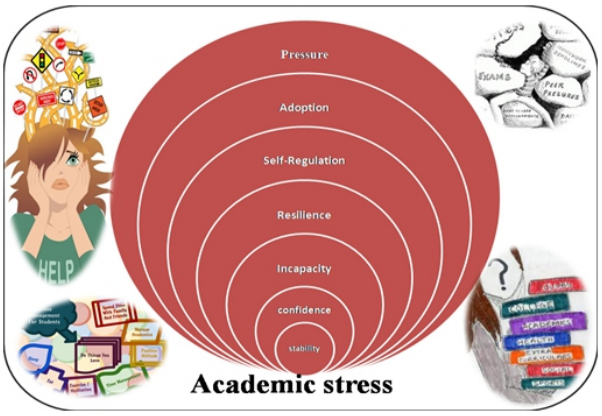

1.1 High Pressure

Given the high pressure placed on students throughout COVID-19, it is critical to understand the influence of problematic internet use (PIU), psychological stress, academic burnout [2].

1.2 Situation Adoption

Online curriculum transactions put pressure on students to adopt newer instructional methods and virtual interactions in online classrooms, online submission of assignments and tests, and minimize face-to-face interactions with instructors and peers.

1.3 Academic Performance

The academic achievement influences a student's ability to obtain rewarding career, advance in their profession, or be accepted into further education programs, as well as measures the skills of students in meeting specific learning objectives, higher education institutions must ensure that the negative impact of burnout on academic performance is addressed by promoting students' mental health during this pandemic period [2].

1.4 Self-Regulation

Students, on the other hand, can protect themselves from the negative effects of PIU and burnout on academic performance to a great extent if they develop positive coping techniques such as resilience and self-regulation. Learners who self-regulate their learning and adopt cognitive and met cognitive strategies find the new environment favorable for learning [5].

1.5 Lack of Resilience

The quality of life of students heavily relies on their ability to handle a range of study-related demands. Any failure to meet these demands and lack of resilience would impair mental health-giving rise to burnout.

1.6 Individual's Incapacity

When students consume psychological resources continuously during the online classes, even if it is a low level of stress, they would experience burnout. When stress is considered as an individual's incapacity to adjust to his/her environment, resilient people may mobilize all available resources to deal with it healthily [1,2].

1.7 Lack of Confidence

The online presence and lack of physical access to teachers and classmates may create psychological disturbances leading to PIU. Since frustrations, failures, disappointments, and stress in real life and family, social or college life relationships increases the likelihood of PIU as an escape route, PIU acts as an escape mechanism for stress. Students feel that they control everything, but they might not cope with real problems.

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1.8 Lack of Stability

Stay-at-home mandates promote social isolation, which leads to emotional instability and stress, which may result in PIU, which has a negative impact on psychological well-being, including loneliness, depression, anxiety and burnout [2].

1.9 Lack of Competencies

The study pressure, workload, and continuous stress would lead to PIU and academic burnout and in the end, students may fail to develop any competencies. Therefore, feelings of powerlessness or uselessness increase emotional exhaustion, depersonalization, inefficacy and reduce the level of psychological resilience

1.10 Psychological Distress

Students are expected to complete assignments and projects and take tests online using ICT infrastructure and tools provided by institutions. Among the online activities, social networking, entertainment, and gaming activities have become a part of daily social life, as reported by some studies. As an important means of communication, social networking is the main reason behind mental health issues. The intensive use of these sites causes psychological distress; accordingly, we found a direct effect of PIU during the pandemic and burnout experienced by the students [2].

1.11 Extreme of Entertainments

As internet penetration has improved, young adults have increased their use of social media sites such as Facebook, Instagram, and Twitter that have been integrated into their lives.

1.12 Internet Addiction

The supportive function of internet platforms in improving interpersonal interactions also provides immense scope to surf the Internet for gaming, watching movies, or other distractive and harmful activities and hampers academic achievement

1.13 Lack of Understanding

Excessive use of the Internet occurs when students have some difficulties in mastering the subject or face problems in understanding the curriculum.

1.14 Discontinue of Education

Stressful situations give rise to burnout and increase the likelihood of discontinuing their education and lead to failure when learners are deprived of classroom group activities and peer learning, physical sports activities or social engagement.

1.15 Lack of Friendship

Without any support from educators or classmates in understanding difficult subjects or concepts, family-related pressures, competition among peers, financial distress and academic prerequisites lead to academic burnout.

1.16 Cynicism

When students feel exhausted, irritable, detached, lack of energy and resources required to meet academic pressures and expectations makes students perform poorly. When learners face

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difficulties grasping technical concepts and lag others, the inability to excel as expected forms into a negative attitude towards academic tasks and they become indifferent (cynicism).

1.17 Fear of Offline Exams

Some students spread rumors that the end-of-semester or end-of -year exams can be cancelled unnecessarily distracts most of the students in that they participate willingly or unwillingly in mass letter campaigns to cancel the exams. The energy of the students is drained as the exams are nearing. When the exams are not cancelled, they are not ready psychologically to face the exams.

1.18 Lack of Awareness

Higher education institutions should frame guidelines and communicate with students of possible risks of harmful use of the Internet among students and encourage the efficient use of this technology to prevent risks including academic burnout.

1.19 Lack of Supervision

Close monitoring by parents on the behavior of their children while attending online classes would reduce excessive internet activities. The importance of support from teachers, peers, and counseling must be acknowledged and these stakeholders should be a part of counseling process.

1.20 Lack of Physical Activity

The students should also be trained to develop a better understanding of themselves using various self-analytic techniques, counseling or therapy [6].

1.21 Lack of Suitable Electronic Devices

While talking about digital learning, it is important to observe the accessibility of accurate devices for each student to avail digital content. In rural areas, only a nominal section of people have the privilege of accessing laptops and computers [9].

CONCLUSION

Today, we are forced to practice online learning; things would have been different if we have already mastered it. This virus surely has accelerated the process of online learning. As per the World Economic Forum, the Covid-19 pandemic also has changed the way how several people receive and impart education. To find new solutions for our problems, we might bring in some much-needed innovations and change. Teachers have become habitual to traditional methods of teaching in the form offace-to-face lectures, and therefore, they hesitate in accepting any change. We make awareness to the students about education which is related to our life.

Acknowledgement

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ISSUES AND IMPACT OF e-LEARNING

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ABSTRACT

Technology is shaping every aspect of society and changing it drastically.e-learning is a part of computer technology which denotes learning, utilizing electronic technologies to access educational curriculum outside of a traditional classroom. The issues of inequities in access to technology across the nation have added to the complications especially among the students around rural areas. Very important aspect of the society in this era on the way of new innovations and discoveries is education with the concept of e-learning. The draw back in this discovery is that the urban areas are influenced to a greater extent than rural areas. So much more could have been done to bring the revolution in learning process in rural areas of India. In this review paper, a focus on the barriers of e-learning with future solution in rural India is highlighted. E-Learning is doubtless a great tool each for managing education and teaching which should be accessible both in urban and rural areas. The aimis to assess the impact of E-Learning setting on education special relation to rural areas ingeographical region.

Keywords: e-learning, rural areas, effectiveness, drawback.

INTRODUCTION

Electronic learning" or "e-learning" is a general term used to refer to computer-basedlearning. E-learning has introduced a full new set of physical, emotional and psychologicalissues at the side of academic problems. The Covid-19 pandemic brought India along with the entire world to a complete standstill from 2019.Through gradual lifting of the restrictions, the nation has been trying to cope up with the repercussions of the lockdown, the youth of the nation, especially school going students, is facing a rather significant setback due to the pandemic. In the quest of overcoming these challenges, the main aim is to bring teachers and students together by the means of technology.

The Affected Trio

The issues of inequities in access to technology across the nation have added to the complications caused by the Covid-19 crisis. According to the 2019 TRAI data, the internet tele density in rural India is 57.18 per 100 inhabitants against 156.18 in urban regions. This clearly puts rural India on a backseat in terms of access to technology and resources for facilitating e-learning, which can have a lingering effect on the education of the students living in the rural parts of the

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country. Therefore, it becomes all the more important to identify the core issues faced by these students and to navigate through the possible solutions.

Many students are struggling to cope with the syllabus in the absence of teachers due to the sudden shift to online modes of teaching. The pandemic has compelled students to rely completely on technology for e-learning and has eliminated the scope of in-person traditional classroom sessions. Similarly, teachers face more problems in e-learning due to connectivity issues and poor students' response.Administration of any institution around the rural areas also face the issues to strengthen the teacher – students' relation in the e-learning process[1].

Issues of e-learning

In Connection with the issues, which affect the student community of Rural area, financial challenges top it as most of the occupation of rural community is based on daily wages. Rural people could not afford to the advanced level of android mobiles which facilitates the e-learning mode. Next to it, e-learning is a concept which could not be explained to the uneducated parents of this community. Rather they find it to be a lazy way of learning and do not recommend it for their children. E-learning could not be made either qualitative or quantitative with limited and low level apps. Both students and parents do not find it convincing without knowing its value and the advanced level of learning with a global standard. Even Urban community found the technical hitches a greater barrier to online mode of learning. In the same way, the students and the teachers are helpless before the technical issues as it needs a prior understanding of the technology to solve it. It is the biggest of all challenges for the students of rural community.[2]

Apart from these five environmental challenges, they have some more individual issues. Adaptability, that is a sudden change of learning with out a teacher and network support for the clarification is entirely a new concept for them. They are not that much flexible to go for online references and understanding the authenticity of the sources. The lack of computer literacy adds to their weakness in flexibility and adaptability. Managing one's own time is a difficult task for all. Setting alarms and managing time with software's help and apps may be a remote understanding for the rural students. E-learning promotes and prioritises self-paced motivational approach. Commonly students of rural communities prefer a systematic planning and scheduling offered by the institutions, thereby self-motivation could not be scheduled easily by the students[3]. A lot of distractions attract the students when they are highly exposed to this mode of learning. They fail to identify it, refuse it and reject it knowing the dangerous effect it may give to them.

Barriers to e-learning

There are some factors which became real barriers. The inexperience of the students' self-learning process is the first of all other barriers[4]. Individual's design of the learning schedule, planning, motivation and evaluation of his/ him progress are a far-fetched understanding of a student of rural

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community. Face to face interaction of the concepts and clarification with real time classroom atmosphere is a used learning environment for them. This mode of learning makes the rural community students as mere participants, they could not transform them as active participants of e-learning process[5,6]. There are lot of health issues they face, as day and night is determined by the learner himself. In total, they lack the power of concentration, prioritization, and values of learning.

Impact of E-learning

Though e-learning is the order of the day, institutions in rural area find it uncomfortable to cope with the change and also to monitor the system of teaching - learning and the process of evaluation. The academic activities move slowly as e-learning concentrates maximum of only the curriculum activities[7]. The curriculum is also not suitable for a virtual classroom which creates poor responses from the students and make students passive participants. It results in the increase of dropouts in rural community.

CONCLUSION

E-Learning paves way for all the students to gain knowledge and enrich them in a global standard. It should be welcomed as it shapes the learning process in a great way. The institutions must come forward to build a favourable learning culture knowing the ability and environment of the rural community students. They must install the needed userfriendly Learning Management System. They should link the qualitative courses towards job opportunities for the welfare of the students and for their future.

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E-LEARNING IN RURAL INDIA

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ABSTRACT

E-Learning has only come in existence since 1999. The word was at first utilized in Seminars and Conference. Simultaneously, other words like "Online Learning" and "Virtual Learning also came in to existence. Impact of COVID-19 made E-learning to reach all over rural areas in India. During the covid-19 pandemic situation e-learning teaching method is the main alternative teaching method of the Indian. The main objective of the study to find out how many e-learning platforms, use of e-learning platforms, government develop the elearning platform.Effects of the institution, teachers, and students of e-learning platform in rural areas of India.Use of various e-learning platform during COVID-19 situation such as e-learning platform: Zoom, Google-Meet, WhatsApp, Telegram, YouTube, Google Classroom, Swayam, swayamprabha, Diksha, E-Pathshala,E- kalpa, E-padasalai, E-ganga, E-Gyan Ganga,NIOS and CBSE(You-Tube Channels for senior and junior level education), National Digital Library of India, asynchronous learning, Flipped learning, Blended learning PDF files created application, UMANG Application,NPTEL etc. Finding of the study positive effect of elearning platform on the institution, teachers, and student. Students have problems faced in E-learning used for higher education in India.

Keywords: E-learning, COVID-19,Learning Platforms, Teaching Methods, Higher education..

INTRODUCTION

Globalization is one of the factors that necessitated creation of online training solutions. Employees are located at different geographical locations and training them the traditional way is time consuming and costly. Added to this, business demands are constantly changing. Markets are expanding and there is a proliferation of products. Due to these reasons, it became imperative for employees to be constantly updated on their knowledge and skills. This means training has to be continual and ongoing. That is how eLearning came into picture. The development of E- Learning revolution arose from the number of other educational revolution. The researchers said that four such revolutions cited as follows:(i).The innovation of Reading and Writing. (ii). the emergence of the professions of

teachers/scholars (iii). The development of movable type(print Technology) (iv). The development of electronic technology.E-Learning plays a vital role in Education as it supports and gives deep knowledge for the all of us in their concern field. So, the basic ideas, methodologies and didactical grounds are not new. As, the COVID-19 has affected the whole educational system in India, leading to the school, college and university.Indian prime minister decided to temporarily close educational institutions in India. So, after close of all institutions student has been not participating in the classroom since 25th march 2020. At this time, a various educational institution in India decides the educational system need to be given through e-learning teaching method. This paper concentrates more on e-learning platforms that are available through Indian Government and various other international apps.

CONCEPT OF E-LEARNING

E-learning or electronic learning is the advanced electronic information and communication medialike- CD-ROM, DVD, Tele-conferencing, video conferencing, email, live chats, web blogs. According to Rosenberg (2001) "E-learning refers to the deliver a broad array of solutions to enhance knowledge and performance. However, when these techniques are delivered via the internet for instructions and learning became e-learning. E-learning is used to computer-enhanced learning, e-learning is a type of 'online learning' carried out through the internet or web-enabled Technology.

E-learning utilizing electronic technology to access education material studying online. Learning that is delivered or mediated using electronic technology for the explicit purpose of training in an organization. E-learning is the use of electronic educational technology in learning.

E-learning is the use of technology to enable people to learn anywhere and anytime. Simply put, learning accomplished with the use of electronic media is eLearning. However, it is not as simple as it may seem. The information provided by subject-matter experts is made learner-friendly with the application of the principles of instructional and visual design and then produced using authoring tools/ software such as Articulate, Lectora, Captivate, Flash etc. Finally, it is made AICC or SCORM compliant and made available on the Learning Management System, Web Portal or intranet for users to access. The objective of an eLearning course is to teach or help individuals, who are essentially trying to learn by themselves.

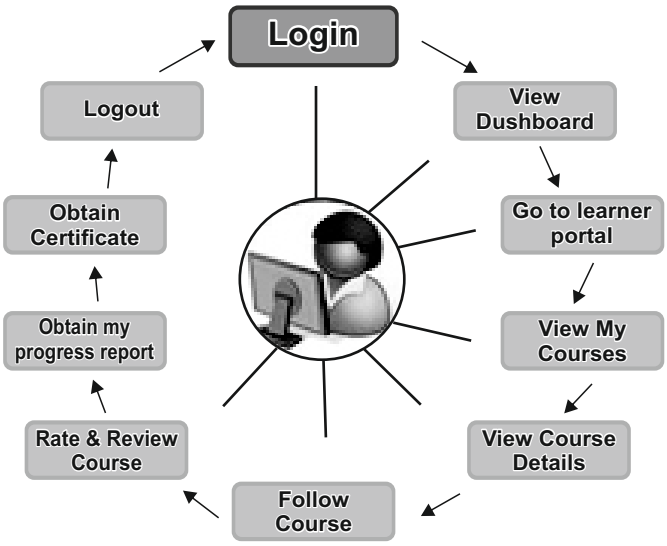

Fig. 1 Simple Process of accessing e-learning platforms

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USE OF E-LEARNING PLATFORM DURING COVID-19

Usynchronous: Synchronous media required all participants to be together at the same time in different locations. So, synchronous is a very good learning process for learners during the COVID-19.

Blended learning: Blended learning is a combination of multiple approaches to learning. A combination of both face to face and traditional classroom with E-Learning is used to create a hybrid approach to teaching. Blended learning had an impact on higher education during coronavirus

Zoom: Zoom is a video-communication service developed by mobile apps. At the time of coronavirus, various educational institutions arranged online classes through this ZOOM platform.

Google-Meet: Google Meet is known as Hangouts Meet. Google-meet is a videocommunication service developed by Google. At the time of coronavirus, various educational institutions arranged online classes through this Google-Meet.

WhatsApp: The main purpose of WhatsApp is to communicate, WhatsApp media through which teachers can communicate with their students. It increases the level of communication between students and teachers. Education Strategies for WhatsApp use the Group Chats. Teacher audio lessons recording that can be sent directly to student's WhatsApp groups. Various student problems and assignments were sent to the institution's WhatsApp group. sent to WhatsApp group different educational videos, pictures, graphics for the online class.

Telegram: The main purpose of Telegram is to communicate, Telegram media through which teachers can communicate with their students. It increases the level of communication between students and teachers. Education Strategies for Telegram Use the Group Chats. Teacher audio lessons recording that can be sent directly to student's Telegram. Telegram through contact with students outside the classroom. Various student problems and assignments were sent to the institution Telegram group. sent to Telegram group different educational videos, pictures, graphics for the online class.

YouTube: The main purpose of YouTube is to communicate to students, YouTube media through which teachers can communicate with their students. It increases the level of communication between students and teachers. Education Strategies for YouTube Use Channel. Teacher audio lessons recording that can be sent directly to student's YouTube Channel. Through contact with students outside the classroom. Various student problems solve through YouTube channels in a live class.

Google Classroom: Educational systems India has been affected by the Covid-19 pandemic, This research aims to students learning using Google Classroom during this pandemic. The result of the research paper finding proves that it is effective to use this Google Classroom.

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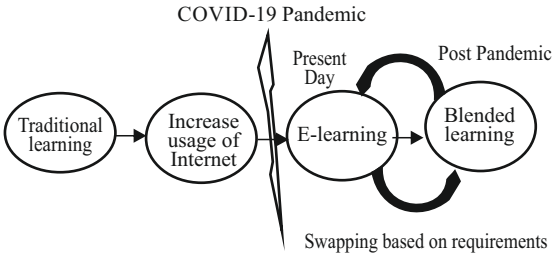
PDF file created application: Document scanning app Cam Scanner is one of the most popular tools used by project managers, Exam answers shifts, assignment and Institution administration working remotely during the Covid-19 pandemic.

Unacademy: Unacademy is an Indian online education E-Learning platform company based in Bangalore. It was created as a YouTube channel by different exam preparation. Unacademy platform during COVID-19 situation offers preparation material for several professional and educational entrance exams.



List of free e-Learning platforms developed by the Government of India:

1.Swayam: The objective of SWAYAM is to provide a learning platform to all, including the most disadvantaged. It hosts almost all the courses taught in classrooms from Class 9 till post-graduation. More information on SWAYAM can be obtained on the official website, swayam.gov.in.

Diksha: This is an initiative of the National Council of Educational Research and Training, Ministry of Education, Government of India. DIKSHA can be accessed at diksha.gov.in by the learners and teachers across the country. It currently supports various courses of NCERT, CBSE and SCERTs across India.

e-ShodhSindhu: It will continue to provide current as well as archival access to more than 10,000 peer-reviewed journals and a number of bibliographic, citation and factual databases to its member institutions. e-ShodhSindhu can be accessed at ess.inflibnet.ac.in.

e-PG Pathshala: It is an initiative taken by the MHRD under its National Mission on Education through ICT, which is being executed by the UGC. The platform, epgp.inflibnet.ac.in provides interactive e-content in 70 subjects across all disciplines of social sciences, arts, fine arts and humanities, natural & mathematical sciences.

The content and its quality being the key component of education system, high quality, curriculum-based, interactive e-content in 70 subjects across all disciplines of social sciences, arts, fine arts and humanities, natural & mathematical sciences, linguistics and languages have been developed by the subject experts working in Indian universities and other R & D institutes across the country. Every subject had a team of principal investigator, paper coordinators, content writers, content reviewers, Language editors and multimedia team.

SwayamPrabha: It consists of 34 DTH channels, which is devoted to telecasting

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high-quality educational programmes 24X7. The course contents are provided by NPTEL, IITs, UGC, CEC, IGNOU, NCERT and NIOS. The website is swayamprabha.gov.in.

NPTEL: The National Programme on Technology Enhanced Learning was initiated by IIT Bombay, IIT Delhi, IIT Kanpur, IIT Kharagpur, IIT Madras, IIT Guwahati, IIT Roorkee along with Indian Institute of Science, Bangalore in 2003. NPTEL platform, nptel.ac.in provides open online courses around engineering and core science subjects.

III. ASYNCHRONOUS LEARNING PLATFORM

In contrast to the rigidity of synchronous learning, asynchronous learning is learning that happens at the student's pace. Using this method, the instructor will assign instructional content, set out tasks that need completing, and provide exams that can be completed when on the learner's time. Teachers often have multiple sources they can draw from to design their courses, so they can get instructional content from pre-existing online books and videos and mix those in with third-party learning applications. The result is a very flexible and open learning environment. There are many other asynchronous learning examples you can learn from.

Asynchronous learning activities can happen both in online and offline classes. An example of asynchronous learning happening offline is when a student registers for an independent study course. Another example is when a teacher assigns a book report or research project that allows students to choose their own path when completing it.

Asynchronous Learning Platform

Asynchronous learning has several advantages over synchronous learning. The first advantage is in saved time. In an online learning environment, you can avoid the wasted time of dealing with students' technical issues as they try to come together to meet at the same time. Another great advantage is the customization of the learning materials. Many learning apps have AI that can help learners in a way that is more time-effective than waiting for an instructor's response. One more advantage is that learners can move at their own pace. Learners that are driven to learn on their own may find this type of learning more to their liking as they won't be slowed down by other students.There are some issues that we should be concerned about when using asynchronous learning, however. One of these is the emotional distance that can occur if students feel too separated from their peers or teacher. Lack of real-time interactions with peers and their teacher can lead to another issue, as well, which is indifference. On a broad level, learning is the ascension process within a community of practice. If a student cannot feel the presence of the community, then the whole learning element may be undermined.

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Key Points on Asynchronous learning: Customized lessons through AI Learners move at their own pace Suffers from a lack of community.

Proven Online Tools that Support Asynchronous Learning

1. Discussion Board. Adult learners like to actively participate in the learning experience. ...
2. E-mail Lists. An email is one of the most common methods of communication in asynchronous online training. ...
3. Blogs. ...
4. Videos. ...
5. Digital Library.

IV.Blended Learning :

It is not simply mixing Technology and Teaching. Blended courses include a mix of both face-to-face,instructor-led learning, and online or digital course components that give students some control over path and pace. Blended learning13 is not a completely online course or a lecture course that is broadcast online. It also does not include course changes that simply swap analog tools for digital ones. In blended learning, the in-person and online elements work together to create a richer learning experience and do not simply duplicate course content in varying formats.

For example, flipped classrooms require students to review lecture materials prior to class. Most often this involves teachers or trainers recording short video lectures that typically include a screen recording of slides, a webcam recording of the teacher, a video of a demonstration — or a combination of the three. The video is typically then shared with students through a learning management system (LMS) or video content management system (Video CMS).

In other blended learning courses, instructors record videos for use as supplemental course material, In other

blended learning courses, instructors record videos for use as supplemental course material, designed to help students with more challenging concepts, or for those that wish to deepen their understanding of the subject. Alternatively, instructors can record tutorials to introduce students to software or equipment that will be used in subsequent classes.

UMANG provides a single platform for all Indian Citizens to access pan India e-Gov. services ranging from Central to Local Government bodies.

NPTEL

The National Programme on Technology Enhanced Learning (NPTEL)[6]was initiated by seven Indian Institutes of Technology (Bombay, Delhi, Kanpur, Kharagpur, Madras, Guwahati and Roorkee) along with the Indian Institute of Science, Bangalore in 2003. Five core disciplines were identified, namely, civil engineering, computer science and engineering, electrical engineering, electronics and communication engineering and mechanical engineering and 235 courses in web/video format were developed in this phase.

The main goal of NPTEL Phase II (2009-14) was to build on the engineering and core science courses launched previously in NPTEL Phase I. An additional 600 web and video courses were created in all major branches of engineering, physical sciences at the undergraduate and postgraduate levels and management courses at the postgraduate level. Several improvements such as indexing of all video and web courses and keyword search were implemented.

Some highlights:

Largest online repository in the world of courses in engineering, basic sciences and selected humanities and social sciences subjects

YouTube channel for NPTEL – most subscribed educational channel, 1 billion views and 42+ lakhs subscribers

More than 56000 hours of video content

Most accessed library of peer-reviewed educational content in the world

52000+ hours of transcribed content; 51000+ hours of subtitled videos provides E-learning through online Web and Video courses various streams.

CONCLUSION

From the above discussion and result based on we can say that is the good effect of e-learning platform for education in India. E-Learning is larger terms of technology based on learning through Google Classroom, video conferencing, YouTube, blended learning, synchronous method, etc. The government is providing many E-Learning platforms to develop the covid-19 pandemic period. during the covid-19 pandemic situation, many students can use the Elearning platform in a different way to the teaching-learning process. The government of India through its human resource development ministry (MHRD) develop the initiative is VidyaDaan, YUKTI, Bharat podhe online, etc. All initiatives direct use the online platform effectively by teaching-learning method. Students who learn in the online classroom will find that their learning experience is good in their traditional classroom. A virtual classroom is a very good effect on institute teacher and student.

Free e-Learning platforms developed by the Government of India provide a unique opportunity for the students, teachers, and professionals to collaborate and share their

knowledge. This initiative makes sure that education is an uninterrupted ongoing process. Free e-Learning platforms provide independence of accessing the courses anytime and anywhere.

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2. https://www.bing.com/images/search?q=e+learning+platforms+for+education&form=HDRSC2&first=1&tsc=ImageBasicHover
3. UMANG - One App, Many Government Services
4. Asynchronous Learning Platforms | EdAppMicrolearning Platform
5. https://www.google.co.in/search?q=asynchronous+learning&sxsrf=APq-WBsUZtiy9BCuXkBZCDbc22o7KsmYbQ%3A1643879277630&source=hp&ei=bZv7YbrfI4Wk
6. Nptel, online courses and certification, Learn for free
7. e-PGPathshala (inflibnet.ac.in)
8. about government e learning - Google Search
9. E-Contents | Government of India, Ministry of Education
10. Defining Blended Learning - What It Is, And What It Isn't (panopto.com)
11. asynchronous learning platforms - Google Search
12. about government e learning - Google Search
13. Free e-Learning platforms developed by the Government of India | Education News (timesnownews.com)
14. Free e-Learning platforms developed by the Government of India | Education News (timesnownews.com)

ADVANTAGES AND DISADVANTAGES OF DIGITAL EDUCATION

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ABSTRACT

Teaching and learning in or outside of the classroom through computers and internet is called Digital Education. In the present era, technology-mediated learning method has extended wide-reaching reputation from the educational standpoint. Digital Education is computer-based learning, and didactically, it is student jogged and collaborative learning. Digital Education serves learning and teaching technique through all electronic forms. A number of educational institutes in developing countries are still using old and orthodox methods of learning. Since, several institutes have started amalgamation learning still a lot of them follow traditional procedures. It is deadly disease banquet by Corona Virus. It is blatant as a pandemic by WHO. Every field of life is critically affected. This status quo dared the education system across the world and forced educationalists to shift to an online mode of teaching rapid. Face to face classes is prescribed to safeguard the societal distance. The educational organizations which were not ready to accept new method of teaching, they are left no choice except to change their methods and switch to online teaching and learning. The undertaken research explores the significance, benefits, drawbacks and welfares of Digital Education both for students and teachers.

Keywords-Digital Education, WHO, Educationalists, Learning, Reputation.

INTRODUCTION

Every field of life is drastically affected by Covid-19. Field of education is no exception to it. To continue the process of learning and teaching at home, the method of Digital Education emerged. It introduced a unique, new and different education and wisdom atmosphere for together instructors and learners. To make successful to this method, a different set of skills are needed. Acute intellectual, research, and evaluation skills are important, because pupils have access to comprehensive range of information from a diversity of causes to sort through. Using electronic tools for learning, learners are much more sovereign than in the outmoded setting. It is the need that these tools should inspire apprentices for wisdom and commit to teach, minimizing the social interaction with aristocrats or a lecturer. In online

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courses, students are expected to learn in the same as they do in classrooms, but there is higher incidence of extraction or incomplete grades. It is said that Digital Education is a deliberate attempt of using networked information and communication technology in teaching and learning. Other prominent terms as Online learning, Virtual learning, Distributed learning, Network and webbased learning are used to describe this type of learning and teaching. Digital Education can be fruitful in the upcoming if the principles of equivalence and frankness must be followed in digital competence. It is contended that the engineering of Digital Education has made progress to a great extent during the last decade. The covid-19 has stunned the economy of the whole world and education sector has also been pretentious. This pandemic has closed all educational institutes temporarily. Educational sector is undertaking to find options to deal with this challenging situation. These environments make us realize that academic institutions should make scenario planning. Humanity and unity are the demand of the situation. To protect the learners, teachers, faculty and communities is the need of the day. It is said that online mode of learning is easily accessible and can even reach to rural and remote areas. Students can learn anytime and anywhere. They can learn new skills which will be helpful for them in future. Online learning serves as a cure all in the time of crisis.

Definition of Digital Education

Digital Education is the process of providing statistics through altered channels such as E-books, CDs etc. Education and instruction styles have been revolutionized. It discarded the traditional method of teaching and dispirited the use of chalk and board to impart to the learners during classrooms. Education technique has become informative, effective and dynamic. Teachers are well aware of the latest technologies regarding their fields. They impart the cutting-edge knowledge to their learners. Digital Education is defined as the courses which are specifically delivered through the internet everywhere. Thus, teaching and learning both become simpler, easier, and more effective Digital Education is not a new term which focuses on the use of computerized systems to make the learning process easy and effective. Online learning depends on the educational need and purpose. According to the Digital Education distributes erudition and training programmes using technology. It serves the purpose of delivering the educational programmes using electronic means. It serves the purpose of statement as in online learning and teaching procedure students and teachers may interact with each other. It improves the learning of students providing them access to informative and forthcoming technologies. Digital Education is the powerful tool and it should be adopted by all educational organizations. It may replace human communication and it reduces the

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profitable costs of education. It makes learning process thought-provoking as learners are not getting bored using expertise. It is web-based learning which provides training and expansion to the learners and teachers through Electronic media such as the Internet, audio, video etc.

Top E-Learning Apps

Knowledge has made anthropoid life comfortable and innovative things are being familiarized to assist the anthropoid beings. The whole world has become worldwide town ship due to knowledge. Education is necessary to make progress in this worldwide village. Knowledge has revolutionized the sector of edification by familiarizing apps as Google Classroom, Zoom, Education, Seesaw, Photomath, Socrative, Edmodo, Scratch, Prezi, Thinglink and Quizlet etc.

Importance of Digital Education

Digital Education empowers the learners to get basic schooling and enhance skills. It enables them to obtain degree documentation, without actually attending any other organization. It is important for both educators and apprentices. It has facilitated the professors by providing a rich foundation of receiving, where in they can teach from anywhere in their favoured time. It is argued that the ability of learners to understand the lesson is uplifted by applying Digital Education to all levels of schooling. Students and teachers are engaged effectively in this mode of pedagogy. It is significant for both educators and learners in learning as they can uplift their skills regarding learning. These platforms are used for good practice of knowledge and information sharing. Since, 21st century is the period of antagonism its reputation has been increased manifold in the present world. Every walk of life has been changed due to modernization in expertise and science and it speeds up everything. Everybody wants to comprehensive the tasks within no time. Same is the case in the field of learning.

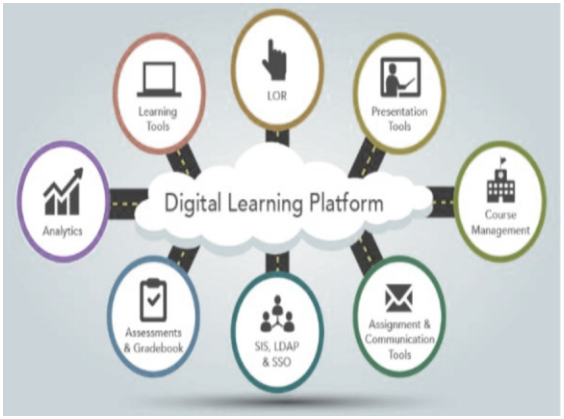

Figure 1

V. Benefits of Digital Education

Digital education does not dependent upon the traditional method of teaching and learning where chalk and board are essential. The basic advantage of E-learning learning is that it makes sure that the students are in synchronization with modern learners. It offers access to exclusive, prolific, and updated content and accessibility is open, secure, and uninterrupted. Digital education lets the learners be updated with the current trends

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The adoption of Digital education in education, especially for higher educational institutions has several benefits, and given its several advantages and benefits, e-learning is considered among the best methods of education.

1. It is flexible when issues of time and place are taken into consideration. According the adoption of e-learning provides the institutions as well as their students or learners the much flexibility of time and place of delivery or receipt of according to learning information.
2. Digital education enhances the efficacy of knowledge and qualifications via ease of access to a huge amount of information.
3. It is able to provide opportunities for relations between learners by the use of discussion forums. Through this, e-learning helps eliminate barriers that have the potential of hindering participation including the fear of talking to other learners.
4. Digital education is cost effective in the sense that there is no need for the students or learners to travel. It is also cost effective in the sense that it offers opportunities for learning for maximum number of learners with no need for many buildings.
5. Digital education always takes into consideration the individual learners differences. Some learners, for instance prefer to concentrate on certain parts of the course, while others are prepared to review the entire course.
6. Digital education helps compensate for scarcities of academic staff, including instructors or teachers as well as facilitators, lab technicians etc.
7. The use of digital education allows self-pacing.

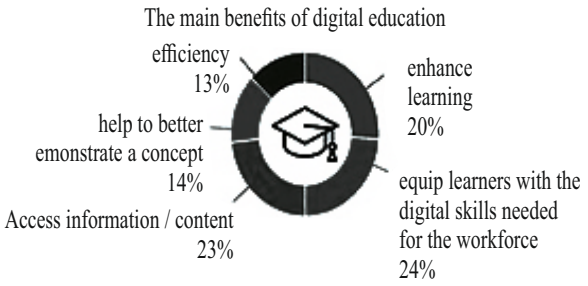

Figure 2: Benefits of Digital education

VI. Disadvantages of Digital Education

The disadvantages of e-learning that have been given by studies include the following:

1. Digital education as a method of education makes the learners undergo contemplation, remoteness, as well as lack of interaction or relation. It therefore requires a very strong inspiration as well as skills with to the management of time in order to reduce such effects.
2. With respect to clarifications, offer of explanations, as well as interpretations, the e-learning method might be less effective that the traditional method of learning. The learning process is much easier with the use of the face to face encounter with the instructors or teachers.
3. When it comes to improvement in communication skills of learners, e-learning as a method might have a negative

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effect. The learners, though might have an excellent knowledge in academics, they may not possess the needed skills to deliver their acquired knowledge to others.

4. Since tests for assessments in e-learning are possibly done with the use of proxy, it will be difficult, if not impossible to control or regulate bad activities like cheating.
5. Digital education may also probably be misled to piracy and plagiarism, predisposed by inadequate selection skills, as well as the ease of copy and paste.
6. Digital education may also deteriorate institutions' role socialization role and also the role of instructors as the directors of the process of education.
7. Also not all fields or discipline can employ the e-learning technique in education. For instance the purely scientific fields that include practical cannot be properly studies through e-learning. Researches have argued that e-learning is more appropriate in social science and humanities than the fields such as medical science and pharmacy, where there is the need to develop practical skills.
8. As is with many internet-based tools or services, an essay pro review puts it succinctly that users, including students, stand to be "completely satisfied" or "be disappointed" with what's offered in the digital space. Students run the risk of finding erroneous, false and even fraudulent content.

Table 1.1

Difference b/w Traditional & Digital Education

Traditional Education	Digital Education
Requires less discipline but imposes more structure	Requires discipline on the part of the student, but allow the student to create his or her own structure.
Demands a heavy schedule	Allows for more flexibility
Creates a specific lifestyle	Gives the student control over his or her lifestyle.
Fosters competition	Fosters personal growth and development
Emphasis on school spirit and unity	Emphasis on learning specific skills
Extremely costly	Extremely affordable
Suited more for younger students	Suited for students of all ages
Restricts available time	Allows more time for work and family
Requires a physical geographical location	Permits students to travel
Rigid deadlines	More flexibility
Direct contact with students and educators	Online contact with students and educators

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VII. Conclusions and Suggestions

The Covid-19 pandemic has changed the picture of the whole universe in 21st century. Every department and turf is affected. To endure in this situation, new trends and modes are embryonic. To find new solutions for erudition and instruction problems, some much-needed inventions and changes are claimed. But the instructors have become habitual to traditional methods of instruction in the form of face-to-face lectures, and therefore, they vacillate in tolerant any change. Though, traditional method has its own kind of importance but amidst this calamity, no other alternative left other than adapting to the dynamic situation and accepting the change. It will helpful for the edification sector bringing a lot of surprising modernizations. It is true that there are a number of learners who have no access to online skill. This pandemic has also tinted that initiates should have awareness about certain skills such as to survive during the crisis. Today, beginners and trainers are facing problems in online learning and teaching. The situation would have been different if they have already learnt it. The time we lost in learning the modes could have been spent on creating more content. But it is better late than never. This outbreak surely has enriched the process of online learning. E-learning makes the learning and teaching easy for both educators and the students even during the pandemics. It offers them the ability to fit learning around their lifestyles in an effective way. Even it is fruitful for the busiest persons to gain new qualifications. With the invention of internet, education sector is making rapid progress. Online methods of teaching support in facilitating learning–teaching activities, but there is a dire need to weigh the pros and cons of technology and harness its potentials. Disasters and pandemic such as Covid-19 make the situation creating a lot of chaos and tensions; therefore, there it is the demand of the time to examine the technology deeply and with due diligence to balance these fears and tensions amidst such crisis. Digital eductionutilizes digital tools for pedagogy. Learners learn with great comfort at anytime and anywhere with the use of technological tools. Training and delivery of knowledge is involved in it and it inspires the learners for communication. Students interact with each other, present their own point of view and show respect to other's opinion. Information and knowledge are shared across the world using the platforms of online learning. Statement through writing and speaking is carried out easily. It has become the effective tool of improving active skills of the learners. It augments the associations that tolerate learning. It has increased faculty and learner's access to information. The overall literature which explains the advantages and disadvantages of Elearning suggests that it should be implemented in education not only in pandemics but in peaceful situation too for faculty, administrators and students so that they may enjoy the full benefits that come with its adoption and implementation.

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ADVANTAGES AND DISADVANTAGES OF DIGITAL EDUCATION

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ABSTRACT

Digital education is essentially a product of the past several years, although in different forms it already existed slightly earlier. It is evident however, that modern devices and means of information transfer are necessary for its development. This type of education would not be therefore possible without rapid development of computers and the Internet. In fact, it can be concluded that they were primary in relation to digital education and somehow they forced its emergence because the prevalence of computers and broadband Internet has given a very strong impulse to use them also in the educational activity. As a consequence, today' virtual lectures, modern e-learning courses, educational games, electronic tests, portals with educational resources as well as digital school registers and monitoring systems of the learning process have entered everyday reality. This article aims to show the advantages and disadvantages of digital education.

Keywords: Necessity of internet, Social Isolation, Time Management, Career Advancement, Socialmedia, Technical Issues

INTRODUCTION

The spread of COVID-19 has led to the closure of educational institutions all over the world. This tested the preparedness of universities to deal with a crisis that requires the help of advanced technology including hardware and software to facilitate effective online learning. Such closure speeded the development of the online learning environments so that learning would not be disrupted. Many institutions have become interested in how to best provide course content online, engage learners and conduct assessments.

All over the world educational institutions are shut by the spread of COVID-19. This is the reason for the universities to deal with some changes that needs the help of advanced technology including software and hardware to facilitate effective online learning. Such kinds of new ways speeded the improvement of the digital education environments. Hence learning would not be interrupted. Now a day many institutions have more interest in how to provide content online, engage students and conduct assessments.

One of the most often used terms is

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'Pandemic'. This term introduces the new way of learning through online learning tools. The COVID-19 pandemic has introduced new ways to learn. Educational institutions are looking towards online learning platforms to continue the process of educating students all around the world. Digital education is a transformed theme ofeducation with its new features. This is the way of delivering educational materials through digital resources. For the students and all the institutions in all over the world, digital education is a necessary resource now a day. Digital education might be totally new to all the institutions but those institutions have to adopt this new transformation in the educational system. Digital education is now applicable not only to learn academics but it also helps to learn extracurricular activities for students. The demand for digital education has increased significantly, and it will continue doing so in the future.

Digital education has its own set of advantages and disadvantages. Understanding these advantages and disadvantages will help teachers or institutions in delivering the lessons with creative strategies.

ADVANTAGES OF DIGITAL EDUCATION

Cost-Effective for Schools and Colleges

We know the meaning of the proverb "Time is Gold". This proverb shows the importance of time. We need to spend too much of time for the travel when we go to a particular institution. Digital Education's one of the most advantages is that we can save our time by avoiding transportation and accommodation. Hence Digital Education is one of the best ways to save our time and also money. We can manage our schedule and attend online courses at our convenient time. This schedule may be in the morning, late afternoon, or evening time. Digital Education is the best way to avoid the payment for the transportation and for the food which we eat while travelling. Not only students can save money and time in digital education, many educational institutions can save money and time through this set-up because institutions need not to use physical classrooms, laboratories etc. Online classes are cost-effective because it totally eliminates the cost of maintaining the physical location. Institutes stopped investing money in maintaining large areas of their physical properties and started investing in online tools which were way less expensive. It reduces worries immediately as the huge amount of money is saved and can be invested in giving better education.

Pollution Free Environment

Our environment is also saved by digital education because it doesn't come up to the pollution brought about by paper production.

Easy Methods for Lessons

Digital Education offers teachers many creative methods to handle class to the students such as videos, PDFs, podcasts. Teachers can add these tools as a part of their lesson plans. Students can be backtracked the videos and audios materials as many times as they need to understand the concept of a

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particular lessons.

Students have more benefits in online class. If it is regular classes they need to meet their teachers as usual. Here institution can't bring many educationists or great writers to their institution. But in digital education, institutions can arrange many educationists and writers or artists to share their knowledge with the students through online. "Wherever and whenever" is the concept of digital education. For example, educationists fromdifferent foreign countries can share their experience and knowledge through online classes. Even the rural area students can learn from those educationists through this online class.Students can interact with them easily. According to these points we can understand digital education isthe best way to learn.

Students need not to depend on others anymore. They can train themselves whenever they want to and they can always get some support from their professors and classmates through online discussion. So this kind of learning helps the students to be active and independent.

Remote Approach To Various Classes

Before the pandemic, to pursue an academic career students have only one option that is going to a particular institution. But today, students have more opportunities to accomplish their academic career which they have never had before. They can find multiple of courses or programs in online. Students can choose their courses where they have interest. One of the best advantages of digital education is remote access to our favourite classes. We need not to awake too early to attend the class that may not interest us at all.Students need not to bend over their desk in a desperate attempt to pick up on each lecturer's word as they are scrambling down their notesin a handwriting which can't understand by others.

Students can attend their exams successfully without running to the campus in a hurried manner. Students can also attend many seminar and webinar through online. They can get e- learning certificate for every online class, which is very helpful to the students in their job in future.

Instant Career Advancement

Digital education is perfect for everyone who likes to continue their academic studies where they left off at some point of their lives, or they couldn't get a chance to continue their studies further and now this is the correct time for them to fulfill their aim.

Digital education significantly improves our opportunities for further advancement in the current job, or getting a new, better one. E-learning certificates will be a proof of involvement to professional improvement to presumptive employees.

Quick delivery

Compared to traditional classroom teaching methods, e-learning provides students with a faster lesson delivery.

Consistency of Teachers

Teachers can teach their lessons in a consistent way with a higher level of

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coverage ensuring that all the students receive the same amount of knowledge. There is a shortage for experience teachers in many institutions. This issue is easily solved with e-learning as a couple of highly qualified and experience teachers can teach more than thousand students.

Improved Student Attendance

Since digital education can be handled from home or location of choice, there are less chances to the students to miss their lessons. Students can get full attendance in online classes.

Suits A Variety of Learning Styles

Each student has a different learning methods and styles. Few students are visual learners, while some students are audio learners, some students prefer to learn through videos. Likewise, few students succeed in the classroom and other students are solo learners who can be distracted by large groups. The online learning system, with its range of options and resources, can be personalized in many ways. Digital education is the best way to create a perfect learning environment suited to the needs of each student.

Record Now. Refer Later.

Students can record all their classes and they can refer it later when they are studying. Digital education is the best way to record everything and every point which said by their teacher. Whenever they want to learn they can refer the recorded one. With the help of the internet they can complete their studies in a successful manner.

DISADVANTAGES OF DIGITAL EDUCATION

Social Isolation

Digital Education is the main reason for the social isolation because in this method students can't meet their teachers and friends face-to-face. Students can learn many things when they are being in the company of their peers. But in online classes, there are minimum physical interactions between the students and the teachers. In this situation, institutions have to make many ways of communication between the students, peers, and teachers, including online messages, e-mails, and video conferences that will permit for face-to-face interaction and moderate the sense of isolation.

Lack of Interaction

Interaction is very limited in digital education. So the bond between the teachers and students is failed. Students and teachers don't know each other. Students forget their responsibilities due to digital education. Students can't learn how to respect their teachers. In those days, teachers could find outthe problems of the students by seeing their facial expressions. So teachers could help the students to recover from their personal issues. But now a day teachers can'tidentify their students and they don't get chance to know about their students' family backgrounds. Without knowing how to come out of the problems, many students attempt suicide. Students don't have the bond with their teachers. Hence this digital education spoils the bond between the students and the teachers. This is one of the main disadvantages of digital education.

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Cheating is unavoidable

In regular days to schools, during the examination students couldn't see others' answer scripts because there was a teacher in the classroom. So students must study for their examination to get pass mark. But in digital education, this method is totally spoiled. During the examination in online, students have more opportunities to write their exams by searching answers and sharing answer through network. Hence students have learnt how to get more marks without learning anything. So they never think to study for the examination. Without learning students get pass marks and move to next grade. Because of this, students are failed to gain knowledge about a particular subject. If they pass every exam without any subject knowledge and practical knowledge, they can't get job in their future. Through these we can understand this digital education is spoiling students' future.

Lack of Concentration

Teachers can use more videos, podcasts, slide, creative pictures to get students' attention. But teachers are not sure whether their workouts reach their students or not. It is not possible to make all the students to concentrate on their lessons through online. So this is the disadvantage of digital education.

Inability to focus on Screens

One of the most challenges of digital education is the obstacle with concentrating on the screen for long periods of time. With digital education, there is also a greater opportunity for students to be easily distracted by social media or other sites. Therefore, it is necessary for the teachers to keep their online classes engaging and interactive. It will help the students stay focused on the lesson. In digital education while attending the class, students might get notifications from social media like Facebook, Instagram and Whatsapp etc. Whenthey get notifications from thesocial media at once they ignore the online classes. If students are in the classroom they won't get distractions. So they can learn and concentrate on their class. But unfortunately in online classes there are many ways for the students to lose their concentration in their studies. So that students are failed to develop their knowledge regarding their subjects.

Technical Issues at All Times

Network connectivity is the main barrier in the digital education. If the students are located in a network available area, they are so lucky. But unfortunately every student is not so lucky because there are some students who don't have enough networks for the online class. Due to poor network coverage many students from rural areas meet more struggles to attend and learn education. So these kinds of students have to go some other areas to get network. Because of this reason students may not try to get network and they simply avoid online classes. Without having stable internet connection, students and teachers can be struggled in lack of continuity in learning.Internet issues, laptops not working and no electricity are just a few problems to name. These are some of the problems that students and teachers often face and are helpless. There are no such solutions for it. A hotspot is not strong enough while installing a generator is expensive so students did miss

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classes automatically. This is disadvantageous to the education system. So network is also a major disadvantage of digital education.

Manage Screen Time

Many parents are worried about their children's health because children have to spend a long period of time staring at a screen. So one of the biggest trepidations and disadvantages of digital education is screen time. Due to focusing bent in front of a screen sometimes students develop physical problems.

Budget concerns

One of the most disadvantages of digital education is budget. Parents have to spend more money to buy laptops or mobile phones for their children's online classes. Mobile phones and laptops became mandatory for the students to attend the online class but this is very tough for those parents who can't save money and buy it.

CONCLUSION

The digital education is spreading all over the world. Therefore, it becomes necessary to analyze all its aspects, both advantages and disadvantages. I have to say that this is the time of technologies in which digital education is good for many of the reasons but traditional classes system have many advantages. So it can't be ignored fully. But now we are in the situation of taking advantage of both online as well as traditional classes.

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ROLE OF VIRTUAL LABORATORIES IN LEARNING BIOTECHNOLOGY

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ABSTRACT

Laboratory classes are essential in Biology, as they help learners acquire skills and understand physical phenomena in depth. To run hands-on laboratories one needs space, equipment and staff, so virtual laboratories can help reduce the total cost and still complement physical presence. This paper reviews virtual laboratories applications in a variety of educational settings, in Biology, Biotechnology and Chemistry. The results demonstrate that virtual laboratories are used in undergraduate and postgraduate courses, with overall positive effects on students' cognitive load, skills development and motivation. The reviewed works overwhelmingly indicate that virtual laboratories should not substitute physical ones and their advantages are better realized when combined with traditional hands-on sessions.

Keywords: Virtual laboratories, Biology, Biotechnology, Chemistry

INTRODUCTION

The rapid advances in Information and Communication Technology (ICT) and the ever-increasing Internet access use provide new educational tools both for educators and students [16,20,30]. ICT is transforming the learning process, since accessto information is increased, collaboration between teachers and students is improved, ideas are easier expressed [39].Quite often, to investigate and understand how a real-life system works, a model of the system at an abstract level is constructed. Since real-world problems are complex and simple mathematical operations and methods cannot provide the required information to thoroughly study such a real-world system [3] these models are usually studied using simulation. Simulation is a tool to understand artificial or natural systems and explain their performance [32] whereas a computer simulation is “a program that contains a model of a system or a process” [16]. Additionally, simulation is used to improve current systems or operations, offering a better understanding of a system and potentially helping identify suggested improvements [36]. Simulation has been adopted as an educational environment for experiments, helping learners to comprehend and adopt real laboratory practices and skills [16].

Virtual laboratories constitute a special category of simulations and are based on models of physical laboratories and the experimental processes taking place therein [37]. The advances of ICT offer tools and

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opportunities to develop various categories of virtual laboratories that can be accessed and used [18]. As users perform their experiments in the virtual laboratory, they get familiar with the environment and, consequently, can more actively participate in the educational process [27]. Additionally, virtual laboratories provide science teachers with educational tools that can be used as supportive material [17]. In a distance virtual laboratory environment, a student remotely accesses and uses the experimentation interface on a virtual system [14] thus being able to experiment with simulation parameters and, eventually, getting closer to achieving the educational goals set by educators [44].

Virtual laboratories are mainly used as a) pre-lab practice before the hands-on experiments, b) an alternative for physical lab experiments and c) a substitute in case of dangerous, expensive or non-practical models or systems [10]. The main benefits of using virtual labs are [13,17]:

- Cost reduction, as physical laboratories need expensive equipment and personnel.
- Availability, as virtual laboratories can be accessed from any place at any time.
- Accessibility, as virtual laboratories can be accessed from many people even with physical disabilities
- Safety, as dangerous materials or equipment is handled without hazard.
- Reality adaptation, as virtual experiments designers can highlight noticeable information, remove insignificant details and by modifying model characteristics, such as dimensions and time, can make the comprehension of certain phenomena deeper.

These important benefits are identified in other recent studies, in various science domains, confirming that virtual labs offer advantages in science education [5,14].

The use of laboratories helps students develop critical thinking, understand natural laws and, also, be motivated [18]. However, the practical skills, which are acquired in a physical laboratory, through experience and continuous practice, are difficult to be acquired by using a virtual laboratory for education. As a result, hands-on laboratories help students to acquire haptic skills and instrumentation consciousness, which virtual laboratories are very difficult to offer [1,40,48]. Learners conduct experiments as part of the inquiry learning in order to analyze data and draw conclusions, which can also be conducted in an online learning environment consisted mainly of a virtual lab [29]. Since, to achieve their educational purposes, laboratories must be fully equipped, concerning materials, facilities and training staff, any noticeable lack of such resources suggests that virtual labs might offer a supplementary solution, especially in distance education.

We primarily aim that this paper reviews the work on the educational use of virtual laboratories in the domains of biology/biotechnology and chemistry in a variety of educational settings. Additionally, we intend to present the educational

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approaches concerning the use of virtual laboratories. As a result, this survey intends to provide educators with a spectrum of simulators and their educational applications, out of which they might select one (or more) for a particular learning activity they deliver to their students in the domains of biology/biotechnology and chemistry. We decided to focus on these specific domains because of the relatively similar nature of the experiments and the laboratory instruments one finds therein, as well as because they have been the focus of recent related work [38,39,46].

The rest of this paper is structured as follows: Section 2 describes the methodology used in this paper for the exploration of the literature; Section 3 outlines the results concerning the virtual laboratories use in various educational levels and the educational approaches used; and, Section 4 elaborates on a comparative discussion and considers future directions and limitations.

METHODOLOGY

In the present review paper, our primary research question is framed as "Can virtual laboratories be effectively used in different educational settings and under which educational approach, in biology/biochemistry and chemistry domains?", with two sub- questions:

- RQ1: Considering the surveyed research on virtual laboratories educational use in biology/biochemistry andchemistry domains, can they be effectively used in different educational settings as supplementary tools?
- RQ2: What are the educational approaches concerning the use of virtual laboratories?

In order to execute a literature review, a broad search plan is constructed, so as to ensure the completeness of the search of resources under consideration. The main source of information and data about virtual laboratories used in education was the peer-reviewed literature. Searches for peer-reviewed journal articles and dissertations were conducted using the following databases: EBSCO, ERIC (Educational Resources Information Center), Web of Science and Association for Computing Machinery Digital Library. Moreover, sources outside those databases were searched, particularly using the references of relevant articles. Google Scholar was used, but the overlapped articles with other data sources were excluded. Searches were performed during June to August 2018, using the Boolean parameters "virtual AND laboratory", "virtual AND lab", "simulated AND laboratory", "simulated AND lab", "simulation AND laboratory", "simulation AND lab". Further search was performed using the parameters "education OR educational level OR school OR University". Then, a final search was performed combining all search parameters using the Boolean parameter "(virtual OR simulated OR simulation) AND (laboratory OR lab) AND (education OR educational level OR school OR University) AND (chemistry OR biology OR biochemistry)".

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Initially, 237 search items were identified. Publications that obviously were out of the interests of the current study were removed. Then the evaluation focused on abstracts: they were manually filtered as relevant to the research criteria and worthy of further study. For the 54 publications that were relevant to our literature search, the full articles were accessed. In the case of any uncertainty concerning a study's relevance based on its title or abstract, we chose to include the study in our full-text evaluation.

At the final stage, the full texts of these 54 articles were examined for final worthiness, based on the following criteria:

- Peer-reviewed articles published in journals, International Conferences/ Workshop Proceedings.
- Full results presentation.
- Frequency of citations.
- Thorough methodology presentation.
- English language studies.

The resulting literature revealed 29 peer reviewed journal articles and documents. Each document was listed to categorize the information for further analysis, documents were grouped, summarized and critically analyzed.

RESULTS

While reviewing the publications it was apparent that virtual laboratories have been used in various educational settings, either by design for a particular context or by adaptation from a similar setting. Moreover, we studied the different educational approaches in order to reveal the possible applications of virtual labs. Since the reviewed studies were conducted in various timeeducation: A Literature Reviewperiods, the technologies adopted were quite diverse. All these aspects should be taken into consideration when a particular virtual laboratory application is being assessed as potential tool for educational purposes. The studies were clustered along two major axes, namely a) Virtual laboratories in secondary education and in post-secondary/tertiary education, and b) Educational approaches adopting virtual laboratories usage.

Virtual Labs in Biology-Biotech-Chemistry

Virtual laboratories are increasingly used in various educational settings since they support science teachers to expand the scope of the educational process via stimulating students' interest [49]. We have observed that virtual laboratories are used both in secondary and post-secondary education. Thus, we present the results, clustered according to the educational level of the students involved, in order to answer RQ1, by revealing possible differentiations in virtual laboratories use among the various educational settings. So, the reviewed studies concerning virtual labs in secondary education are firstly presented, followed by the studies for post-secondary/tertiary education.

Virtual labs in secondary education

Computer simulation is, mainly, used in biology, in order to provide students with experience before actual experimental sessions and also to enable essential

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experimentation that would not be otherwise possible [2], such as actual dissection or observation of animals' physiological systems and interrelationships [19]. Frog dissection is a commonly used experimental procedure to teach anatomy. A popular virtual simulation that allows students to conduct frog dissection in high school biology classes is Vfrog!. Using this simulator, besides cost, one also accommodates students' personal views on conducting animal experiments [26].Simulation has also helped students practice problem solving [35], even as they use computers for peripheral tasks, such as data analysis. Additionally, students who used the guided version of the simulations fared better on subsequent simulation pretests, on scientific thinking tests, and on critical thinking tests (compared to their fellow students).

In another study [15], a computer simulated program for biology was implemented for tenth grade students. According to the results, girls achieved equally with boys in the experimental group. The students that were at the concrete and transition operational stages in the experimental group accomplished higher academic achievement than students in the control group. Moreover, in the situation where the cognitive operational stage was high, students' achievement was higher.

Finally, another study's [28] results supported the effectiveness of well-designed computer simulations as an effective tool which could be used to support student understanding of chemistry complex concepts in USA high schools.

Virtual labs in post-secondary/tertiary education

The research question whether virtual laboratories in undergraduate biology courses help students to understand and learn biology laboratory procedures and equipment was investigated in [11]. Results of the aforementioned study showed that students who used virtual labs learned more biology concepts compared to the students who used traditional labs. Though the number of participants was limited, students were found to prefer to participate in virtual labs than in traditional ones but they also believed that traditional labs provide more effective pedagogical techniques to teach them how to use laboratory equipment.In a study designed to explore student perceptions concerning virtual biology laboratories [42], students attended both face-to- face and virtual laboratories. Data collected indicated that students experimented with virtual labs, but perceived face-to-face labs as more effective overall. Students stated that virtual labs were useful to their learning experiences and may enhance interaction and community building when collaborative assignments are used, but they enjoyed interpersonal interactions and the immediate feedback in face-to-face labs.A recent study [24] examined the use of virtual labs as a replacement to a face to face demonstration of real lab to prepare students for a laboratory exercise in microbiology in an undergraduate biology course. The results

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of the study indicated that using a virtual lab as a demonstration of the real lab functioned just as well as a face to face approach.

Laboratory experience and skills are also vital in the biotechnology domain. In a research study [30] involving both secondary education and university students and professors in India, the results indicated that students found virtual laboratories helpful in understanding the experiments and in motivating them. The capability of any time access that virtual laboratories offer was also perceived as a key advantage, though difficulties due to limited ICT skills were also reported. Still, professors reported that they managed to combine traditional learning methods with virtual laboratories in teaching process.

In a virtual biotechnology lab project in India, the students who used virtual laboratories reported a positive attitude concerning the value of virtual labs in e-learning [8], but concerns were also expressed about the potential for virtual labs to replace traditional educational process.

A 3D virtual simulation environment was used as a preparation tool before the on-campus laboratory sessions [7]. More than half of the students who used simulation indicated that it was a helpful preparatory tool for identifying instruments and other laboratory equipment. However, students ranked in higher position the laboratory manual and the pre-lab exercises as useful resources.Potential differences in cognitive effort between students who practiced with simulation and those who did not have been also explored [47]. The group of students that used simulation showed a higher frequency of reflective questions regarding the underlying chemistry theory, compared to the group that did not use simulation. Students who used simulation concentrated more on the theoretical aspects of the prelab exercise as they had improved their cognitive capacity.Another relevant study's [33] results showed, in a very high percentage, that students benefited from the prelab use of virtual lab and the combined educational method used, could lead to the improvement of learning experience.Two different educational approaches concerning a pre-laboratory session were investigated in [21]. As results revealed, the simulation program led to the same learning outcome. Having this in mind, the educator could use any of the two methods depending on the educational conditions (staff, laboratories) of the educational settings. However, researchers pointed out that the simulation program did not replace the educator and the hands-on laboratory work.

Finally, in the distance education field, until the late 1990, the science courses in UK Open University posted students science kits (biology, physics, chemistry) to conduct experiments and then sent them back [45]. Nowadays, the evolution of ICT tools, offer students the possibility to use simulated instruments like microscope offered by web-based University's OpenScience Laboratory. Thus, they are prepared for the on-campus laboratories and they have more time for hands-on laboratory sessions.

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A brief comparison of virtual labs in education.

The reviewed studies concerning virtual laboratories usage denote that virtual labs can be used in different educational settings as an effective supplementary tool, as shown in Figure 1.

Educational setting	Number of studies	Indicative conclusions
Secondary Educational	9	Simulation was at least as effective as the conventional educational method and ,moreover, it promoted self-paced learning and improved preparation for the final examination.
Post - Secondary / tertiary Educational	20	Simulation labs helped students to learn and overcome some misconceptions. although face- to face labs were more effective, the combined use of a virtual laboratory with the real laboratory activity led to significant gains in student knowledge, self-efficacy and motivation. Students who used simulation had cognitive capacity available for thinking.

Figure 1: Comparison table of virtual labs in education

Educational approaches for virtual laboratories

Virtual laboratories are used under different educational approaches according to the degree of their adoption. From the reviewed studies, answering the RQ2, virtual labs are mainly used as pre-lab practice sessions before the hands-on experiments in physical laboratory and as an educational tool combined with the traditional teaching approaches (blended approach). These findings are in accordance with the study [10]. Additionally, four studies investigate the full virtual laboratory approach as the main educational approach versus the traditional approach.

In studies where virtual labs were used as preparatory tool, learners found this use really helpful, as they were prepared for the laboratory sessions. More than half (61%) of the studies used the blended learning method. Even, studies that used virtual labs in contrast with physical ones suggested that the blended approach could offer the advantages of both methods. In thirteen studies, virtual labs are exploited in inquiry learning environment where experiments play a key role. Moreover, in three studies virtual labs were used in two different approaches in order to compare the results.

DISCUSSION AND CONCLUSIONS

Physical laboratories can be enriched with remote labs and simulated labs [23]. Simulations offer learners and educators

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many opportunities to explore physical or biological phenomena through virtual experiments, which may be impossible, too expensive, extremely difficult or time-consuming to carry out in a real laboratory environment [2].This review presents different studies in the domains of biology-biotechnology and chemistry having as target to reveal the use of virtual laboratories in different levels of education settings in different countries worldwide. As presented, virtual laboratories are used in K-12 schools, secondary education settings, undergraduate and postgraduate courses in biology and chemistry. Results of the aforementioned studies showed that virtual laboratories have positive effect on students' cognitive load, skills development and motivations increase. Moreover,when well-organized virtual labs are used as preparation sessions for hands-on lab, students have benefited and have actively participated in the physical labs, which took place subsequently. Of course, most of the reviewed studies indicated that virtual laboratories should not substitute physical ones and their advantages are better realized when combined with the traditional hands-on sessions.

The improvement, over the past decade, in the effectiveness of simulations, alongside other technological advancements and improvements in instructional support, have considerably contributed to the development of useful and user-friendly educational applications [38]. Thus, similar reviews should be regularly updated, to reflect new applications and new educational approaches.Quite predictably, the inclusion criteria, which we applied, have resulted in a lot of research papers to be excluded from this review. Obviously, it is quite impossible to systematically review, in a single paper, all the features of virtual laboratories in education, even without considering the extent to which commercially licensed software can be subject to such a review. Rather, this review aimed to present a selection of research concerning the educational uses of virtual laboratories in chemistry and biology domains. Of course, a further review on virtual laboratories and simulations, which are documented in these studies, could also assist researchers and educational stakeholders to better select an appropriate tool to suit their educational activities.

Based on this review, we plan to develop an application to select the appropriate simulator for a given educational laboratory task, considering to the greatest possible extent, the targeted learning outcomes. Thus, it will evolve towards offering another potential tool for science education using virtual laboratories.

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DIGITALIZATION OF EDUCATION: ADVANTAGES AND DISADVANTAGES

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ABSTRACT

Digital Education is a progressive strategy for giving information, particularly since it evens the odds for all understudies. India is home to the biggest populace of youngsters on the planet, with an expected 430 million kids in the age gathering of 0-18 years in the country. The condition of schooling in the country, particularly in provincial regions has been woeful, with difficulties, for example, antiquated showing strategies, lack of instructors, profoundly unbalanced understudy educator proportion, and deficient showing materials tormenting the area. Digitization of instruction helps in relieving these worries by giving sight and sound instructing devices to instructors and drawing in understudies through learning strategies that use advanced apparatuses, for example, brilliant sheets, LCD screens, recordings, and so forth It likewise makes it feasible for one educator to convey data from a distance across a few areas, through intuitive advanced media addressing the shortage of teachers in the country.

INTRODUCTION

"Digitized schooling is creating new learning open doors as understudies take part in on the web, advanced conditions and as personnel change instructive practices using crossover courses, customized guidance, new cooperation models and a wide exhibit of inventive, drawing in learning procedures. Besides, a 21st century perspective on student achievement expects understudies to not exclusively be insightful purchasers of computerized content, however powerful and cooperative makers of advanced media, exhibiting capabilities and imparting thoughts through unique narrating, information perception and content curation.".

By 2020 it's assessed there will be 1.5 million new digitized positions across the globe. Today, be that as it may, 90% of associations at present have an IT abilities deficiency, while 75% of teachers and understudies feel there is a hole in their capacity to meet the abilities needs of the IT labor force. Research by the World Economic Forum assesses that 65% of youngsters entering elementary school will wind up in occupations that today don't exist. It is basic, along these lines, for the training area to set up the ability required for the computerized economy, by adjusting as quickly as the expanding interest for IT abilities.

"Computerized" portrays any framework in light of irregular information or occasions. PCs are advanced machines in light of the fact that at their most fundamental level they can recognize only two qualities, 0

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and 1, or now and again. All information that a PC processes should be encoded carefully as a progression of zeroes and ones. Something contrary to advanced is simple. A normal simple gadget is a clock wherein the hands move persistently around the face. Such a clock is equipped for demonstrating each conceivable time. Interestingly, a computerized clock is fit for addressing just a limited number of times (each 10th of a second, for instance). As referenced previously, a printed book is simple type of data. The substance of a book should be digitized to change over it into advanced structure.

Digitalization is the most common way of changing over the substance of actual media (e.g., periodical articles, books, compositions, cards, photos, vinyl plates, and so forth) to advanced arrangements.

Digitalization eludes to the most common way of deciphering a snippet of data, for example, a book, diary articles, sound accounts, pictures, sound tapes or recordings accounts, and so on into bits. Pieces are the basic units of data in a PC framework. Changing over data into these double digits is called digitization, which can be accomplished through an assortment of existing advancements. A computerized picture, thusly, is made out of a bunch of pixels (picture components), organized by a pre-characterized proportion of segments and lines. A picture document can be overseen as a standard PC record and can be recovered, printed and changed utilizing fitting programming. Further, literary pictures can be OCRed in order to make its substance accessible.

Why education in India should go paperless

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data help in searching and accessing the data efficiently saving time and efforts.

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7. Saves space- Real Estate space is expensive, eliminating paper storage can give you with more space, reduction in rent, reduced off-site document storage fees or potential to open up a new office.

8. Stay Competitive- From multinational firms to small organization, digitization has been the mantra of the new age document management. Document digitization efforts have repaid businesses in reduced costs, efficient workflows and satisfied customers.

9. Environmentally friendly- Document Imaging and overall document digitizing process adds to your green credits and is an environment friendly initiative. It removes the needs of creating multiple backup copies and unnecessary printing, increasing the eco-friendly quotient of your company.

10. Digital Transformation – Image scanning is a first step in building a digital transformation plan. Early adoption is the key for organizations to ensure digital success and focus on cost savings and standardization.

Disadvantages of digital education

- With the advancement of mechanization, teachers are not equally trained with its proper implementation. Thus, learners are just using technology instead of gaining knowledge from it. Using applied science to achieve education in the proper way is a good thing but to transform it into an active set of skills is a matter of time.
- Relying completely on computers are creating poor studying habits. Many students keep browsing websites to find the shortest possible way to solve problems in Mathematics instead of solving them in a traditional way which actually helps them to gain in-depth knowledge of the subjects. Spell-

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checkers prevents them from learning the correct spelling thus resulting infinite spelling mistakes in paper.

- ✉ It is the human being who built technology not the technology that created a human. As humans are not error-free, similarly technology too does not come error-free. There are lots of problems like server error and connectivity problems which take oodles of time to troubleshoot it, therefore, hindering the learning process which can sometimes be a matter of frustration both for the learners and the educators. Wastage of time because of unnecessary issues is not at all advisable in schools or any learning institutes where every second is valuable for the learners.
- ✉ With the speeding development of technology, the websites owner urges to rank their websites higher in search engines, so they only concentrate on rankings instead of the content that they are posting. Many websites come with wrong information that has been copied and pasted from other sources without checking its authenticity. Thus, the learners are misguided by the wrong information's available on the websites. These things can perhaps become serious obstacles in their development.
- ✉ There are arguments that because of all the new technology that there is a loss of communication skills and the ability for people to interact with each other. Since a fairly large amount of the new technology is made for an independent use there are valid concerns about the loss of interpersonal and cooperation skills that students usually develop within a classroom setting.
- ✉ It is not secret that the newest and most up to date technology is very expensive. In order for a school to use technology like this they have to pay for it, which is difficult for most public schools to do because of the sheer cost. This is also difficult for parents because the students become accustomed to some technology that they do not have at home.

CONCLUSION

In the present hyper-associated world, reasonable utilization of innovation can upgrade instruction. Obviously the advantages are some more. However, the way to innovation in the study hall is continuously going to be the educator understudy relationship, since that is the place where the training occurs. Innovation can be a profoundly viable instrument; however that is all it is an apparatus since man has made innovation and innovation has not made man. Innovation isn't intended to supplant the educator. Rather, the thought is to establish an adaptable learning climate that breeds advancement. It moves the homeroom experience from the 'sage-on-a-stage' way to deal with a more cooperative learning climate. The achievement of such undertakings will at last rely on how innovation is applied to keep understudies locked in. It tends to be baffling and tedious, yet eventually, innovation in instruction can prepare to new encounters, new disclosures, and better approaches for learning and working together.

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SUMMARY

The digitization of education in India is spreading into an ever increasing number of regions. In this manner, it becomes important to break down the entirety of its perspectives, the two benefits and weaknesses. In the performed reflection, an endeavor to introduce the present status of the admittance to PCs, the Internet and e-course books in some schools has been made. Based on the auxiliary examination of different late investigations as well as own exploration performed, it has been resolved that the degree of digitization of instruction in India is as yet not sufficiently high. Simultaneously the creator focuses to the declaration of its dynamic advancement inside the following quite a long while. Benefits and burdens of the utilization of Information and Communication Technology, specifically e-course books, in the schooling of youngsters and youngsters were the hub for the reflection attempted. Numerous contentions for showing in light of current strategies and methods have been introduced; be that as it may, simultaneously, various dangers which this innovation conveys have been recognized. It is difficult to obviously be 'in favor' or 'against' this sort of recommendations. Notwithstanding, it appears to be that computerized schooling will turn into a typical reality in the following quite a long while. Along these lines, it is important to foster it so it could carry the most advantages with the base of secondary effects. Just practice will presumably show whether such an answer is conceivable.

PROBLEMS AND SOLUTIONS FOR ONLINE EDUCATION OF RURAL INDIA

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ABSTRACT

The educational status of rural children has been severely affected during the Covid-19 period. The purpose of this article is to examine the problems that students face in education in this context and the solutions to them. This article also sets out the steps to be taken to improve the educational status of students through the Internet Education.

Key Words: The education system, udemy, Digi-Eskwela, e-learning hub

INTRODUCTION

Education is equal to god in our world. The basic Reason for elevating a person to a higher level education classroom education has become Mobile Education. Today in this situation this system of education is completely different and difficult for rural students from which the purpose of this Article is to explore the fundamentals of Recovery.

The education system in India

India has a unique education system designed to uphold its nation's culture, history, values, and customs. While traditionally, education in India was reserved mostly for the higher-caste children, new education policies have been aiming to achieve equity in education and the right to education for all children irrespective of social class. The Gurukul was India's first system of education. It was a residential schooling system dating back to around 5000 BC, where shisya (student) and guru (teacher) used to reside in the guru's ashram (home) or in close proximity. This allowed for an emotional bond to be developed prior to the transmission of knowledge. Under India's Right to Education Act 2020, free and compulsory education is ensured to every child between the ages of three to 18.As of 2020, education in India statistics show that about 26 per cent of the Indian population (1.39 billion) falls into the 0-14 year category, which provides a great opportunity for the primary education sector.

Pandemic Situations of Rural India

Since December 2019, the deadly Covid-19 has spread from china to other countries. The deadly epidemic has been rampant in India since March created situations that no one expected. Our Indian nation has suffer immense loses; deaths and

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countless rural people have been affected by this. The infection of corona in every village of India has multiplied many times over. Indian Peoples loses their family members, work, comfort, education, economy, food and shelter to the corona epidemic.

Online Education

Online education is a flexible instructional delivery system that encompasses any kind of learning that takes place via the Internet. Online learning gives educators an opportunity to reach students who may not be able to enrol in a traditional classroom course and supports students who need to work on their own schedule and at their own place. Online learning is education that takes place over the Internet. It is often referred to as "e - learning" among other terms. However, online learning is just one type of "distance learning" - the umbrella term for any learning that takes place across distance and not in a traditional classroom. Online education is a form of education where students use their home computers through the internet. For many non-traditional students, among them all those who want to continue working full time or raising families, online graduations and courses have become popular in the past decade.

Challenges of online education

Covid – 19 has changed not only the lives of the people but also the educational status of future generations. It is difficult for rural students to go beyond their family, economy, poverty and famine to get an education. In most rural areas only one person per household is in an educational environment. The number of people going to higher education from such rural areas is very low. In this Situation Covid – 19 affected their Education also. Therefore, in the following, we shall explore the biggest challenges of Students facing online education today.

1. Lack of Motivation in Students

It was thought that online learning would be the new interactive and immersive method to teach the new generation of students. Though, the results speak on the contrary. Endless oceans of texts, quizzes, frequent learning assignments and MCQ's have led to students losing motivation to keep revisiting the learning portal. Students complain of lacking motivation due to a lack of interpersonal touch between the students and the teacher in the online classes. The need for physical interaction between the students is also a necessity for maintaining engagement which the online learning methodology has no answers for yet. Institutions need to deliver interactive lessons to students.

2. Infrastructural Problems

Though online learning doesn't require huge buildings, big classrooms, chairs, tables, blackboards, chalk doesn't mean there are no infrastructural requirements. The need for a computer, adequate software, constant electricity and high-bandwidth internet is quite a big

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demand. In most developed nations, this infrastructure is available to the public through public libraries if they cannot personally afford it. But for developing countries such as India, Pakistan, Bangladesh and many others, this quality of infrastructure is only available to a select few percent of the population.

3. Digital Literacy and Technical Issues

Though the new generation is proficient in working with computers doesn't necessarily translate to Digital Literacy. To proficiently learn through an online system requires understanding the workings of multiple software, which presents a huge learning curve. Also, students need to understand online communication etiquette and know student rights and responsibilities in an online learning environment. A bigger problem is with constant technical issues faced by both teachers and students on these platforms. These problems often require technical support to rectify, causing frequent disruption in the learning flow.

4. Lack of In-person Interaction

Humans are social animals. The growth of the internet hinged on the principle that humans will always be curious to interact and know more about one another. That said, on a psychological level, virtual interaction cannot mimic that of a physical one. The physical presence inside a classroom with a teacher and fellow peers often leads to an atmosphere that can't be replicated through virtual means. The physical model also ensures discipline as students cannot switch off webcams and doze off. Physical classrooms also allow for teachers to provide more personal attention to each student's needs. However, interactive eLearning modules can help improve student engagement.

5. Lack of EdTech and Online Learning Options for Special Needs of Students

The segment of students who have been completely ignored in the evolution of online learning is students with special needs. Special needs students need a more personalized and hands-on method of teaching. Though technology has improved drastically, it is still heavily dependent on the need for an expert or a teacher to be there full-time to guide the student through the tasks. These problems have caused special needs students to fall behind others in their academic pursuits.

6. Course Structure and Quality

The shift to online learning and other modern teaching tools was thought to bring about a modernization even in the course curriculum and structure. Sadly, that hasn't been the case. Institutions have retained their obsolete course curriculum and structure even after shifting online. With companies such as Google and Tesla choosing to forego college as a prerequisite for employment, students are reconsidering college as a whole. Online resources such as YouTube, Goggle, Skill share, Udemy and others offer

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better content on these subjects for cheaper or even free. These platforms also let them pick and choose their subjects, making the learning structure highly flexible. This should cause Educational Institutions to rethink their approach to teaching as a whole.

7. Lack of Accredited Degrees from Top Universities

Education has more to do about branding than learning. It matters more from where you studied than what you studied. In such a market where the brand is a huge factor, the online learning sphere is yet to convince prestigious higher learning institutions to offer their courses through online/ distance learning modes. The online courses for degrees are often not accredited and mostly not recognized by the job market or other institutions. Though schools have embraced the online learning system, the higher educational institutions and the governments have yet to recognize them as legitimate methods of obtaining a professional degree.

8. Abundant Distractions, Lack of Discipline

With recurrent technical issues, bandwidth problems and monotonous lectures, online attendance has seen a drastic dip. Most students find learning online boring and often complain of lacking the motivation to make it through a class. Even teachers often complain of a lack of tools to make the classes engaging, leading to a loss of interest from both parties. With the lack of any accountability in the online teaching method, education quality often becomes compromised. Coupled with the free use of laptops and mobile phones during classes, distractions have become countless, often coming at the cost of focusing during class.

Some ways to overcome the challenges faced by online education

- The current situation will pave a greater way for research around topics such as low-cost Learning platforms; penetration of digital learning in rural areas, revisiting learning science from blended mode approach and this would be more beneficial for learners at large.
- Digital content delivery training cycles for teachers can be organized periodically by the state governments.
- Innovations can be brought about to make the process of digital education more interactive and robust.
- With public-private initiatives, rural areas could be equipped with the required infrastructure.
- The successful initiatives under the CSR of corporates promoting digital education in rural schools should be promoted further.
- Rural schools can be provided with digital learning kits and alternative sources of energy like solar power can be installed in schools.

Here are some of the ways through which stakeholders can contribute in overcoming the barriers of digital education in rural India:

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- **Ed-Tech** organisations should provide low-budget multi-lingual platforms that work on low bandwidth and provide quality content. The Government can give tax benefits to these organisations for promoting it.
- The current situation will pave way for a survey on topics such as economical learning platforms, penetration of digital learning in rural areas, redefining learning science from a blended mode of approach thus benefiting the learners at large.
- Digital/online content delivery training should be arranged for the teachers by the state governments.
- The process of a vigorous and interactive online education can be initiated through innovative solutions.
- The rural areas of India can be well-resourced with the required infrastructure provided by the public-private schemes.
- The buoyant gambits under the CSR (Corporate Social Responsibility) of corporate hubs promoting online education in schools of rural parts of the country needs to be encouraged.
- The educational institutions in rural areas should be dispensed with online learning tools and alternate sources of energy like solar power should be established in these institutions.

Introducing multimedia teaching tools:

Providing multimedia teaching tools to teachers and students and utilizing smart classroom equipment like virtual classroom, digital board, digital teaching system, digital content, digital language lab, etc can help teachers boost education scenario in rural settings.

1. Digi-Eskwela Project E-Learning Tablets

The Patatas is a group of social innovators who actively look for ways to ease problems faced by these rural and underprivileged communities. The Patatas is a subsidiary of the Singapore-based Potato Production that supports social enterprises. Through innovative technology and digital solutions, The Patatas believe they can bring about positive change to these rural areas in innovative and efficient ways.

The Digi-Eskwela project introduces e-learning via tablets to children in the rural areas of Asia. The project focuses on gamification and mobile technology to supplement traditional classroom learning. By introducing tablets and weaving educational content into games, the children will be more engaged and eager to learn. The tablet acts as a platform for educational materials instead of physical textbooks and subjects or modules are preloaded according to the curriculum. Therefore, schools and students would not need to spend extra money on purchasing textbooks when the information is available on a compact tablet. Teachers also undergo training to ensure they are well prepared to conduct lessons with the tablet.

Digi-Eskwela project in Tiwala has shown over 50% improvement in numeracy

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and literacy skill. Tiwala teachers also gave positive feedback on how the children have improved their listening, reading, vocabulary and speed in mathematical problems.

2. Book donations

Other than innovative technology of the Digi-Eskwela project and the CaseStudy, there are other easier ways to help the community improve their education, through books! The Industrial and Services Co-operative Society Limited (ISCOS) collaborated with The Patatas to launch the "ISCOS Book Corner" in 2016.

During the launch, they invited David Seow, a local author that wrote 43 children's books, to conduct a storytelling session. The ISCOS Book Corner hopes to invoke passion and love for reading among underprivileged children. The Patatas provided over 100 pre-loved books that were specially curated for a wide range of interests, such as storybooks, business, culture, leisure and even entrepreneurship. However, as of now, The Patatas are no longer focused on this area of service. It definitely is a good way to improve education in rural areas that have no access to electricity and the Internet.

3. Volunteer programs

If you want to help and be the one to make a change, join a volunteer program! The Patatas always have new and innovative ways to help rural communities. One of the interesting projects was collaboration with Red Pencil International to bring Art Therapy to the children in Tiwala.

You may ask, what is art therapy? It allows the children to use the power of creativity and art to express themselves in a way that words cannot. Many of these children live in poor conditions and experience violence and helplessness. Art therapy hopes to help these children build self-empowerment and resilience to their overwhelming life circumstances.

Art Therapists create a safe environment for children to express themselves and take part in the activities. The Tiwala teachers are also trained to conduct art therapy sessions, ensuring continuity and sustainability in the course, even after the Art Therapists leave. The Red Pencil International has also pledged to follow up every 3 to 6 months. As an update, as of now we have ceased our volunteering program to focus on serving communities through our Case Study project.

4. The Case Study Project

In rural areas that are prone to natural disasters such as flash floods or hurricanes, school facilities such as "computer labs" get easily destroyed. Fixing or buying a new computer is just not a viable option for these schools.

The Patatas came up with a cost-effective digital solution to help the teachers adapt to different locations without facing complicated logistical issues. "Case Study" is a fully customisable case with many features specifically catering to the needs of each school and community.

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Case Study is a waterproof housing unit that is portable and easy to carry around. It contains electrical and digital equipment needed for classes, but don't worry, it is also shockproof. You can toss it around a class and all the electronic devices inside will be safe and sound inside. We designed it with the consideration that in case of a natural disaster such as earthquakes or floods, the items inside will be intact. Case Study acts as a classroom itself, providing teachers with complementing audio/visual and information support that can be set up quickly with ease.

e-learning hub for Villagers

A e-learning hub is a technology-rich learning environment with both physical and virtual components that provide formal and informal opportunities for learners to come together with peers, teachers, and other experts in their field. Here, individuals can access relevant knowledge and information, enlist support from educators and other learners, and, in so doing, develop new opportunities to improve their livelihoods. Someother e-learning centers are functioning for rural students.

- MHRD - A collection of different platforms suggested by the Ministry of Human Resource Development for online learning during the health crisis.
- National Digital Library of India - An online library created by the Ministry of Human Resource Development, providing academic content by subject area for different levels of education, including lifelong learning.
- Swayam Prabha - Channels devoted to telecasting of educational programs accessible across the country. The channels air courses for school education (class 9-12), higher education (undergraduate, postgraduate) as well as for out-of-school children, vocational education and teacher training.

IIM Kozhikode to launch an e-Learning hub and Library for villagers in Mavoor, one of the five villages adopted by the Institute under Unnat Bharat Abhiyan. Lot of e-learning centers like this have adopted some villages and given the learning to suit them so that the rural students can achieve better status.

CONCLUSION

Education which is supposed to raise the living standards of the rural people has undergone many changes in today's modern environment. All the rural students are in a situation where they have to change themselves as if they have adapted to the situation. Rural Students faces more benefits and some difficulties while learning online education. Our Government of India should take immediate steps to enable rural students to join the e- learning fast so that they are not affected. In this article is to research about Problems and Solutions for online Education of Rural India.

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CHALLENGES IN E-LEARNING OF RURAL AREAS FOR POST COVID -19

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ABSTRACT

Educational institutes across the world have closed due to the COVID-19 pandemic jeopardizing the academic calendars. Most educational institutes have shifted to online learning platforms to keep the academic activities going. Educational institutions (schools, colleges, and universities) in India are currently based only on traditional methods of learning that is they follow the traditional set up of face-to-face lectures in a classroom. Although many academic units have also started blended learning, still a lot of them are stuck with old procedures. The World Health Organization declared it as a pandemic. This situation challenged the education system across the world and forced educators to shift to an online mode of teaching overnight. Many academic institutions that were earlier reluctant to change their traditional pedagogical approach had no option but to shift entirely to online teaching–learning. Rural area Students are perception and preference towards the online learning through an online survey of some students. The results indicated that majority of the rural areas (70%) are ready to opt for online classes to manage the curriculum during this pandemic. Majority of the rural students preferred to use smart phone for online learning. The students opined that flexibility and convenience of online classes makes it attractive option, whereas broadband connectivity issues in rural areas makes it a challenge for students to make use of online learning initiatives. This paper includes the importance of online learning Challenges of e-learning modes in the time of crisis
Keywords : A Panacea in the time of covid-19 crisis , Challenges , challenges faced by rural communities , Problems associated with online teaching and learning**,** Illam thedi kalvi

INTRODUCTION

The global pandemic has taken a colossal hit on all the sectors of the economy. Challenging for the education system around the world that majorly revolved around classroom learning. The government has recommended moving to online learning as a stop-gap arrangement to evade any disruptions in academic calendars. Technology and smart classrooms are not only transforming education in highly paid private schools, but it is gradually making inroads in government schools. Consequently, e-learning is now the way to transform the education sector. It is showing a positive transformation and schools and colleges in rural areas are also adapting to technology day by day.

Online Education or E-Learning, rural population is not completely equipped with utilities like fast internet, uninterrupted power supply and electronic devices. There have been improvements regarding basic infrastructural facilities but many rural areas

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in India are still grappling with these challenges to make education completely digital or online.

ONLINE LEARNING: A PANACEA IN THE TIME OF COVID-19 CRISIS

The Covid-19 pandemic outbreak forced many schools and colleges to remain closed temporarily. Several areas are affected worldwide and there is a fear of losing this whole ongoing semester or even more in the coming future. Various schools, colleges, and universities have discontinued in-person teaching. As per the assessment of the researchers, it is uncertain to get back to normal teaching anytime soon. As social distancing is preeminent at this stage, this will have negative effects on learning opportunities. Educational units are struggling to find options to deal with this challenging situation.

Several arguments are associated with e-learning. Accessibility, affordability, flexibility, learning pedagogy, life-long learning, and policy are some of the arguments related to online pedagogy. It is said that online mode of learning is easily accessible and can even reach to rural and remote areas. It is considered to be a relatively cheaper mode of education in terms of the lower cost of transportation, accommodation, and the overall cost of institution-based learning. Flexibility is another interesting aspect of online learning a learner can schedule or plan their time for completion of courses available online. Combining face-to-face lectures with technology gives rise to blended learning and flipped classrooms this type of learning environment can increase the learning potential of the students. Students can learn anytime and anywhere, thereby developing new skills in the process leading to life-long learning. The government also recognizes the increasing importance of online learning in this dynamic world.

OBJECTIVES OF THE STUDY

1. To analysis the challenges of online learning during the Covid pandemic period and natural disasters.
2. To give some suggestions and recommendations for the success of online mode of learning during a crisis-like situation.

RESEARCH METHODOLOGY

Secondary sources of data used are (a) journals, (b) reports, (c) search engines, (d) company websites and scholarly articles, (e) research papers, and other academic publications.

CHALLENGES

It is a challenge for institutions to engage students and make them participate in the teaching e- learning process. It is a challenge for teachers to move from offline mode to online mode, changing their teaching methodologies, and managing their time. It is challenging to develop content which not

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only covers the curriculum but also engage the students. The quality of e-learning programs is a real challenge. There is no clear stipulation by the government in their educational policies about e-learning programs. There is a lack of standards for quality, quality control, development of e-resources, and e-content delivery. This problem needs to be tackled immediately so that everyone can enjoy the benefits of quality education via e-learning. Therefore, an effective and efficient educational system needs to be developed to impart education via online mode.

All the rural teachers and students have access to all digital devices, internet, and Wi-Fi. Unavailability of proper digital tools, no internet connections, or iffy Wi-Fi connections can cause a lot of trouble due to which many students might lose out learning opportunities. The Corona Virus outbreak is the chance to make out the best from the current situation. We can learn a lot in this challenging situation. A lot of tools are available, teachers are required to choose the best tool and implement it to impart education to their students. A step-by-step guide can be prepared by academic institutions that can guide the teachers and students on how to access and use various e-learning tools.

CHALLENGES FACED BY RURAL COMMUNITIES

Corporations are allowing their workforces to work from home, while schools and colleges are moving classes online. In India, people are relying heavily on strong internet connections, computers, or smart phones to get back to business during the new normal. The crisis has nudged students to pick up e-learning opportunities, as there is no end in sight. As the country takes to online education, the current pandemic is impacting rural students more than those who live in cities. E-learning is transforming the sector even in remote rural areas. While many are making the most of what online learning offers, local authorities are finding it tough to integrate high-speed internet facilities. Moreover, people in rural areas have to also deal with intermittent power supply and older electronic devices, which are often a hindrance to seamless access.

Unfortunately, students in rural India are denied the newest devices and levels of accessibility to online content that urban Indians enjoy daily. Unlike their counter parts in cities, a lower percentage of students in villages possess desktop or laptop computers. They depend on their family members' mobile phones for learning and attending classes, making it an arduous exercise. Watching small screens to consume as much information as possible for long hours could be detrimental to students health. Digital literacy and the digital divide have been serious concerns for our country for over a decade. Many teachers and students in rural areas are not able to match up to the technical skills of educationalists and students in cities. Collective efforts of civil society organisations, policymakers and the

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government are required to create a user-friendly digital interface so that rural area teachers and students find it conducive for uninterrupted learning.

PROBLEMS ASSOCIATED WITH ONLINE TEACHING AND LEARNING

There are number of technologies available for online education but sometimes they create a lot of difficulties. These difficulties and problems associated with modern technology range from downloading errors, issues with installation, login problems, problems with audio and video, and so on. Sometimes student finds online teaching to be boring and an engaging. Students want two-way interaction which sometimes gets difficult to implement. The learning process cannot reach its full potential until students practice what they learn. Sometimes, online content is all theoretical and does not let students practice and learn effectively. Students feel that lack of community, technical problems, and difficulties in understanding instructional goals are the major barriers for online learning.

POSSIBLE SOLUTIONS FOR PROBLEMS

Technical difficulties can be solved through prerecording video lectures, testing the content, and always keeping. Online courses should be made dynamic, interesting, and interactive. Teachers should set time limits and reminders for students to make them alert and attentive. Personal attention should be provided to students so that they can easily adapt to this learning environment. Social media and various group forums can be used to communicate with students.

Communication is the key when it gets difficult to try reaching out to students via texts, various messaging apps, video calls should be such that enable students for practice and also hone their skills. Online programs should be designed in such a way that they are creative, interactive, relevant, student centred, and group-based. The challenge to educational institutions is not only finding new technology and using it but also reimagining its education, thereby helping students and academic staff who are seeking guidance for digital literacy.

RURAL CHILDREN ENROLMENT

Beyond the health consequences of COVID-19, the pandemic has caused school closures as well as economic hardships due to migration and loss of livelihoods, among other reasons. ASER 2020 explored whether this unprecedented situation has caused shifts in children's enrolment patterns in

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Table . 1 Children enrolment school in 2020

Age group and sex	Govt	Pvt	Other	Not enrolled	Total
Age 6-14: All	65.8	28.8	0.8	4.6	100
Age 7-16: All	65.5	28.6	0.7	5.2	100
Age 7-10: All	64.3	30.5	0.8	4.4	100
Age 7-10: Boys	60.9	33.6	0.8	4.7	100
Age 7-10: Girls	68.1	27.0	0.8	4.1	100
Age 11-14: All	68.0	27.4	0.7	3.9	100
Age 11-14: Boys	64.5	30.9	0.7	3.9	100
Age 11-14: Girls	71.9	23.5	0.7	3.9	100
Age 15-16: All	62.1	27.3	0.6	9.9	100
Age 15-16: Boys	60.8	29.7	0.8	8.8	100
Age 15-16: Girls	63.6	24.8	0.5	11.1	100

Source : Aser 2020 Report

Table 1 summarizes enrollment data for different age groups in the Aser 2020 sample. For children in the 6-14 age groups, these data show that overall, more than 60% of all children are enrolled in government schools and close to 30% are enrolled in private schools.

Table 2. Enrolled children with selected assets in 2018 and 2020

Household resource	% Children					
	ASER 2018			ASER 2020		
	Govt	Pvt	Govt & Pvt	Govt	Pvt	Govt & Pvt
Smartphone	29.6	49.9	36.5	56.4	74.2	61.8
TV	54.8	72.5	60.7	56.0	71.9	60.8
Motorized Vehicle	39.1	62.5	45.9	43.5	64.7	49.9

Source: Aser 2020 Report

The comparison between Aser 2018 and 2020 shows that a much higher proportion of children now come from households with a smart phone as compared to two years ago. Although the proportion of children from households with assets like TV and motorized vehicles changed only slightly over the last two years, the proportion owning a smart phone increased from 36.5% to 61.8%.

ILLAM THEDI KALVI

Education must be available to all sections, and the government had initiated steps towards rural students achieving this goal. Launching the 'Illam Thedi Kalvi'

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'(education at doorstep) said it would brighten up the future of the younger generation. The foundation stone had been laid for a revolution in education, he added. "Education and employment for all is one of the key ideals. The spirit of social justice, self-respect and a humane approach is also promoted by the scheme. The Government that initiated the serving of meals to children studying in schools under the rural areas.

The scheme was evolved to address the learning gap that had arisen among rural students due to the closure of schools during the pandemic-induced lockdown. The benefits of in-person classes could never be matched by online classes, and the objective of the scheme was to impart education to children at home, Volunteers would take classes for up to two hours a day.

SUGGESTIONS

- We might bring in some much-needed innovations and change.
- Teachers have become habitual to traditional methods of teaching in the form of face-to-face lectures, and therefore, they hesitate in accepting any change.
- This virus surely has accelerated the process of online learning. It allows conducting live online classes, web-conferencing, webinars, video chats, and live meetings.
- Instruction, content, motivation, relationships, and mental health are the five important things that an educator must keep in mind while imparting online education .
- Some teaching strategies (lectures, case-study, debates, discussions, experiential learning, brainstorming sessions, games, drills, etc.) can be used online to facilitate effective and efficient teaching and learning practices.

CONCLUSION

There is a need to prioritize all the critical and challenging situations which may occur and plan accordingly. This pandemic has also taught us that students must possess certain skills such as skills of problem-solving, critical thinking, and most importantly adaptability to survive the crisis. Educational institutions must build resilience in their systems to ensure and prioritize the presence of these skills in their students. As several factors affect the choice of a particular technology such as security features, availability and condition of laboratories, internet speed, internet access, digital literacy levels of the beneficiaries.

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INFLUENCES OF DIGITAL CLASSROOMS ON RURAL EDUCATION IN INDIA

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ABSTRACT

Information technology affects in all aspects of human activity, and education is not exception, so its impact on education and training is inevitable. A digitally literate citizen will be able to learn and take responsibility for their learning so this results in a higher demand for education and feel of the needs for more equipment and tools. By spreading the use of World Wide Web, internet and intranet, integrating technology that support the education became a prevalent subject in the 1990s. In digital environment students can share their ideas and experiences and using help from other students and teachers. Digital classroom comprises all forms of electronically supported learning and teaching. The Information and communication systems, whether networked or not, serve as specific media to implement the learning process. It is essentially the computer and network-enabled transfer of skills and knowledge. Digital classroom applications and processes include Web-based learning, computer-based learning, virtual classroom opportunities and digital collaboration. Content is delivered via the Internet, intranet/extranet, audio or video tape, satellite TV, and CD-ROM. Students, and teachers must be trained and qualified to fulfil their roles; Schools and organizations must be developed and prepared for the new context. This paper displays how digital classroom affects education and how it proliferate learning process. This study also demonstrates the benefits and defects of digital classroom.

INTRODUCTION

Nowadays, the use of information technology has been improved expeditiously. Most of the people use internet and computer to share information, investigation, ideas and so on. Since appropriately used technologies have significant effect on teaching and learning, if they used inappropriately will hinder the process of learning and teaching. So integrating technology into the classroom is an approach to develop better understanding of basic concepts provided for learning, if it is applied appropriately. Although technology can never replace the human mind, it can intensify it, and increase the pace of learning. Thus, teachers have a critical role in this area – teaching students how to use technology as a tool to help, rather than hinder, their learning. Students use

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information and communication technologies to build knowledge and to communicate with others.

Integrating technology into the classroom begins with the teacher preparing lessons that use technology in authentic and meaningful situations. A major goal of using integrated technology is to prepare a situation that students use technology, deal with real world problems and manipulate them to find different aspects of the problem. Thus, students can imagine the possible consequences when the variables are changed.

Therefore, when teachers are trying to combine technology into their classroom lessons, they can demonstrate the basic concepts and then ask the students to work with the computer or other technology. Finally, both teacher and student can take the advantage of using technology if teachers know how to integrate it successfully into the curriculum. The belief that technology will hinder students learning has been discarded as long as students are taught to use it as a tool in their learning. Now researchers came to this conclusion that using desegregating technology not only is not harmful for learning and learners, but it is beneficial to both teacher and learner.

DEFINITION OF EDUCATIONAL TECHNOLOGY

Educational technology entitles any means of communicating with learners except communicating in direct form, face-to-face interaction, or personal contact. Educational technology in our definition would consist following elements:

The instruments and equipment which are used to support teaching (including software, programs, and networks, web, video player, data projector, overhead, computer, television monitors, and so forth)

The skills needed to produce or apply the tools and equipment effectively. (for example, writing, designing, programming, and production)

An understanding of teaching and learning process and how knowing educational instruments and materials can be chosen and used appropriately to support such processes.

The human resource needed to make the most effective use of the instruments, including technicians, engineers, educational designers, web programmers, and so on, as well as experienced teachers.

This is the organization role to apply the tools and equipment which can be developed and used appropriately. We therefore define educational technology as all the components of an integrated system necessary for appropriately using tools and equipment for educational purposes, which can be upgraded and altered.

THE DIGITAL CLASSROOM

A Digital Educator creates a learning environment in the classroom that provides the opportunity for students to develop both academic skills and 21st century skills. The digital classroom is conducive for all

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students by expanding the classroom beyond the four walls into the community. Students are engaged in authentic tasks that have a connection to the real world. In addition, the digital classroom involves all partners of the learning community such as teachers, students, parents, business partners, and higher education experts.

We can distribute digital classroom on two parts. First, synchronous digital classroom equipped with computer for each student and online students which can participate in the classroom via internet and a teacher using computer to learning with advance technology and managing learning process. Second, asynchronous digital classroom that each student participate in the class via internet at any time and from any place. This kind of learning is a student centered teaching method that uses online learning resources to facilitate information sharing outside the constraints of time and place among a network of people. This learning is a combination of self-study with asynchronous interactions to promote learning, and it can be used to facilitate learning in traditional on-campus education, distance education.

The online learning resources used to support asynchronous learning include email, electronic mailing lists, threaded conferencing systems, online discussion boards, and blogs. In this paper we concentrate on asynchronous digital classroom and demonstrate the impact of using technology on different part of the learning process. Researchers have reached to this conclusion that technology integration involves the educators' and students' seamless use of technology as a tool to complete a task in a disciplined study that promotes higher order thinking skills. The incorporation of technology in the classroom is a process that involves change in an educational system and occurs over a period of time.

The combination of the Internet and multimedia make it possible that digital classrooms adjust many forms of distance learning. Classrooms too, can be thought of as a platform, and they certainly are no exception to increasing amounts of research and the pervasiveness of multimedia. The digital classroom is quickly spreading into many campuses and is increasing in visibility. The attainment of this goal entails a reform in an educator's method for the delivery of instruction with students.

IMPACT OF USING DIGITAL LEARNING OBJECTS

A digital learning object is a resource that can be used and re-used to support learning. Digital learning objects offer a new conceptualization of the learning process: rather than the traditional "several hour chunk", they provide smaller, self-contained, re-usable units of learning. Teachers selected a range of DLOs to which students were given access. Teachers presented some examples of these DLOs to whole-class audiences, leaving students to choose those that best supported their needs as they

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prepared for Science and Technology Fair presentations. If the variety of DLOs were increased, students will have more choices to select for learning. By utilizing this process, students' learning power will be enhanced, and they may use other DLOs too.

STRENGTHS OF ASYNCHRONOUS LEARNING

Asynchronous learning's greatest benefit to students is the freedom it gives them to access the course and its instructional materials at any time they choose and from any location with an Internet connection. This allows for accessibility for diverse student populations, ranging from traditional, on-campus students, to working professionals, to international students in foreign countries.

Asynchronous learning environments provide a "high degree of interactivity" between participants who are separated both geographically and temporally and afford students many of the social benefits of face-to-face interaction. Since students can express their thoughts without interruption, they have more time to reflect on and respond to class materials and their classmates than in a traditional classroom.

The other advantage is that most asynchronous courses have the potential to reach far more students than a traditional course and course wide updates or modifications can be disseminated far more quickly and efficiently than traditional lecture models. Another advantage of asynchronous learning (and, as technology develops, many synchronous learning environments) is that there is a record of nearly everything that occurs in that environment. All materials, correspondence, and interactions can be electronically archived. Participants can go back and review course materials, lectures, and presentations, as well as correspondence between participants. This information is generally available at any time to course participants.

IMPACT OF DIGITAL CLASSROOM ON TEACHER PRACTICE

Digital classroom requires a shift from a teacher-centered to student-centered environment where the instructor must take on multiple new roles. The constructivist theory that supports asynchronous learning demands that instructors become more than dispensers of knowledge; it requires that they become instructional designers, facilitators, and assessors of both grades and their teaching methods. As instructional designers, emphasis is placed on establishing the curriculum, methods and the media through which the content will be effectively delivered. Once the design is in place and executed, the instructor must then facilitate the communication and direct the learning.

Through this project, teachers became involved in building their knowledge base. They took an active role by determining a wider vision for their learning journey, taking part in the process from start to finish. They readily took their learning to

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the next level; this progress was evident when teachers, subsequent to adopting DLOs, seized the opportunity to expand on their managerial skills or risked venturing into new territory by transforming organizational culture or mastering new educational software. As such, they displayed leadership in shaping their learning experiences.

IMPACT OF DIGITAL CLASSROOM ON STUDENTS

The student-centered nature of asynchronous online learning requires students to be actively involved with and take more responsibility for their own learning. In addition to their normal duties as learners, students are required to:

- Become proficient with the technology required for the course;
- Use new methods of communication with both peers and instructors;
- Strengthen their interdependency through collaboration with their peers
- Students use background knowledge and then interpret, implement, analyze, and evaluate it to create a new product.

Guided by their teachers, students working on fair testing DLOs from the Learning Federation completed the Science Fair learning process and entered display boards in the regional competition. Teachers viewed these outcomes as evidence that learning had taken place and was being transferred into other activities.

LEARNING WITH TECHNOLOGY

In studies of students using the computer as a tool for instruction, teachers have reported it provides them the opportunity to create a student-centered environment. The teachers become more open to multiple perspectives on problems and are willing to experiment in their teaching. Some of the important advantages of using technology in learning process are:

- Innovative way of teaching with technology enabled education making them flexible and technologically gymnastic.
- A picture is worth a thousand words
- Animations add spice to teaching and create a fun atmosphere in learning
- "Save" and reuse of Lecture when needed.
- Most Important of all is that technology saves the time for more learning activities.

Furthermore, technological advances are creating innovations that can potentially support the unique and individualized needs of learners in distributed education.

BENEFIT OF ASYNCHRONOUS DIGITAL CLASSROOM

This method leads to more and deep learning. Effective relation developed between students and teacher and also between students with themselves. They can share their ideas, experiences and investigations. This method is effective for all students especially for student with low learning speed and even for those with high learning speed. Traditional classrooms were place and time bound but asynchronous

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digital class has no limitation in time and place.

In other hand, in traditional class source of knowledge and learning was only teacher but now it is beyond the teacher, beyond the school and even beyond the country. The other benefit of digital classroom is that in this method education is open and flexible which cause opportunity for deep learning. The process of learning in traditional class was: listen, remember, synthesize and interpret knowledge which was drudgery but with digital tools it will be effective because there is a chance to repeat, practice and fail. In digital classroom, efficiency increases since students attention is 100% on learning rather than on his notes and spellings. Students at various universities can swap their notes in a fraction of time, and share their knowledge and experience with each other.

DEFECTS OF ASYNCHRONOUS DIGITAL CLASSROOM

Critics charge that asynchronous digital classroom is cold and impersonal, and cannot replicate the experience of a real classroom. The other defect is that it almost certainly requires more student initiative than traditional classroom learning. Because in a virtual classroom, teachers are less likely to notice when students daydream or slack off. It can be difficult to manage student classroom behavior: During class sessions, it may be hard for the instructor to maintain the attention and participation of the students in the class. If only the instructor is visible during the meeting, it is easy for students to become distracted by other things and not pay attention. It is probably this fact that leads to this belief that e-learning is less effective than traditional classroom learning.

They also need to have computer skills with programs such as word processing, Internet browsers, and e-mail. Without these skills and software it is not possible for the learner to succeed in eLearning. Learners in this method need to be very comfortable using a computer. Slow Internet connections or older computers may make accessing course materials difficult. This may cause the learners to get frustrated and give up. Another disadvantage of asynchronous learning is managing computer files, software comfort ability and learning new software. For learners with beginner-level computer skills it can sometimes seem complex to keep their computer files organized. The lesson points you to download a file which the learner does and later cannot find the file. The file is downloaded to the folder the computer automatically opens to rather than a folder chosen by the learner. This file may be lost or misplaced to the learner without good computer organizational skills. Building a powerful digital classroom needs to powerful management on students, teachers, lessons and so on. Teachers have critical role on course contents, leadership of student to finial objects and so on. And the last but not the least is that some restriction exists for information transmission.

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CONCLUSIONS

Digital classrooms are considered as the vital element in promoting and improving the traditional methods of teaching and learning. So all schools and universities focus on it, and try to attract more virtual students. So they apply the most friendly user software and technology with skilful teachers and engineers to fulfil this aim. In fact digital class transforms the education process, and cause universal interactivity between teacher and learners as well as among learners themselves, all around the world. This global interactivity cause mutual understanding between teacher and learner, and among the learners. It also causes more adjustability of materials and methods, which are used in the process of education. So different educational organizations enter a competitive situation for promoting their materials and methods, and the result is the improvement of learning and educational process. Digital classroom also reduce the gap of qualification and knowledge of students in different geographical areas. Even in a far most areas, by having a computer and access to internet you can enter a digital classroom to use the same materials and benefit the same teachers that are available for those who live in big and developed cities. Digital classroom has also influences on the cost of the education. For starting a course in a desired university, students do not need to move to that city, and pay for your trip, accommodation and transfer. In addition, Timesaving is one of the most important consequences of digital classroom on education.

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THE ADVANTAGES OF DIGITAL EDUCATION AND DISADVANTAGES OF DIGITAL EDUCATION

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ABSTRACT:

In the research we should clear in what is the definition of Digital Education , It`s scope and advantages. Disadvantages of Digital Edution also clearly in this research. Atlast we should know Advantages of Digital Education is greater than Disadvantages of Digital Education .

INTRODUCTION :

It is hard to imagine that just 30 years ago, the internet was little more than a concept that only super brainy computer types. This invention has become the major infrastructure for most of our daily tasks in lesssthan half an average life time.

We learned through the Covid-19 pandaemic that more and more can actually be done online.

We have quickly adapted to zoom meetings, the possiblities for remote work are expanding and outlook for the future is facinating in terms of what is possible.

Digital Education – Definition:

Digital learning uses new technologies and methods to help students learn in a diffferent way. This new form of education has been rapidly replacing the more traditional form of 'face to face' lessons.

The incorporation of digital learning can be as simple as the use of Tablets, Ipads, or Laptops in the classroom instead of the good old fashined noteboooks and paper.

The Scope of Digital Education:

(1) Limitlesss

(2) Some incredible benefits for students

ADVANTAGES:

1. Personalished Learning:

It is one of the biggest benefits of digital learning. It alllows teachers (or) course providers to their learning plans (or) curriculam to the individual student.

The traditional 'face to face method' has worked for us a society. But now we know that there are somany contributing factors that will determine the successs of a student in their learning process.

In the old system where you have one teacher for 30 to 100 students. The

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curriculam is always set by the student in the middle. In digital learning the teacher is able to format their curriculam based on the needs of the individual. It is also makes it easier for them to provide feedback to eachone.

2. Breadth of Information

The internet is expanding every single day with free information. At that time of visiting this over 63,000 seachers are performed on Google master each second. The knowledge is free and update in Google. Someone looked on wikipedia , they clicked on a related link, within a half an hour they are learning about the details.

3. More Engaging Student

Classroom, books ,paper, note one teacher and Students were in traditional education. In oldendays, there was one blackboard and chalk. Now, one whiteboard and markerpen.

This morden (costly) education offers a larger range of delivery methods for learning. Some teachers are able to find software that enhances the topic.All of this helps to make the students with fun and no tension.

4. Develops Accountability

The interactive nature of digital learning will stimulate most of the senses necessary to create a good habit. on this educational path will young students experience problem solving, concept maps , story telling, gamification, Role Playing, peer teaching and much higher frequency.

Digital learning helps to wonership over their education. Digital learning students dono`t know " why the sky is blue?" . But they use the techonology and find out the answer.

5. Learning Flexiblity

Digital learning allows for more focus on the individual student.They understand more details about any topics.

6. Recorded Content

Many who have experienced are online classes will say how valuable it because lessons are recorded. If you miss something , you can just rewind and catch the point later.

This is the benefit for students of all ages, especially kids.

7. 24 Hours Resources

Not every student is the most productive at exactly the same time. Some people are better in the morning . Others have late at night. In traditional model , doesn`t s allow for this.

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In this education you need to be 'on' during your lesson time. If you aren`t able to get attentiveness, you might get left behind. With online learning , there is no 'back' of the class. The student can take things at their own place and own time.

8. Connected Learning

Connection is important concept for all learners in education system. In recent time , 1/3 of teenagers …. are more comfortable sharing information in online.

9. Easy to Track Student Progress

In the digital learning environment , It is much easier for a teacher to make a student`s strength and weakness.

There is online record of all work completed as well as attendance and the result of exams.

10. Improves Written Skills

Online learning normally involves large amount of wrriten communication. (like grammer….)

11. Accessiblity Through Modern Technology

Digital learners can enable to chat with classmate about assignments, homework, etc.

12. Involves Educators An Parents

In the past, In a single classroom , teacher gave their hard work to educate a large group of students. But in digital learning environment that will free up time for teachers.

In a past, parent-teachers interview... twice a year. In digital learning.....weekly check up

13. Rapidly Increases Sharing Of Information

In digital learning we can able to share information; save time and money; not to buy large volumes of text books .

14. Increases Students Employablity

In our education system, digital learning is one of the top most priorities. We need to make sure the students for job market.

15. Fun And Engaging

Students who experience fun with their education environment. It is completely designed to be used without the need for parental supervision.

DISADVANTAGES

1. E- learning is one of the causes of social isolation. Because don`t see the teacher and classmates face to face
2. intraction is very limited.
3. yourself lucky, you are located in a area where the internet connection is fast and stable. yourself unlucky, very limited access to the internet, you have go to public wifi. This is inconvenient.
4. In submiting assignment, there is nobody watching , so cheating is available.
5. Requires self motivation and time management.
6. In digital learning most of the time listening videos, slide presentations. There is no experience in experiments. More focuses only in theory.

CONCLUSION

- Digital learning helps student to use effectively.
- It doesn`t require expensive instrument.
- Learning methods and scope are completely changed.
  (From chalk board---------- to note pad paper---------- to laptop)
- Modern way of digital learning requires only gadget
  and internet access. However it is not for everybody.

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VIRTUAL LEARNING: A POSSIBLE SOLUTION FOR HOME EDUCATION MODEL INDIA - CRITICAL ANALYSIS

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ABSTRACT

The concept of digital segregation is very common between rural and urban areas of India. When it comes to access to resources the rural sector has always been poor. One major difficulty was the cost factor. At the IIT Delhi conference, our then President, the Honorable APJ Abdul Kalam reiterated the fact that rural India should be provided with the five basic types of connectivity namely, Equipment, Electricity, Information, Social and Economic. With the term Knowledge Connectivity he meant the spread of digital education in rural India.

INTRODUCTION

In a country like India, the school level education sector is split into three major segments - primary, secondary and higher secondary followed by higher education which goes in to graduation and above. Now with the passage of time there has been a shift in the Government decision in terms of spreading education in rural areas. The government in various ways has stepped in to liaise with the private technology infrastructure companies to launch the eLearning program in various rural areas of India such as Madhya Pradesh, Tamilnadu, Kerala etc. IDC forecasted that the eLearning market which was about $7 billion in 2004, is likely to grow $28 billion by 2008 with nearly 30% compounded annual growth rate. (TheE-learningBoomlsHere,2006)

The main focus of the campaign is to address the information needs of people living in rural areas. There are different people with different information needs. These portals offer a wide range of services ranging from an online residential certificate, caste certificate to income certificate and other information. Among these related services one part is education or eLearning.

Assessment of Educational Needs in Rural India:

Urban & Rural India schools have ethical differences. Urban schools provide state-of-the-art infrastructure, intellectual resources while rural schools in India lack all the features. The first factor to be considered in assessing the educational needs of rural Indians is that education should include a part of vocational education (Concept Paper, 2004). The reason for this idea is to enable them to use natural resources with the education perspective available in their area

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for their livelihood. There are some areas where vocational training can be provided such as Small Scale food processing, organic farming, beekeeping culture etc. It has been noted that dropout rates are high in rural India, one of the reasons being that we may be trying to force the urban school education model into a completely unrealistic rural sector.

Therefore, we can examine that, in Rural India the need for education is guided by certain basic rules of school education followed by vocational training. The need for handicraft training may depend on the availability of resources in that local region, i.e., pisciculture may thrive in riverine areas, beekeeping culture may thrive in forest areas etc

So, the question before us is - how can eLearning ideas help achieve this dream?

Corporate - Government Initiative:

Gramjyoti: A project by Ericsson, Ericsson has set up broadband network across 18 villages and 15 towns of Tamilnadu. (Ericsson, n.d.). The major objective of this project, as far as education in rural India is concerned, is to facilitate education using high speed internet bandwidth across these villages. Ericsson has setup community centers across these villages which are equipped with PCs and 3G mobile handsets and has deployed teachers at their Chennai office to deliver education through internet. (Gramjyoti, n.d.).

Gyandoot: It is an initiative taken by the Government of Madhya Pradesh. In this initiative intranet facilities have been set up to connect the rural cyber cafes (http://gyandoot.nic.in). The Gyandoot Samiti has been able to set up 32 kiosks in high schools and higher secondary schools of Dhar District. Through these kiosks the students are provided educational contents of class X & XII in client server architecture (E-Education, n.d.).Through this portal students can share data across email an also the question bank created by the experts. (IIM-A Report, *2002)*

Byrraju Foundation: In the year 2004, Byrraju Foundation partnered with IBM India to convey the technology to the 142 villages of rural Andhra Pradesh across six districts of Guntur, Ranga Reddy, East & West Godavari, Hyderabad and Krishna. The name of the initiative is IBM Kid Smart Early Learning Programme. (Business Line, 2004)

AKSHYA, Kerala: Government of Kerala launched Project AKSHYA in 2002 to promote basic computer usage among rural masses. The project aimed to establish 5000 multi-purpose AKSHYA e-kendras across Kerala which are run by private entrepreneurs. (Current ICT Projects, n.d.)

AAROHI, Uttranchal: Uttaranchal Government in partnership with Microsoft, Intel launched project AAROHI to provide basic computer education to all Government and Government aided schools from Class VI - XII. As of now 1206 Government and 281 aided schools have been covered. (Current ICT Projects, n.d.). Microsoft further wishes to enhance computer literacy in the states of Kerala and Uttaranchal by imparting computer education 80,000 teachers and 35 lakhs students. (Business

Line, 2003)

Objective of the Study

1. To understand the educational needs in rural India.

11. To understand how eLearning can be helpful to meet those needs in a better way than existing practice.

Methodology

The present study is based on data collected from various secondary sources like news papers, web sites, reports and research papers.

Analysis

Mostly the eLearning initiatives have been deployed so far, talks about the education at a basic level and is more traditional in nature. The way education has been dealt since ages, same practice is going on even in the eLearning era. Merely a change in medium has taken place without considering any change in pedagogy or delivery objective. Now the big question in frontof us - how could we orient the perspective of education for rural using eLeaming so that it helps them to shape up their life?

The present models advocate more of delivery of study material which has been drafted to suit a particular curriculum requirement and with limited sharing of knowledge.

Proposed Model

The author proposes a layered model which will have career oriented vocational learning capsule.

The strong character of this model would be

a. Basic education till class X
b. Vocational Training
c. Focus group discussion across network
d. Appreciation from competent authority

Rationale of the Proposed Model

Every model is proposed in order to fulfill certain objectives. This model tries to meet not only the educational objective but aims to focus at the future, so that a student today can be guided to build his/her career tomorrow.

a. *Basic education till class X* This layer will fulfill the fundamental computational, linguistic and general awareness skill.

b. *Vocational Training:* This layer will follow the previous layer. Only after certain skills are acquired, students can be counseled and their potential can be evaluated. Further, this layer will act as an incentive because after the successful completion of this layer students can think forward to build their career.

c. *Focus group discussion across network:* In this layer students can share ideas across villages and exploit this layer to find out opportunities and new markets in the unexplored areas. (Mukherjee, 2007) This process can be facilitated through multimedia solutions. (Devi, 2006)

d. *Appreciation from competent authority:* This initiative must be supported by the competent authority like Zila Panchayat, District Administration, State or Central Govt. so that the students can find the initiative as a qualification of recognition subsequently the initiative may become popular.

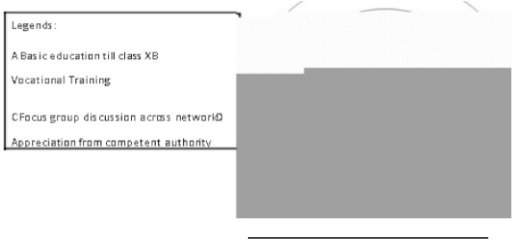

Fig. 1: eLearning Model for Rural India

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CONCLUSION

There are eLearning initiatives taking place in Rural India from both corporate and Government sector. The author has proposed a model which is not only catering to their basic educational needs, but their need for career or future growth has also been taken care of. The time has come when we need to integrate the education and career option for the Rural India instead of segregating them.

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COVID -19 IMPACT IN EDUCATION OF RURAL INDIA

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INTRODUCTION

Every village is not provided with school which means that students have to go to another village to get education. Owing to this parents usually do not send their daughters to school, leading to a failure in achieving rural education in India. Poverty is another setback. Government schools are not as good and private schools are expensive. This results in a very low number of students actually clearing their secondary education and taking admission in colleges for further studies. So the drop-out-rate at the secondary level is extremely high in villages. Only parents who can afford college education send their kids to secondary schools. If parents are not able to send their wards for higher education then all their previous efforts get wasted as completing just secondary education means a low paying job and the person is again struck in the same never ending cycle of money, life and poverty

In India, the right to education is a fundamental right which states that every citizen of India between the age of 6 to 14 years get free and compulsory education. This provision ensures that every citizen of India should get education up to 14 years without any discrimination. But the reality is far different from this. The literacy rate in India is 77.7%. However, the literacy rate of Urban region in India is 87.7% whereas in rural India it is only 73.5%. There are many reasons behind the difference between these two. Some of the challenges or problems are given below.

Quality and access to education is the major concern in rural schools as there are fewer committed teachers, lack of proper text books and learning material in the schools. Though Government schools exist, but when compared to private schools then quality is a major issue. Majority of people living in villages have understood the importance of education and know that it is the only way to get rid of poverty. But due to lack of money they are not able to send their children to private schools and hence depend upon government schools for education. Above that, in some of the government schools there is only one teacher for the entire school and if they don't show up at work, then it is a holiday. If the quality along with number of teachers and, that too committed teachers can be improved in these schools, then aspiring

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rural children and India can fulfill their dreams of doing something great. Some government schools in rural India are overly packed with students, leading to a distorted teacher- student ratio. In one such remote village in Arunachal Pradesh there are more than 300 students in class X which makes nearly 100 students in each classroom. In such a situation it is impossible for teachers to pay full attention towards each and every student, even if they are willing to help.

Objective of the study:

To know the problems of the students in rural area

To analysis the situation of the students status in education in Covid - 19

To identify the impact of education of children in rural area in Covid -19 situation

Statement of problem:

In India illiteracy is one of the biggest problems. Lack of easy access, lack of teachers, lack of interest, poverty, gender differentiation, lack of infrastructure, common curricula are few of the reasons which are holding back the progress in rural education. But with the use of technology mass education can be given and situation can be changed. The study analyse the problem of education in rural area and also the impact of education in Covid - 19

Problems in education in rural India

Nearly 65.53% population of India reside in a rural area. There is a wide gap between urban and rural education system. The literacy rate of the urban area and the rural area are also wide. The survey was conducted and cover almost all rural districts; it was found that more than 50% of the children of age 3 to 16 years are not able to read and perform arithmetic abilities in the age group of 5to 16 years. However, the problems related to education in rural India are:

- Lack of availability of resources
- Lack of awareness of educational importance
- Less availability of schools
- Digital dividend
- Financial condition

Lack of availability of resources

There is a lack of availability of resources in the rural regions in India. There is also a lack of infrastructure in the schools situated in rural areas—no availability of benches, playgrounds, laboratories, washrooms or if present they are in the worst condition.

Sometimes the textbooks are not available in proper quantity, or if available they are not in good condition. Also, the availability of stationery is also a challenge. Many rural Indians don't have enough money to bear stationary charges and other expenses.

Another challenge is there is no transportation availability as there is poor connectivity from one place to another place.

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Another challenge is less availability of teachers. In India, the school in rural areas have only one or two teachers in the school.

Lack of awareness of the importance of education

Another reason for the low literacy rate in rural regions in India is the lack of awareness of the importance of education. People in rural regions are mostly engaged in agricultural and allied sectors. Children from the beginning are engaged in these sectors and not give much importance to their studies.

Religious beliefs and some societal norms also a hiccup in the path of providing education in rural India. Many rural Indians believe that children, especially girls, should not study much and don't have to cover a long distance to go to school. Instead of getting the education, they should focus on some work which helps them in earning.

Less availability of school

There is also less availability of schools in rural regions. Many students have to go from one village to another village by covering miles of distance. Another challenge is the non-availability of transport. It takes long hours to reach school and to come back home. This challenge also aids in increasing drop-out student ratios in rural India.

Digital dividend

Another challenge in rural education in India is the digital dividend. In a globalized world, where everyone is technology prone and using their application in daily life. It is necessary that everyone should have knowledge about their use.

During the corona time, education is given in online mode, but due to poor connectivity, rural children are not able to get an education. This also creates a barrier in the education of rural India. Some of them also don't have a smartphone due to which they can't access education.

Ways to boost rural education in India

We need to overcome the above said obstruction to boost education in India. In order to boost up this, we need to adopt the following measures:

- Encourage free education
- Increase the number of schools
- By adopting modern teaching technologies
- By providing scholarships
- Proper infrastructure and availability of resources

Encourage free education

One of the most important ways to boost rural education is boosted up free education. as our constitution provides the right to education to all citizens of India. The government should focus on how they can increase the enrolment of children who reside in rural areas.

This can be done by establishing more schools, providing proper infrastructure and resources. The

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government should also ensure that the number of children who are attending school must retain education up to elementary level.

Another reason for encouraging free education is that people of rural India don't have much income so they can't afford high school fees and eventually drop out the school.

Increase the number of schools

The government should set up more school in rural India to boost up education. Most of the children have to leave their education due to the large distance between the home and the school.

This is the case, especially for girls. Most of the girls drop out of school due to non-availability of transport. If the schools are set up at every village, it will aid in increasing the enrolment percentage and decrease the drop -out rate of rural children.

By increasing the modern teaching technologies

Modern technologies are very important in imparting education. Today in a globalised world where technology is rapidly emerging, it is necessary for every individual that they are updated with the current technology.

Also, the focus of education should be on conceptual learning not on rote learning so that the students must use the applications of these new technologies.

By providing proper infrastructure and resources

Another way to boost up the education in rural India is by providing proper infrastructure and resources. The objective of education is the all-round development of the individual.

Availability of resources is also important for providing education. Resources include textbooks, stationery, laboratories, playgrounds, and benches should be in good condition and available for all the students. This will aid in achieving the objective of education and retaining the number of students in education.

The government should make provisions and schemes to boost up education in India, especially focusing on rural India.

CONCLUSION

The literacy rate of India is 77.7%, but it is different in rural and urban India. There is a wide gap between the literacy rate of urban and rural India. However, the reason behind the low literacy rate in rural India is many. The problems faced by rural India in achieving the education are less number of schools and resources, less availability of teachers, religious and societal norms, the large distance between the school and home, lack of awareness of education. The way to improve the present scenario of education in rural India is the construction of schools in every village, providing proper and adequate infrastructure and other resources, using modern technologies in education, creating awareness about the importance of education and rights.

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ADVANTAGES AND DISADVANTAGES OF DIGITAL EDUCATION

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ABSTRACT

Digital education is one of the fastest growing sectors in the education industry. It is more interactive, engaging, and flexible than traditional education. Comprising a wide spectrum of practices, including blended and virtual learning, it has the potential to transform the way we educate our children, introducing them to a world of possibilities that would have been unimaginable just a few years ago. Blended and virtual education, also known as digital education, is a modern approach to education that combines online and in-person learning experiences which emerges during the pandemic of COVID-19. Digital education can take many different forms, but it always involves some amount of technology and often relies on digital tools and resources to enhance the learning experience. The advantages of digital education are that it provides a more personalized experience for students. It can accommodate the needs of students of all backgrounds, levels, and learning styles, and it offers a great deal of flexibility in terms of scheduling, content delivery, and format. Students can learn at their own pace, in any place they want, and with the help of the best experts in the field. The disadvantages are that not all schools have access to high-speed internet and some people may not be able to afford a computer or internet connection.

KEYWORDS: Virtual classes, Blended learning, Digital education, Pandemic, COVID-19

INTRODUCTION

According to a recent report, digital education is a growing trend that is expected to continue. In fact, 68% of U.S. school districts offer some form of digital education program at the elementary or secondary levels, and many more plan to launch such programs in the next two years. One third of schools in Melbourne have implemented 1:1 devices in classrooms; one-fifth of all students are using digital devices full-time. Digital education provides students with endless opportunities to explore their interests and learn at their own pace. Digital education also has the potential to become a distraction in the classroom when students are on social media or playing video games during class time. Digital education offers a lot of advantages. It is easier to learn by watching videos, reading articles and interacting with the teacher. It also saves time and money for students, who can learn on

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their own schedule. In addition, digital education allows for customization of courses to suit different learning styles and needs. However, there are some disadvantages as well. Digital education is not always interactive and engaging for students. Online courses lack the social aspect of traditional courses where students can interact with each other in person or online to discuss ideas and concepts. Students also need to be disciplined enough to work on their own without any guidance from a teacher or classmates.

Objectives

The purpose of this study is to get a detailed view on digital education and the advantages and disadvantages involved in it.

To experience the problems faced by students to learn through digital education during the pandemic days of COVID-19.

Problem Statement

The pandemic brought a nation to a standstill. Schools, colleges, and universities across the country were closed for several weeks to prevent the spread of the virus. This resulted in the postponement of exams and caused a lot of inconvenience to students. Shifting to private schools would have been the best option for many, but this was not always possible due to the high costs. The COVID-19 pandemic had a devastating impact on education in India. Nearly 250 million students were affected by school closures at the onset of lockdown. The pandemic posed several challenges in public and private schools, which included the postponement and cancellation of exams and the rescheduling of classes. In some schools, students were forced to miss their exams and lost the opportunity to advance to the next grade level. School pandemics disrupt the education of millions of children. During the first outbreak of COVID-19, over 200 million students in India were impacted by school closures. In the pandemic's phases, private and public schools were forced to close their doors and suspend operations which caused a disruption in the education of students across the country.

Discussion

Advantages

In the past, education meant spending hours in a classroom with a teacher. The students learned about the world through textbooks and the teacher taught them by lecturing. With the invention of internet, the concept of distance education has emerged. Many students are finding it difficult to cope up with the demands of the current educational system. The ever-increasing workload coupled with lack of time has led to the downfall of many a promising students. But all is not lost as online learning systems provide an alternative for those who are seeking better alternatives. One such system is the CoVid Pandemic which provides students with an interactive and engaging learning experience which helps them to retain the knowledge in an easy and fun way.

Convinent

Online classes allow students to get the education they need regardless of the

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pandemic. Distance learning has never been easier, and the best online classes are taught by the same professors who deliver the on-campus courses. The students can access the courses from nearly anywhere, at any time. Being able to access the classes and study material from anywhere became a lifesaver for those who have been forced to stay home for extended periods of time due to illness, inclement weather, or other reasons. Perhaps the most unexpected benefit of online classes is the amount of flexibility they offer. Many online classes allow you to work at your own pace, and to take as much time as you need to complete assignments and answer questions.

Flexible

The advantages of online education go beyond saving time. By eliminating the need to travel to a physical location, online courses allow everyone to choose the best time to study. One of the best things about online courses is the flexibility they offer. Instead of being tied to a set time and place, students can study during their free time.

Affordable

Online classes are much cheaper than the traditional counterparts. This means that even those students who would have been unable to afford to study at university due to financial constraints can now access education that would have been out of their reach before. This in turn means that a much larger student population is able to benefit from the education that is on offer, which in turn further enhances the quality of the education that is being provided.

Improves Time Management

Online classes improve time management by allowing students to fit their education around their schedule instead of the other way around. This is particularly useful to students who have been doing part-time jobs in their free time. This not only allows them to complete their education but also to get ahead because they are able to complete their education at a faster rate than their peers who are unable to complete their education outside of the traditional class period.

Tech-savvy

Online classes also have the advantage of allowing students to learn using the latest in technology and the students are more likely to be using those technologies to communicate and collaborate with their classmates and the instructor. Thus online classes tend to require more online participation and communication from the student than traditional classes do. This also means that online classes are more likely to be using programs and software that are designed to facilitate communication and collaboration between students. This allows students in online classes to get the most out of their education and experience, since they are able to express themselves and learn better when they are able to do so using the latest in technology. For example, many online classes require students to participate in online discussions and group projects rather than having them write essays on class discussions.

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Disadvantages

On the other hand, there are also a number of disadvantages associated with digital education. One major disadvantage of digital education is that it is not as personal as traditional education. Since students are not physically present in the same room as their teacher, they tend to receive a substandard education compared to that which they would receive in a traditional classroom. This is especially true in situations where the teacher is an excellent resource due to their ability to make the material interesting and to engage the student in dialogue, rather than a resource due to their excellent academic credentials.

Digital Learning Create A Sense Of Isolation

Digital learning may create a sense of isolation for students. As classes are offered exclusively online, students who prefer face to face interaction with their teachers may be at a disadvantage. Since students cannot interact with other students in the same class or even other students in other classes, it can be difficult for them to develop relationships with their peers. This can make it difficult for students to feel supported, which can in turn make it difficult for them to perform well in class. Some students may also find themselves reluctant to participate in class discussions since they are unable to interact with other students, which can lead to a deterioration in their speaking and writing skills.

Digital Learning Requires Self-discipline

School is a place where we are supposed to learn and grow. It teaches the children not only education but also how to behave i.e.) self-discipline. In digital learning, the students can watch lectures and take quizzes in the comfort of their own home, which is more convenient for them. The pandemic has making it difficult for students to maintain their previous level of self-discipline.

Technical Issues

Digital learning also raises a host of new challenges that is technical issues. The students faced problems with audio, video, or connection issues during their online lessons. Some students were required to install large size apps that would deliver inconsistent performances.

Training to the Teachers

With the advent of new technologies, students can learn almost anything online. This has presented a unique challenge for teachers: how to provide quality instruction when they don't have access to a classroom. In order to provide students with the best education possible, teachers must have a basic understanding of how to use digital forms of learning to their advantage.

Lose Concentration

Teachers are finding it difficult to keep their students engaged and focused in the classroom during the ongoing pandemic. This is primarily because of the large amount of distractions that students face while online. This is causing a lot of frustration

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among teachers and causing them to lose focus on their work. This is affecting the quality of education that students are receiving and is becoming a major concern among parents.

Lack of Socializing Skills among Students

During the pandemic, many students faced the challenge of being confined to their homes for long periods of time. This limited their socialization with other students, which can result in social withdrawal and poor grades. This is thought to be due to the stress of the pandemic, which caused many students to fall ill at the same time, leaving them without enough socializing skills to cope.

CONCLUSION

In recent years, digital learning has become a popular way to learn from home and connect with others around the world. It is an excellent tool for continuing one's education at any stage of life, from young learners to older students, and for earning a range of college and university degrees. Educators have found many ways to use digital learning to improve the education experience for their students. Videos, podcasts and online courses offered a way to learn from the comfort of one's home. In some cases, students learn in new and better ways than through traditional face-to-face courses. Digital education has many advantages and disadvantages. It can be convenient, but it can also lead to isolation, which can in turn lead to burnout.

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DIGITAL EDUCATION BARRIERS IN RURAL INDIA

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ABSTRACT

"Education is the best friend. An educated person is respected everywhere. Education beats the beauty and the youth". Education is the process of facilitating learning, or the acquisition of knowledge, skills, values, morals, beliefs, habits, and personal development.

Digital education is the innovative use of latest technology to be used during teaching and learning. The worldwide influence of Covid 19 has resulted in the rapid development of digital education. Despite the obvious advantages of digital education, there are still numerous obstacles to making education fully online phenomena in rural areas.

Keywords: COVID-19, Rural Area, Digital education and obstacles or barriers

INTRODUCTION

More than half of the population is under the age of 25, and 10 million people enter the workforce each year. India already has one of the largest education systems in the world. The country has 1.4 million schools, 35,500 colleges, and 600 universities. The right to education is a fundamental right of every Indian citizen, regardless of whether the child lives in a high-profile society or in a remote, underdeveloped village. According to Article 45 of the Indian Constitution, all children up to the age of fourteen must receive a basic elementary education.

Digital education has long been viewed as a viable solution for rural India in terms of bridging the existing gaps in education delivery. The **National Education Policy** (NEP) 2020 also emphasises digital learning as an alternative to the traditional classroom model as a communication medium between teachers and students. The COVID-19 pandemic has devastated school systems around the world for the past two years, wreaking havoc on the most vulnerable students. Education is heavily reliant on government-run or aided institutions and non-governmental organizations for the vast majority of the population living in rural areas. However, rural areas continue to suffer a number of challenges that have a direct impact on the country's literacy rate. Students in tiny towns have a lot of potential and are eager to learn, but they lack the proper supervision. The huge divide between the haves and the have-nots has impeded the expansion of digital education. A huge portion of India's population has limited or

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no internet connection. This has been the biggest factor in hindering the proper penetration of digital education among the rural population. Even if some remote locations have adequate internet access, few families can afford the digital devices that are required for online schooling. Families who rely on the mid-day meal programme to adequately feed their children cannot afford to spend thousands of rupees on a Smartphone, let alone a desktop or laptop computer.

Usefulness of online education:

Online learning, your learners can access content anywhere and anytime. They are not required to take time off from work to attend classes. E-learning is also economical. Learning designers can use e-learning tools to make content more interactive. The more engaging the subject, the better the students will remember it. They will be able to retain and apply things at work if they enjoy studying. Every time, online learning provides regular and structured training.

Situation of E learning in India:

The foundation of education is still reading, writing and arithmetic; today's pupils require a more comprehensive education. Live instruction, video content distribution, student-to-student interactions via video-conferencing, remote test administration, up-to-date materials, self-learning, and other features are required in today's classroom. By integrating many of these and other critical factors together, the Digital India effort is likely to boost education. Even the government is a big supporter of e-learning, with the Department of Electronics and Information Technology (Deity) actively developing tools and technology to promote it; nonetheless, additional devices and an ecosystem are required.

The Digital India (DI) programme is a government of India initiative to electroni cally connect government departments and Indian citizens. This action attempts to ensure that citizens may access government services via the internet. It also involves a large initiative to build high-speed internet networks in rural areas.

Problems faced in rural areas:

In India, over 65.53 percent of the population lives in rural areas. The urban and rural schooling systems are vastly different. Pratham Foundation released the 16th Annual Status of Education Report (ASER) 2021 (Rural) on Wednesday, November 17. ASER examines the schooling status of children aged 5 to 16 in rural India, as well as their ability to do basic reading and arithmetic skills. There are numerous issues with rural children's education. Lack of infrastructure, a lack of value placed on education, poverty, a lack of resources, and the location of schools in remote areas are just a few of them. As the entire world's education moves online, the limited availability of technology in rural places creates educational impediments.

Obstacles of education in rural areas:

"Education is the passport to the future,

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for tomorrow belongs to those who prepare for it today". Despite the fact that the world is getting more digitalized, there are numerous barriers to the growth of education in rural areas. With the growth of e-learning, where instruction is done remotely and on digital platforms, education has altered tremendously. A huge portion of India's population has limited or no internet connection. This has been the most significant impediment to appropriate digital education penetration among the rural population. There are more barriers such as

Internet and digital device reliance

Online learning is a method of transmitting teaching-learning information over the internet or the World Wide Web using digital devices. This needs the use of a high-speed internet connection as well as a digital device such as a desktop, laptop, or Smartphone. In rural areas, the network signals are difficult to reach and so the availability of signals for internet is very low. One of the challenges in digital education is that students must rely entirely on the internet for their digital education.

Linguistic barrier

"Unity in Diversity" is the motto of our country. The majority of online courses are taught in English. Because the majority of parents in rural areas are uneducated, children find it difficult to understand English when it is used as a communication medium. This is another barrier in digital education.

Technological Inefficiency

Digital education necessitates technological skill and assistance. Many isolated and rural areas still lack access to technology, resulting in a digital divide in the country. Many first-generation students have a fear of technology and are hesitant to pursue digital education. Such difficulties can be overcome with a solid support system and some instruction on how to go via an online course. It is difficult for children in rural India to get digital education since their parents are unable to cope with the rapid advancement of technology. This becomes one of the obstacles for digital education.

Parental penury in rural areas

In rural places, the majority of parents live in poverty. They were unable to meet their everyday requirements and desires. Children in rural communities are compelled to work and earn money in order to survive. This leads to poor attendance in online education. This is one of the barriers in online education.

A Lack of understanding of online learning:

In India, online learning is still in its infancy, and many people are utterly unaware of it. Even if some material has reached them, they are unable to determine the value or benefits of taking an online course. Because the children are unaware of the relevance of education in the developing world, they do not recognise its significance.

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Lack of awareness is one of the obstacles in online education.

Inadequacy of teachers in rural areas

There is a glut of competent instructors in many urban locations, yet there aren't enough jobs to go around. However, finding exceptional teachers in rural areas can be incredibly challenging. Teachers in rural locations struggle to connect to the internet, and a lack of awareness about new technologies creates barriers to online education. The traditional method is to give increased compensation or better perks, but this can be difficult to justify. So it is one of the barriers in online education.

Data cost and access to appropriate devices

When it comes to digital learning, it's critical to keep track of the availability of appropriate devices for each student to access digital content. In rural places, only a small percentage of the population has access to laptops and computers. Even pupils with access to desktops and laptops are unable to use the internet due to the expenditures involved. Apart from that, the phone displays offered to children are insufficient for long periods of study. Both professors and students are discouraged from continuing with live classes as a result of the data packages and their prices.

Skill deficiency

Another major impediment to the progress of digital education is the lack of expertise among teachers in rural areas to handle digital platforms. Teachers are hesitant to employ these teaching methods because they lack the essential skills to use digital platforms.

Familiarity with Face-to-Face Communication

For generations, the traditional F2F mode has been in use. This way of teaching and learning has been around for a long time. This creates a psychological barrier that makes people want to stick with the old system rather than try something new and different. The presence of a school/college building and teachers allows students to see the system on the outside even if it is broken on the inside.

Disentangle learning material leading to lowered motivation:

Interactivity, collaboration, quick feedback, and personalisation should all be present in online classes. These are necessary for increased motivation and engagement. Because of the separation of learners from their teacher, peers, and the institute, online learning may perform worse than traditional learning if these factors are missing. This is one of the barriers in digital education in rural areas.

Remedies to overcome the obstacles in online education in rural areas:

To overcome the obstacles teachers

- The Teachers should be provided sufficient training on how to use emerging technologies

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- The government should take the necessary steps to ensure that signals are received in all rural regions
- Local and national governments must work together with the IT and edtech sectors to speed up the process of bringing innovative and cost-effective online education tools to rural India.
- New methods of teaching should be introduced and building on pre-existing infrastructure like Language Lab, Smart Boards, and Internet facility with WIFI will overcome the obstacle.
- All the stakeholders have made significant investments in improving access to digital services and e-learning

CONCLUSION:

For the past two years, the world has been increasingly digitalized in all disciplines, resulting in growth or loss. Human existence has changed dramatically as a result of digitization. All learning and writing has been digitalized, and education has become virtual. In comparison to rural areas, the expansion of online education in cities is particularly rapid. The decline in growth of education in rural areas is because of these barriers. This demonstrates that digitalizing education in India's semi-urban and rural areas is a difficult task to accomplish, and we still have a long way to go.

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ONLINE EDUCATION: CHALLENGES FACED BY RURAL COMMUNITIES.

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ABSTRACT

Explore challenges faced in rural communities during pandemic period while organizing the online career. Online education is one of the unconventional guide to bridge the gap between what industries expect and what the educational institutes are delivering. Online education offers an opportunity to enhance skills through advance courses available in different domains. This study identified the challenges faced by students and mentors in rural communities in achieving their educational goals and establishes possessions of these disputes in accomplishing their course of learning.

Keywords: Corona, on- line, education, pandemic, technology.

INTRODUCTION

Online education is a course of action for gaining knowledge through electronic devices like computers, mobiles, laptops etc using the internet. Those who cannot focus customary regular classes can concentrate and learn anything from anywhere using internet. Online educations turn out to be a great source of education that is offered for the students through the far-fetched inventions of devices / technology [1]. This type of learning cannot be attained during the traditional classroom learning.

This mode encompasses audio, text, video, animations, chats with tutors. The implicit virtual training was instructed by the teachers to the students. Today there is such an easy way to get an education that we do not need to go anywhere to get an education. To take instruction, we can get education from the teacher just sitting at home from the online mood [2].

In today's time, amenities like the internet are accessible in all the residences. Online education is providing to be very effective in the instant of Corona [3]. In this day and age online education is becoming very customary everywhere whether it is village or city and can join online education anywhere in the country or abroad. Nowadays online education is providing to be very advantageous for the learners.

The virulent disease has brutally impinged on education and educational systems across the world. Educational institutions around the world were temporarily closed in an attempt to reduce the impact of Corona. Learners around 1.077 billion have been affected owing to school closures. Many big organizations have found

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only one elucidation for this, which is online education [4 - 7]. The effect of which can be seen everywhere. Online education is being achieved in the course of computers in a way with the facility of the internet. Computers and many types of gadgets are used for online education. But for this the eminence of the internet should be good, where the teacher sits far apart, whether that place is at home or outside the house, they can provide education to their students. Through this, teachers and students are exchanging their ideas, which is a good way to understand education.

2. Benefits of Online education

Technology changes education

In the shifting environment, there have been many changes in expertise and its use is also gigantic. Many alterations have also been seen in the way of captivating education due to technology [1]. Today, the teaching-communicated material used in online education can be sent from one place to another through technology online.

Brave to have notes

In online education, we do not have to fear like a classroom that we have to be attentive and make notes with the teacher. We can hiatus our video, capture and watch it yet again and moreover memorize them easily.

Online education expedient

Online education is incredibly well-situated. In this, the student can sit anywhere and acquire education. Students do not have to go outside the house and they get education while be seated at home itself.

Technology facts during online education

Online education of children is available on at this time and have taught new technology like video chatting and overwhelming their studies. Children are learning a new way of reading from their teachers and are also taking interest in reading [8]. The changing atmosphere of learning has furthermore ended studies with fun and more excitations and is finding it more remarkable and contented to teach while staying at home.

3. Detriments of Online education

Internet exploitation

The prevalent inconvenience of online is that yet if parents go against their financial condition, they should provide facilities like mobile, laptop, computer to the children. But whether the children are taking proper education from them, they linger oblivious of these things. And children take the erroneous improvement of this and initiate engage in recreation all over games in it. Or unwrap the erroneous belongings, which are not accurate for them.

Lack of concord between teacher and student

Lack of harmony between the teacher and the children comes forth. If this education was in the habitual form and does not understand, then they converse that subject matter with the teacher in the class at the same time. Teachers are not proficient to enlighten the students thereby the students cannot understand the concepts and remain compatible [9].

Substantial destruction

Both mentors and learners are facing corporal problems due to the use of online education. Incessant learning while in the peak 6-8 hours, the light of the screen of a computer, laptop has a terrible consequence

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on their eyes and physically are getting tedious which is actually very harmful.

Abundant Distractions, Lack of Discipline

Students find learning online bored and often complained of lacking the motivation to make it through a class. Lack of essential tools makes the classes engaging, leading to a loss of interest from both tutor and learners. Due to insufficient online teaching method, education quality often becomes compromised. Coupled with the free use of laptops and mobile phones during classes, distractions have become countless, often coming at the cost of focusing during class.

Lack of focus

When the learners was unable to compensate proper attention to their studies by going to school, then where will they pay attention in online education [10 , 11]. In online education, the student stops or breaks learning by the middle by making numerous justifications, which are incorrect.

Intricate online education accessible

Online education may not be existing to each one. Since they can afford only for two times of bread, and how they provide facilities like computer, mobile and laptop for their children. Due to which the tutoring of the children of poor families were not able to step forward further and they are enforced to stay at home without learning [12].

Weak Internet

Access to the internet, has been the prevalent factor in obstructing the appropriate penetration of digital education among the rural population. The lockdown imposed for many months also impeded children from assembling in one place with better internet connectivity. They were essentially cut off from education for months at a stretch.

Even if several rustic areas are blessed with good internet connectivity, not several families can afford digital devices which are crucial for online learning. Members, who rely on the mid-day meal scheme to feed their children, cannot afford to spend thousands of rupees on a smart phone, leave alone a desktop or laptop. This lack of monetary dispensation has forced many parents to take their children out of schools. It is apprehensive if they will go again, to schools. Conversely, the entire circumstances in rural India are not desolate. Lots of teachers have developed inventive ways to train their wards, even in a pandemic [1].

Financial problems

Scanty incomes of parents lead the education of kids taking a backseat, expense rather than an investment tending their children to work and earn. During their higher education, students have a look by shifting to cities, which also adds their expenses. This problem leads to low rates of enrollment and higher dropout rates.

Lack of control

Pupils in rural regions have great potential and are motivated to study but lack right counselor for the children and their parents.

Lack of infrastructure and faculty

Children have inadequate indispensable learning tools such as well-equipped classrooms, computers, labs, playgrounds, etc. Often, the faculties are often not qualified leads to a poor quality of education, low morale among students.

Gender inequality

Girls are not allowed to go to school in few rural areas and are not allowed to

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move out of their hometown for higher education or seeking better jobs. With the use of smart phones in rural areas, e-learning platforms are rather easier and affordable.

4. Case Study

The Cart School

Haryana, Jhamri village, an innovative instance was noticed as the brainchild of Satyanarayan Sharma. A cart acted as the area of a classroom parked itself at the village centre and the teacher imparted lessons by help of a loudspeaker. To maintain social distancing, students take part in the class from their homes. His innovative method ensures that education is impervious by the existence or else of internet connectivity.

Sharma explains this unique method of teaching provoked the main aim to ensure that students do not drop out of schools. Hence arranged a loudspeaker attached to a cart thereby teachers take turns to give lessons in this mobile classroom. The cart is parked at a position from which maximum students take part in the class and not be enormously infallible, but ensures that students do not lose touch with schools.

Public Announcement System

Janan village in Gujarat, Ghanshyambhai a mentor, ensures that children's learning is not disrupted and started to use the public announcement system of his village panchayat to instruct education highlighted by stories and songs that even guided parents on the best ways to handle kids during lockdown. Complicated subjects like mathematics over a loudspeaker is tedious and cannot reach the learners properly. But the system kept children in touch with their education.

Furthermore, focused more awareness to sustain and maintain a healthy lifestyle.

Group Study

In Bhadole village of Maharashtra, teachers imparted education during the pandemic period by identifying students having smart phone and internet access and clubbed them with students who don't have access to internet made an effective group study with limited resources. Lesson plans were generated and circulated to the parents having phones. Others make use of this opportunity and finish their duly work assigned in their home and send the completed assignments to the teachers via the same phone. Moreover, the teacher's pooled money to make certain data recharges of the parents' phones and also ensured social distancing by telling not to gather simultaneously in the homes of those with phones. This ensures that no one bears excessive cost for this team learning, and that education is seamless.

5. CONCLUSION

The present scenario of education in rural India during Corona period is significant to construct schools in every village, providing proper and adequate infrastructure and other resources, using modern technologies in education, creating awareness about the importance of education and rights. Online education has advantages and disadvantages, but spaced out from all these things, the most crucial passion is to indenture an education.

Consequently, online education is the major means of education today. Rural India chiefly has been conceited by the spontaneous reliance on online learning. Online education for the pupils are more

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challenging owing to multiple problems like unavailability of the network, lack of resources to buy the necessary gadget and data, power problem, inadequate knowledge, not conducive home climate, and lack of direct contact between student and teacher. Although, it has approached the concern seriously by including all the stakeholders by proper remedies.

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ONLINE EDUCATION ON PANDEMIC: ISSUES, AND SOLUTIONS

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ABSTRACT

The pandemic outbreak altered people's lives all over the world. Education is the most affected sector. Education is an effective tool in today's information age for enabling thinking by transforming information into knowledge. It is so highly valued that the right to education is regarded as one of the people's fundamental rights. With an ever-increasing adoption rate, Information and Communication Technology (ICT) has become ubiquitous in today's world. India implemented the Right to Education Act, which mandates free and compulsory education for all children aged 6 to 14, ensuring education for a large number of children from poor backgrounds. This paper discusses the issues faced in online education, and factors affecting the socio-economic background of children.

Index Terms- Information Communication Technology (ICT), Right to Education, Socio-Economic, Online Education

INTRODUCTION

COVID – 19 Pandemic

According to a UNESCO report, the coronavirus pandemic has kept 321 million children in India at home due to school closures since the lockdown was announced on March 24, 2020. Employment opportunities for India's massive migrant workforce are a very aspirational discourse, both economically and socially. As most of these workers have settled their families in cities over the years, they have been enticed by the promise of educational opportunities and a better future for their children. When access to education intersects with the concept of gender, it has also been an unequal terrain. Gender equity has been an unrealized goal, and as the pandemic continues to deny formal education to so many Indian children on the margins, young girls face a bleak future as their families' limited resources make their return to school unlikely, because the boys in their families will have priority when it comes to paying school fees. However, discussions about the physical reopening of schools are gaining traction in India right now, with some states allowing partial reopening for higher classes and dealing with an increase in the rate of infection among students and teachers as a result. [1]

E-Learning in Pandemic

The United Nations Sustainable Development Goal is to ensure that all people have access to affordable, reliable, sustainable, and modern energy, which is especially important for rural communities in low-income countries where access to energy is typically limited [2].

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Education is critical to nation-building, and having literate, well-informed citizens is critical to the country's progress. Literacy and educational attainment have long been recognized as important indicators of a country's development, as they not only foster personal development but also determine employment opportunities and opportunities for overall human & social development [3].

E-learning enhances learning by expanding and complementing face-to-face learning rather than simply replacing it. The term "e-learning" originated in the United States in the 1990s, but only gained popularity in the late 1990s. E-learning is less about technology and more about learning based on technology. E-learning appears to be a more systematic approach to learning than previous developments, particularly when compared to several other learning approaches, due to its completely integrated nature [4].

ISSUES IN ONLINE EDUCATION

The education industry was one of the hardest hit by the COVID-19 pandemic, with schools scrambling to find ways to keep their doors open. Many advantages of online education include portability, ease of access, reduced need for physical infrastructure, lower costs, and greater flexibility. But that doesn't mean it doesn't have flaws. The students who recently switched to an online – learning system found the experience boring and struggled to motivate themselves to pay attention in class.

The most significant challenges confronting online education today,

Students' Lack of Motivation

Online learning was thought to be the new interactive and immersive method of teaching the next generation of students. Students complain about a lack of motivation in online classes due to a lack of interpersonal contact between students and teachers.

Physical interaction between students is also required to maintain engagement, which the online learning methodology does not address.

Infrastructure Issues

Though online learning does not necessitate large buildings, large classrooms, chairs, tables, and chalkboards, this does not mean that there are no infrastructure requirements. A computer, appropriate software, constant electricity, and high-bandwidth internet are all in high demand.

In-person interaction is lacking

The physical presence inside a classroom with a teacher and peers often creates an atmosphere that cannot be replicated virtually.

Course Design and Quality

The transition to online learning and other modern teaching tools was expected to result in a modernization of the course curriculum and structure. Unfortunately, this has not been the case. Even after going online, institutions kept their out-of-date course curriculum and structure.

Distractions abound, and Discipline is lacking

Due to recurring technical issues, bandwidth issues, and monotonous lectures,

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online attendance has dropped dramatically. Most students find online learning to be tedious and frequently complain about a lack of motivation to complete a class. Even teachers frequently complain about a lack of tools to make their classes more engaging, which leads to a loss of interest on both sides. Education quality is frequently jeopardized due to the lack of accountability in the online teaching method.

SOLUTIONS FOR ONLINE LEARNING

Different tools for education during COVID – 19 pandemic based on UNESCO (United Nations Educational, Scientific and Cultural Organization). The educational applications, platforms, and resources listed below are intended to assist parents, teachers, schools, and school administrators in facilitating student learning and providing social care and interaction during school closures. UNESCO categorized the functionalities based on distance learning needs

Web Application for Online Education

- In this approach, UNESCO provides various online learning tools for students, parents, staff, and research scholars.
- Learning Management System (LMS) is a software application that is mainly used for the delivery of educational courses, training programs, or learning and development programs.
- UNESCO provides the following web application tools to improve the level of learning even during the pandemic,

S.No	Company Name	Description
1.	Century Tech	This is a digital education drive that creates a personalized learning path for each learner based on their specific needs.
2.	ClassDojo	A web application that connects teachers with students and parents to build amazing classroom communities. ClassDojo is mainly used to engage the kids.
3.	Edmodo	This is an educational technology company that provides a platform for communication, collaboration, and coaching to K-12 schools and teachers
4.	EkStep	EkStep's mission is to improve literacy and numeracy by enhancing access to learning opportunities for 200 million children in India. It provides learning opportunities for children.
5.	Google Classroom	Google Classroom is a free blended learning platform developed by Google for educational institutions that aim to simplify assignment creation, distribution, and grading.
6.	Moodle	Moodle is a free learning management system that provides a platform for e-learning. It greatly assists various educators in conceptualizing the various courses, course structures, and curriculum, thereby facilitating interaction with online students.

Mobile Application for Online Education

- ✓ There are a number of mobile applications that are recommended by UNESCO for online education during the pandemic. Below are some of the mobile applications that are used as an online learning tools,

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S.No	Company Name	Description
1.	Cell-Ed	Cell-Ed addresses one of the world's most difficult challenges: teaching people the skills they need to thrive. Reading a child's homework, searching the internet, communicating confidently, managing time, and navigating health care are all examples of skills.
2.	Eneza Education	Eneza Education is an ed-tech company that provides curriculum-aligned revision material in all subjects on any device to primary and secondary students. Our virtual tutor gives learners in primary and secondary school access to curriculum-aligned content in all subjects via SMS and Web.
3.	Funzi	Funzi is the most accessible learning ecosystem on the planet. Anyone with a mobile device can learn 21st-century skills with our short self-study courses.
4.	KaiOS	Software that adds smartphone capabilities to low-cost phones and opens doors to new learning opportunities.
5.	Ustad Mobile	you can access and share educational content in offline.

Offline Tools

✓ Some of the companies provide learning facilities with offline functionality. Below are the companies list,

S.No	Company Name	Description
1.	Kolibri	Learning applications are available in over 20 languages to support universal education.
2.	Rumie	Education tools and content for underserved communities to enable lifelong learning.
3.	Ustad Mobile	Access and share educational content offline.

Massive Open Online Course (MOOC) Platforms

✓ It provides remote learning opportunities to students all over the world.

S.No	Company Name	Description
1.	Alison	Thousands of free online courses leading to certificates and diplomas are available. Get Career Advice and Improve Your Resume.
2.	Canvas	Network - A free course catalog for teachers to support lifelong learning and professional development.
3.	Coursera	Online classes are taught by instructors from well-known universities and businesses.
4.	European School net Academy	Online professional development courses for teachers in English, French, Italian, and other European languages are available for free.
5.	EdX	Leading educational institutions offer online courses.
6.	iCourse	University students can take Chinese and English language classes.
7.	Future Learn	Online courses to assist students in studying, developing professional skills, and connecting with experts.
8.	TED-Ed Earth School	During the five-week period between Earth Day (April 22nd) and World Environment Day (June 5th), online nature lessons were made available on a continuous basis (June 5th).
9.	XuetangX	A collection of universities offers online courses in Chinese and English on a variety of subjects.

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Live – Video Communication Platforms

✓ Communicate the information to the students in an effective way, the live-video communication platforms are used,

S.No	Company Name	Description
1.	Dingtalk	Video conferencing, task and calendar management, attendance tracking, and instant messaging are all supported by this communication platform.
2.	Hangouts Meet	Video calls are integrated with other G-Suite tools from Google.
3.	Teams	Microsoft Office software includes chat, meet, call, and collaboration features.
4.	Skype	Video and audio call with the ability to talk, chat, and collaborate.
5.	We Chat Work	Messaging, content sharing, and video/audio conferencing tool with up to 300 participants, available in English and Chinese.
6.	Whatsapp	Mobile application for video and audio calls, messaging, and content sharing.
7.	Zoom	Cloud-based video and audio conferencing, collaboration, chat, and webinars platform.

Tools to Create a Digital Learning Content

✓ In online education preparing a study material is a tedious job. Below are some of the companies which provide a tool for creating digital learning content [10].

S.No	Company Name	Description
1.	Thinglink	Tools for creating interactive images, videos, and other forms of multimedia content.
2.	Buncee	Supports the creation and dissemination of visual representations of learning content, such as multimedia-rich lessons, reports, newsletters, and presentations.
3.	EdPuzzle	Software for creating video lessons.
4.	EduCaixa	Courses in Spanish to assist teachers in developing learners' skills and competencies in areas such as communication, entrepreneurship, STEM, and big data.
5.	Kaltura	Tools for video management and creation, as well as integration with various learning management systems.
6.	Nearpod	Lesson creation software that includes informative and interactive assessment activities.
7.	Pear Deck	With various integration features, it makes it easier to create engaging instructional content.
8.	Squigl	A platform for creating content that converts speech or text into animated videos.
9.	Trello	Teachers and professors use this visual collaboration tool to help with course planning, faculty collaboration, and classroom organization.

Solutions can be provided by Government and Education Institution

The government can implement various pandemic education schemes to fund both private and public educational institutions. Educational institutions must plan for the expansion of smart room classrooms using the funds provided. Similarly, private educational institutions must devise a plan for

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online education during the pandemic. The scheme should identify students with low socioeconomic status and provide them with financial as well as educational support.

CONCLUSION

COVID-19 has had a huge impact on India's education sector. While it has created many challenges, it has also created numerous opportunities. To deal with the current COVID-19 crisis, the Indian government and various education stakeholders have investigated the possibility of Open and Distance Learning through the use of various digital technologies. India is not fully equipped to ensure that education reaches all corners of the country via digital platforms. Students who are not as fortunate as others will suffer as a result of the current digital platform selection. The priority should be to use digital technology to put millions of young students in a better position in India. It is urgent for educational institutions to improve their knowledge and information technology infrastructure. India is not fully equipped to ensure that education reaches all corners of the country through digital platforms. Students who are not as fortunate as others will suffer as a result of the current selection of digital platforms. This paper discussed the issues faced in online education and the solutions to improve the efficiency of online education.

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CHALLENGES AND REMEDIES IN ONLINE EDUCATION IN RURAL INDIA

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INTRODUCTION

- The whole world is adjusting to the reality of the covid-19 pandemic by finding alternatives to the disruptions caused thus far.
- Corporations are allowing their workforces to work from home, while schools and colleges are moving classes through online.

Online impact on rural communities

- As the country takes to online education, the current pandemic is impacting rural students more than those who live in cities.
- Furthermore, purchasing data plans for learning could also incur a lot of expenses for families who face financial constraints.
- There were no regular classes or tuitions for them. Lack of teacher- student, Student-Student interaction and blackboard method of teaching and learning affected the quality of education given to the students.
- Doubt clearance becomes very difficult in the online method. **Weak Internet**
- A large part of the Indian population has little or no access to the internet.
- The need for a computer, adequate software, constant electricity and high bandwidth internet is quite a big demand for rural communities.
- Even if some rural areas are blessed with good internet connectivity, not many families can afford digital devices which are imperative for online learning.
- Even if they can afford mobile to their children, they can't able to recharge every month for the online classes due to lack of employment in rural areas in the pandemic situation.

Lack of privilege

- This lack of financial privilege has forced many parents to take their children out of schools. It is unsure if they will return, now that schools have reopened.

Struggles faced by children

- In this pandemic situation the rural community children are go to the domestic works to fulfill their basic needs and also girl children are forced to get married.

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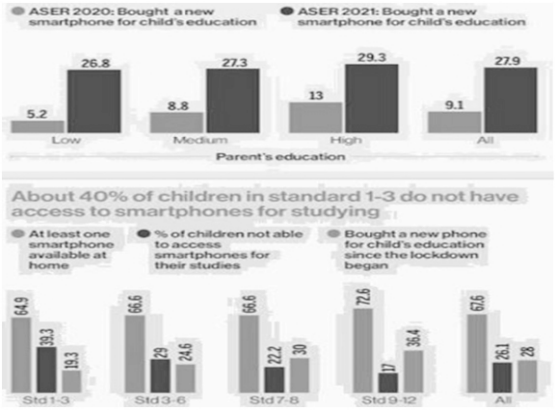
Communication issues

- Students are lack of effective communication skill during online learning. There are some students who feel shy to communicate with their teachers and friends due to the new model of learning.
- It might happen due to lack of interest, poor technological skills with apps and video calls or unable to express themselves via Live chats, Emails or text messages.



Lack of faculty

- In schools, there is an lack of faculty. Many of the teachers are losed their job during this pandemic.
- In the online classes, according to the survey only 15 students can be accommodate by 1 teacher. But 100 Students are accommodate by single teacher.
- This is the fact that happens in the online classes. There is no doubt can be asked by students due to the communication and technical issues.

Teachers difficulties

- Furthermore, more teachers and students in rural areas are not able to match up to the technical skills of educationalists and students in cities.
- And in the online classes, parents also want to takecare to improve their knowledge, technical based skills and identify their extracurricular skills. But in the rural communities parents had no schooling.
- This study found that teachers did not have proper knowledge about online classes and had not been given any training.
- As the teachers are middle-aged or old, they usually do not know how to conduct online classes via smartphones or laptops.
- Due to online classes, some teachers faced lower self-esteem, productivity in teaching , and their motivation level decreased.
- Many teachers have developed innovative ways to educate their wards even in pandemic like,
  - Cart school
  - Announcement system
  - Group study
  - Illamthaedikalvi by state government
  - Through videos in youtube
  - Homeworks
  - Providing assignments

Announcement System

- Through the public announcement system of the village panchayat to impart education and also guides parents on the best ways to deal with children during lockdown.

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Group Study

- They have identified students who have a smartphone and internet access.
- They have then clubbed them with students who don't have access to internet.
- This makes for an effective group study which makes great use of limited resources.
- The teachers send lesson plans to the parents who have phones. The other students note these down and finish their homework in their own homes.
- The teachers have also ensured social distancing by telling the students not to gather together in the homes of those with phones.

Government initiatives through online mode

- To translate the power of IT into an extended learning opportunities for all is the ethos of online learning.
- The Government of India has launched the National Mission on Education through ICT(NMEICT) to democratice the opportunity of online learning.
- To promote digital education, various initiatives have been taken such as SWAYAM, SWAYAM Prabha, Shodh Ganga INFLIBNET, National Digital Library and National Academic Depository by the Ministry of Human Resources Development.
- Beside these platforms, the MHRD has developed the Diksha app, Channel (Eg: Kalvi), Illamthaedikalvi and numerous initiatives for the development of online learning in India.
- As there were no other alternative, both the central and state Government ordered the online learning method during lockdown to resume the teacher- learning process.

CONCLUSION

- The findings of the study are significant for the implementation of online education.
- It is suggested here that proper training should be provided to both the students and teachers.
- Caring and training for teachers are some conditions of recovery from the catastrophic situation and sustainable education practice of the future.
- Smart phones and other necessary extensions should be provided to economically poor students.
- If possible, schools and other educational institutions should be reopened with adherence to social distancing and proper precautions to prevent the individuals from getting affected.
- On the bright side, all the stakeholders have made significant investments in improving access to digital services and e-learning.
- Local and National governments must work together with the IT and ed tech sectors to speedup the process of bringing innovative and cost-effective online education tools to rural India.

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ONLINE EDUCATION: CHALLENGES FACED BY RURAL COMMUNITIES

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ABSTRACT:

The whole world is adapting to the reality of the Covid-19 pandemic by tackling alternatives to disruptions that have occurred thus far. Companies allow their employees to work at home, while schools and colleges switch classrooms online. COVID-19 has been a challenging time for all. Schools that are particularly located in rural areas are confronted with problems, both in terms of financial impact and individual division. In villages, students face difficulties in accessing online courses provided by their institutions mainly because of poor data connectivity, lack of access to laptops and smartphones, and some problems with power issues. In India, people rely a lot on strong internet connections, computers, or smartphones to go back to business during the new normal. The crisis has created an incentive for students to take advantage of online learning opportunities, as there is no end in sight. While the country is turning online education, the current pandemic is affecting rural students more than those living in cities.

Digital learning has become an integral part of India's education landscape as a result of COVID-19.However, the diffusionof digital education has been hampered by the large gap between the haves and the have-nots.Conducting online classes in a rural area has its own challenges and many students who do not have access to smartphones or internet service get left out in the process. Rural India in particular has been affected by the sudden dependence on e-learning.Based on official statistics,India has more than 35 careers students. However, it is not clear how many of those students have access to e-learning.The majority of the Indian people have limited or no access to the internet. This is the most significant factor that has affected the adequate penetration of digital education among the rural population. The lockdown imposed for many months also prevented children from coming together in one place with better internet connectivity.They were left without education for months.

While some rural areas are fortunate to have good internet connectivity, few families can afford the digital devices that are essential to online learning.Families who rely on the mid-day meal plan to feed their children properly cannot afford to spend thousands of rupees on a smartphone, leaving a desktop computer or laptop on their own.This lack of fiscal privilege has forced many parents to remove their children from school.However, the whole situation in rural India is not grim.Many teachers have

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developed innovative methods for educating their wards, even during a pandemic.

For the vast majority of the people living in rural areas, education is strongly dependent on public or aided schools and non-governmental organisations.But rural areas still face a variety of obstacles that have a direct impact on the literacy rate of the country.The 2020 National Education Policy focuses on digital learning as an alternative to the traditional classroom model, but implementation in rural India will pose certain challenges.

Conducting online classes in a rural area has its own challenges and many students who do not have access to smartphones or internet service to be put on hold in the process. But online learning is transforming the sector, even in remote rural areas.While many benefit from what e-learning offers, local authorities find it difficult to integrate broadband internet facilities. In addition, rural residents also face intermittent feeding and older electronics, which are often a barrier to continued access.

Unfortunately, students in rural India are being turned away from the newdevices and new levels of online content that urban Indians enjoy every day. In contrast to their counterparts in cities, a smaller percentage of students in villages own desktops or laptops. They rely on their family's mobile phones to learn and take courses, which makes it a difficult exercise. Viewing small screens to consume as much information as possible for long hours could adversely affect student health.

As well, the purchase of learning data plans could also result in significant costs to families facing financial constraints. It may also have an impact on the levels of teacherand student participation in live classes. Digital literacy and the digital divide have been of great concern to our country for more than a decade. Many teachers and students in rural areas do not meet the technical requirements of city teachers and students.

In some places, girls do not have the right to attend school. Or if permitted, it is only till a certain age.They cannot leave their hometowns for higher education or better jobs.While most of these areas require transformative change, which will take time, technology can accelerate it. As smartphones become more widely used in rural areas, online learning platforms are easily accessible.Many of them are affordable. This new approach to learning can attract children. The courses of the best electronic libraries of educators for research material and teachers will all be available in a moment.Vulnerabilities such as the lack of access to quality content and training mechanisms can be addressed. At this unprecedented time, the integration of technology and education has great potential.

They face barriers when switching from offline to online education, which could be a causeof dissatisfaction amongst rural communities. The collective efforts of civil society organizations, policymakers and the government are needed to create aneasy-to-

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use digital interface so that teachers and students find it suitable for continuous learning.

On a positive note, all stakeholders have made significant investments to improve access to digital services and e-learning; building on an existing infrastructure may facilitate the digital inclusion process. Teachers could make a seamless transition if they received the necessary support. Local and national governments should work in collaboration with the IT and Educational tech sectors to speed up the process of implementing innovative and profitable online educational tools to rural India.

Teachers have shown an alternative and innovative way to influence education during confinement.They identified the students who have a smartphone and an internet connection.They have then clubbed them with students who don't have access to the internet.The result is an effective cluster study that makes extensive use of limited resources.Teachers send course plans for the parents who have phones. The other students keep track of them and finish their homework at home. Afterwards, they send the completed assignments to the teachers using the same phone.

Teachers also provided ensured social distancing by telling the students not to meet in the homes of those who have a phone.Instead, students have been told to access the internet in timeslots. In addition, teachers sought money to ensure that data from parents' phones would recharge.This ensures that nobodypays excessive costs for this group study, and that education is flawless.Although these methods can be used temporarily, they cannot provide a permanent solution. It is imperative that we create a learning environment for children, while maintaining Covid precautions.

Barriers to digital education in rural India can be overcome by providing affordable and accessible online learning opportunities. The Standardization of content, the facilitation of all essential equipment and services in public schools through the public-private partnership model, the trainingof teachers by providing them with customized teacher-training programmes on e-learning, blended learning in schools as well as the advancing initiatives in digital learning space by NGOs & CSR wings of organizations needs to be considered to propel digital education in rural India. Apart from this, all stakeholders should gather and provide an ingenious pedagogy, accessible educational facilities,adequate infrastructure and a quality, ecosystem for expanding digital learning in rural India.

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ONLINE EDUCATION: CHALLENGES FACED BY RURAL COMMUNITIES

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ABSTRACT

Education in the present scenario is an unpredictable one, because the Corona Pandemic has reshaped the educational system in to online mode. Certainly it is innovative but obviously it is a very new method of teaching especially for the rural students.

Owing to Covid-19 pandemic educational Institutions across the world have been closed and online classes started. Online education is an alternative to conventional offline education. Though online education in considered to be a substitute for offline education, these are certain short comings in the former. Unless such short comings are eliminated, the fruits of online education will not reach the needy. Here an attempt is made to enumerate the challenges faced by rural students in online education and offer suggestions to overcome the hurdles.

The problems faced by the rural community:

- *Internet connectivity:*This is still a massive problem in rural and remote areas (Poor internet connectivity). During online exams, internet connectivity is a major challenge for the successful downloading and uploading.
- *Technological devices* – Unfortunately the newest devices and accessibility to online content is unaffordable for students in rural areas but it is not so for urban students.
- *Health issues* – Tablets, Laptop, PC are unaffordable to rural students due to poor economic background, as a result they are forced to use smart phones for attending the online classes which leads to eye sight problems.
- *No proper environment in the house to attend the class* - There is no proper environment inside the house and there is no adequate support from their parents while attending the class.

Suggestions to overcome the situation:

- *Awareness* – Since rural students have poor knowledge in using the technological devices, awareness programs may be conducted to enhance

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the familiarity with creation of Whatsapp group, e-mail ID, downloading files, uploading files, zoom meet, Google meet, Google class and Google drive etc.,

- Awareness programson online education for rural students and their parents may be conducted at Secondary Educational level onwards.
- Instead of having academic activities throughout academic year on offline mode weekly once students may be invited to attend online meeting, online seminar, online tests, online exams etc., this will help them to have continuous touch in online mode.
- Computer skilled volunteers may be engaged for rectifying technical problems which are faced by rural students then and there.
- Since there is no suitable environment in the houses of rural students for attending the online classes, they may be permitted to access the community halls and schools with Wi-Fi facilities which are already located in their residential areas.
- Free data card may be provided to rural students to enable them to attend the academic activities which will be held online mode.

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ONLINE EDUCATION: CHALLENGES FACED BY RURAL COMMUNITIES

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ABSTRACT :

The whole world is finding alternatives to the disruptions caused Covid-19 pandemic. by finding alternatives to the disruptions caused thus far. Govt and private sector allowed the White-collar employees and professionals to work from home, whereas the schools and colleges moved to online Classroom. But the student community from rural areas are experiencing challenges due to the due to various factors such as no electricity or electricity with limited hours, insufficient or lack of digital devices to support lesson delivery and learning , network connectivity or band with issues to load the learning contents and. The challenge is not only for the learner, the trainer or educator also facing the challenge due lack of previous experience in online teaching. Accepting the fact that face to face class is not possible with the increase in the infection rate, the educators must learn the new technology and self-trained themselves to conduct the class online.

This paper will analyse the challenges and address some solution to adopt a smoot transition from traditional education system to online delivery learning platform.

Key words: COVID-19, Challenges, Rural Community, Online education, Synchronous and Asynchronous lesson delivery, DIKSHA

Background : With no choice left the (COVID-19) pandemic has forced many sectors for a temporary shutdown or to continue the business by adopting the new norms such as safe distancing and safety measures in place . In Education sector the well developed and developing countries had made the transition to an online education during the coronavirus disease 2019 (COVID-19) pandemic. This may bring about adverse educational changes and adverse health consequences for children who are in primary education to young adult learns in professional schools and colleges.

Indicators relating to literacy, status of education and vocational/technical training

Introduction: Key points Considered

- Infrastructure availability to conduct the Online learning
- Online learning Awareness creation among students, parents and teachers
- Overcoming the barriers World Health Organization (WHO), health care professionals, scientists, government and

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public health officials have worked to ensure the health and safety of the public with attention to the most vulnerable . A total of 320 million learners in India have been adversely affected and transitioned to the e-learning industry, which comprises a network of 1.5 million schools. An NSSO 2014 report highlights that 32 million children were already out of school before the pandemic — the majority of them belonging to the socially disadvantaged class in the country.

Sr No	State	Rural		Urban	
		Operate Computer (%)	Access Internet (%)	Operate Computer (%)	Access Internet (%)
1	Andhra Pradesh	1.5	10.4	11.6	29.5
2	Assam	3.7	12.1	30.8	46.9
3	Bihar	2.7	12.5	20.0	38.6
4	Chhattisgarh	3.2	10.6	22.0	34.6
5	Delhi	NA	NA	34.7	55.8
6	Gujarat	4.4	21.1	20.1	49.1
7	Haryana	5.9	37.1	29.5	55.5
8	Himachal Pradesh	10.5	48.6	28.3	70.6
9	Jammu & Kashmir	3.5	28.7	16.0	57.7
10	Jharkhand	1.3	11.9	15.6	40.2
11	Karnataka	2.0	8.3	22.9	33.5
12	Kerala	20.1	46.9	27.5	56.4
13	Madhya Pradesh	2.3	9.7	17.2	35.4
14	Maharashtra	3.3	18.5	27.4	52.0
15	Odisha	1.8	5.8	17.2	31.2
16	Punjab	9.4	39.4	26.7	57.1
17	Rajasthan	6.4	18.5	26.6	49.9
18	Tamilnadu	11.6	14.4	24.7	24.8
19	Telangana	1.6	9.9	17.6	41.9
20	Uttarakhand	7.0	35.2	32.5	64.3
21	Uttar Pradesh	4.0	11.6	22.3	41.0
22	West Bengal	3.3	7.9	23.0	36.0

Source: 75th round of National Sample survey conducted between July 2017 and June 2018

E-Learning Challenges Can be categorised into these four categories

1. Political & Economic
2. Social
3. Technology
4. Pedagogical

Political & Economic: The Digital divide

According to one of the surveys, According to **World Poverty Clock**, the number of people who are living in poverty is 97,697,747 (97.7 million) or roughly 6% of the population. There are 44,806,455 males and 52,891,292 females impacted by poverty in India. Females are more affected than males. One of out 7 Indians falls under the poverty line and This shows that this population is not able to afford for the digital devices for the online class.

There are few states in India, which does not get more than 12 hours of electricity in a single day. So, power cuts is a major challenge to the Online education system which should be addressed simultaneously with increasing the electrification scenario. As the survey data from DATA **Journalism**

Report says that nearly 96% villages in India are electrified but only 69% of homes have electricity connections, according to a new report that draws on data from six states. The government is trying it's best, to make the country 100% electrified, but in reality If a few homes are electrified in a specific village, the complete village will be considered to have electricity most homes may still not be electrified . The major challenge of remote learning is disparity in access – from electricity and internet connections to devices like computer or smartphones.

Mission Antyodaya, a nationwide survey of villages conducted by the Ministry of Rural Development in 2017-'18, showed that 16% of India's households received one to eight hours of electricity daily, 33% received 9-12 hours, and only 47% received more than 12 hours a day. While a computer

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would be preferable for online classes, a smartphone could also serve the purpose. able to afford a computer or laptop for the kids in the family to get access to digital education.

There are certain parts of Indian rural community where they do not even have the basic housing and food and families are sending the students to school to educate and for the noon meals. This Online education can be an substitute the class room learning and will not do any help in feeding their noon meals. When the families are struggling for the basic needs, When it comes to dealing with laptops and computers in rural areas is a major challenge, as well as the parents are completely literate and do they do not have any computer literacy skills to assist the kids in the online learning process .

The grouping of the learns age plays a major role in online education whereas the children below 7 yrs. might need their parent's help to attend the online class or to access the video lessons. The same is also applicable for students from rural community attending the higher classes if they do not know how to operate a computer.

As on today, In online education, the teachers communicating directly through video calls or share the pre-recorded videos to the students. Watching online videos are required high-speed with a stable internet connection, students has to download the videos or stream online, So it will still be a hindrance of online education.

Psychological impact

Most parents in India are not IT-literate or regular users of the IT gadgets are still having the fear on the allowing the

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students to access youtube or other social media pages and that is the reason why the parents don't want to hand over their smart phone to their kids.

In order to solve this problem, the parents need to educate themselves on the various security measures are available Ex: Parental Control features in most smartphones effectively work; so that they can keep a constant eye on their kids and ensure that they are accessing or watching the unwanted contents smartphone. This solution is still applicable only for the above average income family and the parents are literates. But as we have already discussed, digital literacy in India is not that most parents will better not give their smartphone as they believe the children's will misuse the independence of using the smartphone.

Its not only putting the security measures in place the educators has to counsel the students and the parents how to train the students to use the technology for education and what are the health impacts students will be facing when they are addicted to the usage of digital devices. Parents have to support the students in a way explaining them on how to use and when to use the digital device for learning and entertainment purpose.

Pedagogical & Administrative Challenge for Teachers:

Teachers are one of the most influential and powerful forces for equity, access and quality in education and key to sustainable global development we have a number of experienced teachers in India, who have dedicated their lives building the future of India, who are giving us cool new models like digital education. Student's limited education background.

Lecturer's lack of confidence to use technology: Moving to online classroom will be an added time pressure for the teaches who are experienced in the classroom delivery mode as they have a lack of confidence to use the online technology to deliver the lessons . Yet the modern trained teachers have overcome this problem. A lot of videos published in YouTube and in DIKSHA

Digital Infrastructure For School Education An initiative of the National Council of Educational Research and Training (Ministry of Education, Govt of India) This platform offers engaging learning material, relevant to the prescribed school curriculum, to teachers, students and parents. Download the DIKSHA app and scan QR codes in your textbooks for easy access to all your lessons. {Android 5.1 and above}

Lecturer's lack of knowledge to design and develop digital content: The teachers are subject matter experts but might not be competent enough to teach students using the virtual classrooms technology, where they are used to have a large size black boards . Teachers face the difficulty of grabbing the attention of the students to the virtual classroom. Monitoring and guiding the students virtually is indeed a big problem.

Developing & integrating quality e-contents : Most modern teachers nowadays are quite comfortable teaching online, however, they are relatively less experienced than the old schoolteachers. The teachers in India are commonly trained for class room

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based delivery they need a lot of training to do the online delivery of the lessons. so that they can be capable of teaching students through online classes. But, in the end, not everybody is comfortable with everything.

Lack of e-learning resources for all classrooms: There are various websites or online content provides design and develop eLearning lessons and courses available for different competitive exams, and for school students, these lessons or courses are developed by the content creators who are not experienced as teacher are well trained. Obviously, there are some experienced teachers in most online courses, but the number of young teachers is more. So, there should be more experienced teachers who should come to online platforms and make this mode of education a successful one.

Monitoring student progress.

One major challenge in online delivery and assessment is how do we effectively monitoring student progress. What is the best methodology to assess the students to ensure they have understood the concept? How to me implement the discipline of submitting the assignments on time without fail. In Online Class room the teachers must operate in a much different way to ensure that their students are making progress and to identify and help those students who may be falling behind. The traditional Practical or Written exam will not come in handy to this online. The purpose of the assessment is to ensure the content is delivered and the students are able to grasp the contents. The evaluation can be done differently than the regular assessment method

Constant Communication and Feedback Mechanism

The teachers need to actively engage in regular communication with students to prevent them from falling behind. One way they can do this is by contacting students who have not logged into the online classroom in a while to make sure that everything is going well for the student.

Another action that can be taken is for teachers to help students get technical help if necessary to avoid student frustration which could lead to incomplete work. If a student misses an assignment, teachers should contact them to check on the reason. The teacher could offer some flexibility in grading if after talking with the student, he or she feels it is warranted. The best communication act an online teacher can do to keep students current is to regularly interact with them either through the classroom, private email, or phone calls. Online students do not get regular informal feedback the way they do in the traditional classroom, so the online teacher must be even more diligent in providing it.

The online teacher should provide comments and feedback to the class as a whole, but he/she should also provide individual suggestions and praise to students so they know where they stand. This feedback should be a part of graded and ungraded assignments alike.

Feedback must be prompt. Students must know when and in what manner feedback will occur. This feedback must

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make note of how well students are achieving objectives for the course. If they are lagging behind and not meeting objectives, the feedback must share how the student can get back on track.

The distraction of students in online education

Most school students in India are not serious, and it is not their problem. Small kids will always tend to use those apps and games, which interests them and there is no doubt about the fact that studies do not interest most students. So, if the parents cannot look after the kids, while they are studying online, it is quite possible that the students will do something else on the smartphone or a computer. They will mostly play games, watch animated shows, and everything else at that time.

For most of the students in India the pandemic is a blessing where the schools are closed, and they are in a holiday mood. So introducing the online classroom and motivate them to participate in the online classroom is one another biggest challenge. When the students are given the smart phones are laptops their intention is to play and not to use the gadgets for education purpose.

After few months of online delivery, the secondary students are capable of finding the excuses such as power cut or lost connection as for missing the online class. At the same time attending the online class for more than 5 hrs with the use of smartphones or sitting in front of the computer can have a long-term drastic impact on the health of the students which is again something that needs to be addressed. Long term exposure to computer and smartphone displays can impact the eyes and that is yet another big concern.

To face this challenge the teachers has to gamify the learning and give rewards or badges and stickers via the online learning tools to encourage the students to participate in the class. The learning process to me made as fun. The learning contents should have animations and music's. They can introduce the group activity and other testing methods to gain student attention to the class .

One more thing that can be done is, the digital courses can be made more interesting for the students, and the teachers can make the process of learning more interesting and that can yet be another way, to make the students get interested in studying. That will be another effective way the students can keep away distraction and keep learning with the benefits of digital education.

Aside from the stresses of access and affordability, a daunting task for a student is to keep up with their studies and peers. Unlike an active classroom setting, e-learning does not accommodate one-to-one discussions or problem solving with tutors. Reports emphasize that the receivers (students) are not the only ones struggling – teachers are too. Teachers and institutions are not always trained

CONCLUSION & RECOMMENDATIONS

Talking about the present scenario, India first has to cross the first hurdle of 100%

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electrification before we can dream of digital education completely, or mostly take over the conventional mode of education, Teachers and school administrators have been advised to continue communication with students through virtual lectures or portals like Massive Open Online Courses. However, in the absence of physical classrooms and proper digital infrastructure, both teachers and students are facing unprecedented challenges.

In the context of COVID-19 related disruption of schooling, DIKSHA makes it possible for all states/UTs to enable learning/education at home through innovative state programs; hence leapfrogging the use of technology for the benefit of teachers and learners across India. The teachers also face challenges in designing effective lessons and changing of teaching when shifting to online learning; this can also be resolved through workshops and training. And the trained teachers can be used to re-train the next group of teaches as well as content creation

States, government bodies and even private organisations, can integrate DIKSHA into their respective teacher initiatives based on their goals, needs and capabilities. They can use DIKSHA's features to create:

- In-class resources
- Teacher training content
- Assessment aids
- Teacher profile
- News and announcement
- Teacher community

These features have emerged from consultations with multiple state governments, NGOs and more than 30 public and private organisations, who have collaborated in contributing to DIKSHA.

It is built considering the whole teacher's life cycle - from the time student teachers enroll in Teacher Education Institutes (TEIs) to after they retire as teachers. In India, many teachers are creating & using innovative tech-based solutions in their classrooms. Some state governments have also initiated programs to support their teachers digitally. This inspired MHRD and NCTE to coordinate these efforts at a national level and build DIKSHA.

Digital education is already popular in urban areas, however, looking at rural areas, digital education still has a long way to go, because there are challenges already that we need to overcome. Therefore, we must wait for a few more years before the rural areas get a quality internet connection so that the framework of digital education can be prepared, and that will not only help the teachers to host online virtual classes, but the students can also opt for online courses for various examinations and for school level studies. So, if a school does all the necessary arrangements to host classes online using virtual classroom setups, and all the students within that school come from rural areas where the internet connection is not that good, the whole setup of digital education in that village will fail miserably. We have to agree

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this Covid-19 has also made some impossible situations to possible Such as the teaches has made Improvement in collaborative work and sharing the self-developed contents in the benefit of students, the enhanced digital literacy awareness has increased among the parents and students. Teachers and students are self-motived and self-trained to access the digital device and online learning platforms. Keeping this positive note, we can conclude that moving forward the challenges listed can be overcome and the new norm of online learning is achievable in the rural community as well

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DIGITAL EDUCATION BARRIERS IN RURAL INDIA

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ABSTRACT:

The National Education (NEP) 2020 also emphasises digital learning as an alternative to the conventionally accepted classroom model as a communication medium between teachers and students. Moreover, the COVID-19 pandemic has paved the way for reducing the digital gap between urban and rural parts of India, especially from the points of view of education that has digital access. It has also unveiled the existing challenges for digitalisation of education in both tier-III and rural parts of the country.

Keywords: Rural parts of India, COVID-19, digital learning. Digital Education Barriers in Rural India

PREAMBLE:

The global spread of COVID-19 pandemic has affected almost all nation of the world and has triggered an array of public health responses. The pandemic forced the closure of all kinds of organization across the world. This method of learning requires access to digital devices along with internet connectivity. Video conferencing, PDFs, MEET, JIO MEET, etc, are used for video conferencing. WhatsApp and Telegram are used for sharing study material with the students.

During the lockdown, all class promotion examination in school of Odessa was suspended and students were promoted to higher class based on their term marks. The new session also started in April 2020 to avoid academic delay .The school and mass education department of the Government of Odessa adopted an online mode of instruction became a puff to rural students as they are habituated with a conventional classroom setup, where a teacher is physically to guide students and monitor their learning directly, online learning is new to students in rural areas.

PROBLEMS:

With the decision of the government to resume classes to engage students, suddenly traditional education changed to an online mode of instruction. This alternative from conventional to digital changed the education system in the ways and the effects are yet to be determined. Teachers and students are required to find ways to connect and face the challenges of the change from familiar with the technology. Online education is also likely to broaden the

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learning gap between children from lower-income and higher-income families. Children from below poverty line households live in conditions that are not conducive to online learning. The biggest hurdles to moving to online education in India have been insufficient digital gadgets for students and a lack of internet connection at home owing to poverty. In another place, a family that had to sell their cow, the only source of income for the family, to by a Smartphone, become a hot topic. Upset about not having a Smartphone to use for online classes, a 17 –year-old –girl studying in class 11, from Punjab committed suicide owing to the COVID-19 necessitated the study and document the major changes in teaching practices and teacher's responsibilities.

THE MAIN FIVE HURDLES FOR DIGITAL EDUCATION IN RURAL INDIA:

Access to Digital Devices and Data Cost for Increasing use of content Consumption

It is important for digital learning to observe the availability of digital devices for students availing digital content .only an insignificant section of people access to laptops and computers . Even the students with desktops and laptop cannot use the internet, due to the cost incurred in the process and lower internet penetration in the vulnerable areas. Other than that, mobile screens are not convenient for long hours of learning. The prices of the data packages also restrict the teachers and students to move forward with online classes. To address this situation, telecom companies can subsidise learning data plans to aid the existing gap.

Lack of Digital Literacy and Infrastructural support

A major constraint of digital literacy in rural India is that only 22 percent have access to desktops. A major chunk of the rural population in the country is in need of internet bandwidth and adequate knowledge the equipment and digital terminologies. Another important concern includes the shortage of infrastructural support facilities such as a steady flow of electricity and inaccessible high speed internet connection.

Absence of Skills

As the teacher in rural India lack proper skills to operate digital platform, it becomes another major factors influencing the propagation inadequate training to access the digital platform and are averse to acquire these educational techniques. Other than that, single teacher schools are another major issue in the rural areas as there are97, 273 single teacher schools in the country accounting around 8.8 percent of school in India.

Language Barrier

The absence of availability to regulatory content in Hindi as well as regional languages leads to a slow 85 % of the population living in India does not speak English. Standardized digital/online content that cover the prime modules from K-12 to

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higher education level seems far-fetched. Organizing any standard content from open source will need the synchronized effort of the government. In addition, the syllabus needs to be re-evaluated from an amalgamated learning approach.

Gender Inequality

The availability of internet and literacy is primarily constrained to the men in rural India, similar to most domains. The penetration of digital education amongst the rural females is even more demanding.

OVERCOMING TO THE BARRIERS OF DIGITAL EDUCATION IN RURALINDIA

1. Ed-tech Organization Should Provide Low-budget Multi-lingual Platform That Work On Low Bandwidth And Provide Quality Content. The Government Can Give Tax Benefits To This Organization For Promoting It.
2. The Current Situation Will Pave Way For A Survey On Topics Such As Economical Learning Platforms, Penetration of Digital Learning In Rural Areas, Redefining Learning Science From A Blended Mode Of Approach Thus Benefiting The Learners At Large.
3. The Buoyant Gambits Under The CSR (Corporate Social Responsibility) Of Corporate Hubs Promoting Online Education In School Of Rural Parts Of The Country Needs To Be Encouraged.
4. The Education Institution In Rural Areas Should Be Dispensed With Online Learning Tools And Alternate Sources Of Energy Like Solar Power Should Be Established In These Institutions.
5. The Process Of A Vigorous And Interactive Online Education Can Be Initiate Through Innovation Solutions.
6. The Rural Areas Of India Can Be Well Resourced With The Required Infrastructure Provided By The Public Private Schemes

OBJECTIVE:

The objective of this study was to illustrate the experience of school teachers, student, and parents adopting online instruction during the COVID-19 lockdown. The study intends to understand the challenges faced by teacher, students, and parents to adapt the online teaching learning process in the context of the closure of schools due to COVID-19.

TERMINATION:

The digital education barriers in rural India can be eliminated through the provision of affordable and accessible e-learning modes. Content standardization, facilitating all the vital amenities and services in government schools through PPP (Public Private Partnership) model, up-skilling the teachers-training programmers on online education , blended learning space by NGO @ CSR wings of organization need to be considered to propel digital education in rural India. Other than that, all provide an ingenious pedagogy, accessible education devices, proper infrastructure and a quality

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ecosystem for the expansion of digital learning in rural India.

The finding of the study is significant for the implementation of online education. It is suggested here that proper training should be provide to both the student and teacher. Caring and training for teachers are some condition of recovery from the catastrophic situation and sustainable education practice of the future. Smartphone's and other necessary extension should be provided to economically poor students. If possible, schools and other educational institutions should be reopened with adherence to social distancing and proper precautions to prevent the individuals from getting affected.

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CHALLENGES OF ONLINE EDUCATION DURING THE COVID-19 PANDEMIC ENCOUNTERED BY STUDENTS IN RURAL COMMUNITIES

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ABSTRACT

The COVID-19 pandemic has disrupted every aspect of society. It has caused intense disturbance to the education system worldwide as governments around the world have temporarily postponed physical classes and moved them online to prevent the spread of the virus. These sudden changes from face-to-face to online learning have caused numerous challenges for students, teachers, administrators, and education leaders. The importance of education in personal, social, political, fiscal, and cultural advancement cannot be overstated. Today, education is available in all facets of life, paving the way for the holistic growth of people, communities, and countries. Education is, without a doubt, a boon to human civilization. However, education does not only focus on the idea of literacy. Fundamentally, we should ensure that all pupils are taught morals and critical value-based education if we are to produce good human capital. Thus, value-based instruction should be integrated into every chapter of our curriculum in an engaging manner so that children and students can learn and grow at every stage of their education. As research has demonstrated, value-based instruction plays a critical role in students' holistic growth.

INTRODUCTION

Education plays a crucial role in human life. Without proper education, people surely go wandering without any specific destination. Moreover, in this digital era without the basic knowledge of technology, learners will find it hard to learn and acquire knowledge.

Corona virus has created a disruptive situation in India as well as in many other countries. The lockdown in India has helped to slow down the spread and prepare better to face imminent largescale infection. However, suspension of normal course of functioning of manufacturing and services sectors has resulted in significant economic uncertainty. In the education sector, the outbreak has struck at a critical time when last few classes and examinations were to be held to close the academic year 2019-20. The lockdown meant that it was not possible to complete the syllabus with the regular classes in many institutions. There has been a question mark over how and when to conduct examinations. Many institutions have resorted to online classes to complete the syllabus. But there have been challenges in execution and effectiveness of online classes especially in the case of students in the rural areas.

COVID-19 effected the physical learning method of all the educational

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institutions overall the world. The higher authorities of academic institutes adopted online learning to continue the studies. Although online learning seems useful in protecting students' and faculty's health amid COVID-19 pandemic.

The global pandemic has taken a colossal hit on all the sectors of the economy. While it has been slightly easier for professionals to adopt work from home as a new normal and continue business as usual, the times have been challenging for the education system around the world that majorly revolved around classroom learning. The government has recommended moving to online learning as a stop-gap arrangement to evade any disruptions in academic calendars. Technology and smart classrooms are not only transforming education in highly paid private schools, but it is gradually making inroads in government schools. Consequently, e-learning is now the way to transform the education sector. It is showing a positive transformation and schools and colleges in rural areas are also adapting to technology day by day. It is motivating to see that even Tier III and rural areas are stepping up to transform traditional education into a digitally-enhanced process. While the benefits of online learning are manifold, there are still many roadblocks in the way ahead towards making education an entirely digital (online) phenomenon.

When it comes to Online Education or E-Learning, rural population is not completely equipped with utilities like fast internet, uninterrupted power supply and electronic devices. There have been improvements regarding basic infrastructural facilities but many rural areas in India are still grappling with these challenges to make education completely digital or online. Many students studying in urban institutions and staying in hostels or paying-guest accommodations, have returned to their native villages since the onset of the lockdown. In villages, they face challenges to access the online courses conducted by their institutions mainly due to poor data connectivity, lack of access to laptops and smartphones, and power issues. There are instances of students trekking to random spots away from their villages in search of the elusive mobile wireless signal. An instance of a boy having climbed a tree to catch a good enough mobile signal, in Rural Areas, has been reported in the media. Students, especially girls, face significant difficulty in managing access to online classes. But the educational institutions in urban and even semi-urban locations are compelled to go ahead with online classes due to academic mandates. This has led to many disadvantaged students having to miss out on online classes, giving rise to uneven opportunities amongst students.

Challenges

- **Digital Literacy and Infrastructural Support**

These are prominent hurdles that come in the way of enabling online education in the rural regions of India. Though the power and network infrastructure have improved leaps and bounds in the remote areas of the

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country, there is still a room for improvement. Teachers and students in villages are becoming more accepting towards digital means of learning, but the infrastructural facilities there have not developed fully to become at par with what online learning require. Steady flow of electricity and lack of high-speed internet still pose major problems for the rural population.

➢ **Limited availability of technological devices**

While we look at the domain of digital learning, it is imperative to consider the availability of the right devices to every student for accessing digital content. Not a lot of people in rural India have access to personal laptops or computers, and phone screens are not conducive to long learning hours. Also, data packs and their costs can be a big deterrent both for teachers as well as learners, especially for live classes. Many students either don't have personal laptops/smartphones or they are available for a limited time. Hence, the learning remains restricted with the limited availability of technological devices.

➢ **Lack of Familiarity with Digital Technology**

While Smart Classrooms and Digital Learning have already made a way in urban educational setups, some rural countries still rely on traditional teaching methods for their lessons. Therefore, shifting from traditional pedagogical methods to the digital one cannot happen overnight. Teachers as well as students require proper training and more user-friendly platforms to make them familiar with digital technology so that they can be comfortable teaching/learning using them.

➢ **Lack of teacher experience in online teaching**

Online classes are now the mainstay due to the epidemic coronavirus. But teachers in rural areas are still not comfortable teaching online. Most students believe that online teaching is different from physical teaching in the classroom, because they have never created courseware for online learning or had exposure to courseware for online learning. The main problem is that teachers are facing in the subject of online teaching is the skill gap. Most of the teachers did not get any training on online learning tools and techniques. Government needs to provide advanced technology training to teachers to continuously enhance their skills.

➢ **Shortage of Teachers**

Shortage of teachers or the poor teacher-to-student ratio in villages pose another challenge towards making learning entirely digital in such areas. To make complete digitization of education in rural areas, this ratio needs to be improved and a large number of skilled and well-trained teachers are required so that each and every student receives complete attention even during an online class. While the contemporary online classroom solutions are designed to facilitate engagement and intuitiveness among students towards learning, a teacher's guidance and attention remain indispensable for learners.

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➢ **Adverse environment in home during online learning**

There is a big difference between getting education in school and getting education at home. Because the school environment is suitable for education only where the surrounding environment with teaching materials is conducive to learning but on the other hand there is always activity at home, movement of different people, various chores including housework which are totally unsuitable for education.

CONCLUSION

With the Covid-19 putting a halt on classroom learning sessions, online learning has paved a new way to retain normalcy for students and teachers. It is heartening to see that not only urban educational institutes, but the state-run schools in rural areas have also gone digital and resorted to online classes to avert academic losses. Although, not every village and town in India is infrastructurally developed to sustain online education, it is motivating to see many rural schools and colleges adapting completely to e-learning during these times. Also, many affordable and low-bandwidth e-learning solutions are coming up with multi-lingual platform to facilitate easy and convenient online learning classes in rural India.

In the last few years, we have observed substantial changes in rural India regarding education, infrastructure and other facilities. With the continuous support from government and innovations coming up in digital technology, online learning will be made affordable and accessible.

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ONLINE EDUCATION IN INDIA DURING COVID 19 PANDEMIC

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ABSTRACT

India has a major role to play in the international e-learning services industry. It is already one of the leading IT service provider countries, and it is now aiming to achieve the same position in the IT enabled services. A growing number of students are now opting for online classes. They find the traditional classroom modality restrictive, inflexible, and impractical. In this age of technological advancement, educational institutions can now provide effective classroom teaching via the Web. This shift in pedagogical medium is forcing academic institutions to rethink how they want to deliver their course content. As there was a sudden lockdown, due to the worldwide Corona virus pandemic, we have entered the age of digital revolution. While online classes can be taken through video conferencing, assignments can be submitted by students by using Google platforms. Even though, some of the common complaint about online learning is that it lacks face-to-face interaction and on time exchange of thoughts that one can only grab with classmates and a teacher in real time. Data were collected through structured questionnaires administered to 100 respondents. The study investigates the online education in India during COVID-19.

KEYWORDS: Covid-19, E-Learning, Internet, MOOC.

INTRODUCTION

Corona virus Disease (COVID-19) outbreak poses serious concerns to global education systems. The outbreak of COVID-19 affected all aspects of human activities globally ranging from education, research, sports, entertainment, transportation, worship, social gathering/interactions, economy and businesses. India comes second after china in terms of population and stands as the youngest nation on the planet with an average age of around 30 years. Year 2020 initiated with great hopes and opportunities in India also but soon the country went into lockdown to avoid further spread of Covid-19 pandemic. In this crucial time the education sector which suffered drastically. India has a major role to play in the international e-learning services industry. It is already one of the leading IT service provider countries, and it is now aiming to achieve the same position in the IT enabled services. The presence of world-class educational infrastructure and training professionals enables it to be one of the

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leading e-learning services providers in the world. The government and private sectors have taken many e-learning initiatives. Though these initiatives have been met with a lot of enthusiasm and user acceptance, their commercial viability is still under consideration.

As there was a sudden lockdown, due to the worldwide Corona virus pandemic, we have entered the age of digital revolution. While online classes can be taken through video conferencing, assignments can be submitted by students by using Google platforms. Most of these platforms are free to operate, making it easy for both students and teachers. There are many benefits of online learning like the ease of studying at home, flexibility, no partiality and time constraints. Even though, some of the common complaint about online learning is that it lacks face-to-face interaction and spontaneous exchange of ideas that one can only grab with classmates and a teacher in real time. The present study is analysing the role of COVID-19 in online education.

The advent of online education has made it possible for students with busy lives and limited flexibility to obtain a quality education. As opposed to traditional classroom teaching, Web-based instruction has made it possible to offer classes worldwide through a single Internet connection. Although it boasts several advantages over traditional education, online instruction still has its drawbacks, including limited communal synergies.

ONLINE EDUCATION

Computer-assisted instruction is changing the pedagogical landscape as an increasing number of students are seeking online education. Colleges and universities are now touting the efficiencies of Web-based education and are rapidly implementing online classes to meet student needs worldwide. One study reported "increases in the number of online courses given by universities have been quite dramatic over the last couple of years". Think tanks are also disseminating statistics on Web-based instruction. "In 2010, the Sloan Consortium found a 17% increase in online students from the years before, beating the 12% increase from the previous year".

Contrary to popular belief, online education is not a new phenomenon. The first correspondence and distance learning educational programs were initiated in the mid-1800s by the University of London. This model of educational learning was dependent on the postal service and therefore wasn't seen in American until the later Nineteenth century. It was in 1873 when what is considered the first official correspondence educational program was established in Boston, Massachusetts known as the "Society to Encourage Home Studies." Since then, non-traditional study has grown into what it is today considered a more viable online instructional modality. Technological

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advancement indubitably helped improve the speed and accessibility of distance learning courses; now students worldwide could attend classes from the comfort of their own homes.

Technology is a key component of education in the 21 st century. The increasing use of technology in education has modified teachers' methods from the traditional approach that often place them as dispensers of knowledge to a more flexible approach where they act more as facilitators, mentors and motivators to inspire students to participate and learn. Technology facilitates Remote learning, Distance learning, Virtual learning, Blended learning, Mobile learning, Distributed learning, Machine learning, Ubiquitous learning, Deep learning, Cooperative and Collaborative learning. Most aspect of education is going digital, and education stakeholders including students are confronted with the challenge of transition to online education. The use of appropriate educational technologies increases accessibility to learning resources such as Massive Open Online Courses (MOOCs), and multiple learning approaches to meet the need of diverse learners.

STATEMENT OF THE PROBLEM

Using the internet for entertainment is common, but for online lessons is a big challenge. Most of the teachers today were educated in an entirely different model; their way of learning was most likely based on a traditionally teaching method like teacher-fronted, face-to-face approach where technological change was not a factor. On the other hand, the ever-increasing global pressure to conform to the fast pace changes in electronic communications today constantly renders current practices redundant in a few years time. The fact remains, teachers bear the burden and challenges to maintain pace with the changes or risk being replaced in their profession. The Indian internet infrastructure is not ready for the paradigm shift to online learning mandated by the situation arising due to COVID-19. The Internet connectivity and signal issues as the most prevailing problems faced by students while attending online classes. Lack of access to the internet and devices has also created a gap in digital literacy. The present study is to analyse the online education in India during the Covid 19 pandemic.

OBJECTIVES OF THE STUDY

1. To know the origin, growth and development of online education.
2. To examine the role of COVID-19 in online education.
3. To offer suitable suggestion for the improvement of online education.

METHODOLOGY

The present study is based on both primary and secondary Data. The primary data was collected with the help of questionnaire. The secondary data were collected from various sources like news

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papers, web sites, reports and research papers.

Sampling Design

A sample size of the present study is 100 learners and individual samples are

FINDINGS OF THE STUDY

GENDER WISE CLASSIFICATION

Gender	No. of Respondents	Percentage
Male	60	60
Female	40	40
Total	**100**	**100**

Source: Primary Data

It can be inferred from the table that 60% of the respondents were males while 40% were females. This implies that majority of the respondents were males.

AGE WISE CLASSIFICATION

Age (in Years)	No. of Respondents	Percentage
Below 25	65	65
25-35	28	28
Above 35	7	7
Total	**100**	**100**

Source: Primary Data

It is indicated the majority of the respondents 65% of them were in age of below 25 years. 28% were in the age group of 25-35 years and the rest 7% respondents were in age of above 35 years.

CATEGORY WISE STUDENT

Category	No. of Respondents	Percentage
Student	52	52
Faculty	38	38
Others	10	10
Total	**100**	**100**

Source: Primary Data

It is to be point out that the majority of the respondents 52% of them were students. 38% of them were faculty and the rest 10% respondents were parents

CLASS PREFERENCE

Types	No. of Respondents	Percentage
Offline	88	88
Online	12	12
Total	**100**	**100**

Source: Primary Data

The analysis shows that the 88% respondent were responded the offline classes better than online. Remaining sample were 12% is opposite.

LACK OF INTERACTION DURING ONLINE CLASSES

Opinion	No. of Respondents	Percentage
Yes	80	80
No	20	20
Total	**100**	**100**

Source: Primary Data

The analysis exhibits that the 80 % of the respondent were response the online study is lack of interaction and rest sample were respond it is not lack of interaction.

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COST FACTOR DURING ONLINE CLASSES

Opinion	No. of Respondents	Percentage
Yes	68	68
No	32	32
Total	**100**	**100**

Source: Primary Data

The analysis exhibits that the 68 % of the respondent were response the online study is reducing the cost and rest sample were respond it is not reducing the cost.

TIME SAVING FACTOR DURING ONLINE CLASSES

Opinion	No. of Respondents	Percentage
Yes	73	73
No	27	27
Total	**100**	**100**

Source: Primary Data

The analysis exhibits that the 73% of the respondent were response the online study is saving their time while attending the class at home and rest sample were respond it is not saving their time.

MORE ACCESSIBLE FACTOR DURING ONLINE CLASSES

Opinion	No. of Respondents	Percentage
Yes	79	79
No	21	21
Total	**100**	**100**

Source: Primary Data

The analysis exhibits that the 79% of the respondent were response the location wise digital education is much more accessible. and rest sample were respond it is not much more accessible.

LOSS OF CONCENTRATION DURING ONLINE CLASSES

Opinion	No. of Respondents	Percentage
Affected	86	86
Not much affected	14	14
Total	**100**	**100**

Source: Primary Data

The analysis exhibits that the 86% of the respondent were response they are not able to focus on online education and rest sample were respond it is not much affected their concentration.

IMPACT OF COMPUTER SKILL AND INFRASTRUCTURE WHILE ONLINE LEARNING

Impact	No. of Respondents	Percentage
Average	36	36
Good	14	14
Poor	50	50
Total	**100**	**100**

Source: Primary Data

It is indicated that 50 % respondent were respond as Poor in computer skill and infrastructure and 36% were respond Average in the Computer skill and infrastructure And remaining sample 14% were responds Good.

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SUGGESTIONS

- E-education to reach rural areas, Government need to provide high speed internet through multiple networks.
- Government can introduce E-learning as a policy and provide financial capacity to boost the e-learning environment in India.
- Faculty can be given training on latest On-line tools to enhance their skill in On-line teaching.
- Interactive sessions of faculty may help to enhance the knowledge of students Educational institutions can improve quality and reputation, by updating latest online tools in the institutions, improving infrastructure facilities for effective online education.

CONCLUSION

The online education is the only feasible method during COVID 19 pandemic, the stakeholders are adapting to it, and India has realized that it won't stop even the lockdown, nor the education system would pause. This lockdown has made us realize that we can overcome the odds and still grow effectively. Continuous efforts from teachers and the involvement of students in attending online class are foremost important for the growth of students. There are gaps in the existing researches which may be covered through including the opinions of the students and analyzing the effectiveness of online education with respect to adding value to the lives of the students. In the era of digitalization the scope of online education increase even more and will be beneficial for students, professionals and also institutions.

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DIGITAL LEARNING: CHALLENGES CONFRONTED BY REMOTE AREAS

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ABSTRACT

Digital Learning is a learning method based on the use of new digital tools to enable learners to learn in a different way, whether it be face- to -face, distance learning or blended learning. Digital Learning technologies have added much popularity in education from the past few years; and it was rapidly gone high due to the pandemic situation prevailing in our country. But the sudden widespread shift to remote learning could not be affordable for rural students. They face roadblocks when moving from offline to online education because of unavailability of proper digital tools, no internet connections, or Wi-Fi connections. Furthermore students in rural areas have to also deal with intermittent power supply and older electronic devices, which are often a difficulty to seamless access. They also depend on their family members' mobile phones for learning and attending classes, making online education as demanding. Acquiring data plans for learning could also incur a lot of expenses for families who face financial constraints. Equality in education is achieved when students are all treated equally and have access to similar learning resources. So, Government may take the additional initiatives by increasing the budget for the future of younger generation and institutions may also provide scholarships and needed infrastructure for the most needed

KEYWORDS: COVID-19, Rural Area, Digital Learning and Distance or Blended

INTRODUCTION

Even after 74 years of independence some States in India are still struggling to achieve Universal enrolment, retention and quality education. There are nearly 1.3 million rural schools around 6 lakh villages in India. Schools in rural areas are encouraged to heave the level of education and literacy in India. Due to the outburst of this universal widespread Covid-19, many institutions go from offline mode to online mode of pedagogy like Computer Based Training, Web-Based Training, Virtual Classrooms and Learning Management System. Digital learning uses advanced modern technologies and methods to help students learn in a different way. However, the spread of digital education has been hampered by the great divide betwixt the haves and the have-nots. Urban concrete jungle has their own rules in education system so the urban school students are

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comparatively beneficiary than rural students. Infrastructure, Teaching aids, Language and Co-curricular activities which are more vibrant in urban education system. But, Students in villages face challenges to access the online classes conducted by their institutions. Students in rural areas or other underprivileged students do not have smart phones or internet connections to keep up with online learning. Some of the students depend on only borrowed phones or have a phone with no internet but don't have money to buy. Over 250 million students are there in all around India but only one third of the students are utilizing the online education resources.

OBJECTIVES

The purpose of this study intends to apprehend the hurdles confronted by the students in rural area to undertake online learning due to pandemic situation.

To illustrate the experiences of students adopting the digital education during the COVID-19 epidemic

PROBLEM STATEMENT

As the Corona virus widens across the country, all localities faced pressure to close the educational institutions, instantly formal education moved to the way of online. But experts agree that the transition should not be easy. Teachers and students are required to find ways to connect and face the challenges of change from familiar to a new way of teaching-learning. Whether it's distance or blended learning, teachers are challenged to reach virtually all of their students. Before the pandemic, online learning was there but all of them are not familiar with the technology. But in current scenario, being constrained at home, challenged to quickly learn new technologies. The Students in social segregation and privacy had to develop new skills desirable for e-learning.

Online education is also likely to widen the learning hole between children from poverty-stricken and higher-income families. Children from income scarcity households live in conditions that are not conducive to online learning. The biggest hurdles to moving to online education in rural areas have been insufficient digital gadgets for students and a lack of internet connection at home owing to poverty. Children from lower-income family are struggling to complete online homework because of the in conducive atmosphere at home. Recently, news came that a 16-year-old girl studying in class X, from Saagade village committed suicide, as his father could not buy smartphones for study. In another place, the 14-year-old daughter of a daily wage labourer in the southern state of Kerala killed herself because she could not also catch up the classes even in Television. Due to financial issues in her family, they could not also repair that TV. The sudden interruptions to education owing to the COVID-19 necessitated the study and document the major changes in teaching practices

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DISCUSSION

FINANCIAL SHORTAGE

Many poor families are suffering due to a lack of earnings, salary hacks and even job losses as a result of the Coronavirus epidemic. During this period Students are also in the need of engaging themselves to online classes. In rural areas, Most of the students cannot adapt with that virtual learning scenario due to financial problems, even those fortunate few students whose families can afford the technology face obstacles in the form of network issues, all of which leads to even more anxiety on young boys and girls to adapt and stand out in these difficult times. The Tamil Nadu government newly initiated online classes through its Kalvi TV channel to reach students studying in government schools. However, private schools where few children from poor families have to opt for online classes only.

LACK OF COMMUNICATION

Communication helps to facilitate the process of sharing information and knowledge with others. Regarding this, most schools in India have a three-language formula, where English is often taught as a second or third language. According to the survey, 47% and 33% of school students were taught in Hindi and their mother tongue during face-to-face learning. But in e-learning, every instruction will be in English, which is more challenging for rural government school students because they may belong to the first generation of learners.

LACK OF FAMILIARITY WITH HIGH-TECH

In the present age, there are enormous advanced technologies are available for online education. But these modern technologies are burden at rural students' point of view, because they may not be familiarized with these tools and techniques. They want more proper training and user friendly digital platforms. Changing from traditional teaching methods to the digital one cannot happen overnight.

LACK OF INFRASTRUCTURE

Most of the students in the countryside are forced to move towards online modes of learning due to the current scenario. Even though online learning doesn't require huge buildings, big classrooms, chairs, tables, blackboards, chalk, it doesn't mean there are no infrastructural requirements.Still, they are in need of a few requirements like smartphones, laptops and data plans in order to access the digital content. So, they are struggling a lot due to the lack of needed infrastructure. Sometimes they may face an unfavourable home learning environment. Also, the lack of high speed internet still poses major problems for the rural population. The excellence of infrastructure is only accessible to a selected few percent of the population.

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LIMITED AVAILABILITY OF TECHNOLOGY

Technology cannot put back great teachers, but technology in the hands of great teachers can be transformational. In rural areas, only a nominal section of people has the privilege of accessing laptops and computers. As per the 2019 report of the Telecom Regulatory Authority of India (TRAI), the internet teledensity in rural India is 57.18 per 100 inhabitants against 156.18 in urban regions. This clearly shows that our country is on a backseat in terms of access to technology and resources for facilitating e-learning, which can have a lingering effect on the education of the students living in the rural parts of the country. According to the Survey of NSO, Nearly 4.4% and 14.9% of rural families had a computer and internet. The lack of 3G or 4G connections is also a major obstacle for those attending normal online sessions on different video-streaming platforms. Nearly 65% of the rural students depend on their parent's smartphones only.

LACK OF MOTIVATION

Students in rural areas have great potential but lack right mentoring. When compared with face-to-face learning, online education leads to social isolation and uncertainty in their studies due to digital literacy. Students from rural area face more academic stress than urban. So they cannot do flexible interaction during the online classes.

LACK OF POWER SUPPLY

Interruption in electricity has popped up as the biggest hurdle for students attending online classes in rural areas. A major problem in villages is the discontinuation of electricity. Only those having high-quality power backup options and multiple data connections are able to attend the classes without distraction. Since many children use wired connections with a WiFi modem in their homes, power supply disruptions frequently separate them from the classroom. Most of the students are worrying that the situation will be worse during the monsoon with delayed repair of damaged power lines, transformers, and electric posts.

CONCLUSION

Our country needs to take necessary actions to ensure proper access to technology to tackle the shortcomings of distance education in rural households. Governments may take initiatives to change the perception of quality education only being associated with an 'English medium' learning system only. In order to eradicate the shortage of power supplies, we may go for the usage of Solar Energy. In addition to poor network connectivity, teachers may prepare comprehensive pre-recorded short video sessions and make them available to all students at anytime from anywhere. To promote equitable, inexpensive and good

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quality resources to facilitate e-learning for all kinds of students in every nook and corner of the country, additional policies may be introduced at higher levels. Governments may take additional initiatives by increasing the budget for the future of the younger generation and institutions may also provide scholarships and needed infrastructure for the most needed students. Many awareness and training programmes may be conducted in countryside areas in order to make them prepared to face the future technologies rapidly.

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CORONA VIRUS CHANGED EDUCATION: WHAT IS THE FUTURE OF STUDENTS WITHOUT THE INTERNET?

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ABSTRACT

Education is a social organization that helps to develop children with the value of knowledge and virtue in physical and mental development. Education comes throughout a man's life. But as they learn in childhood, they reach full dimension and transform into full human beings and help society. There are three types of education: formal education, informal education and alternative education. Of these Alternative Education is taught differently. For example, Alternative Schools, Self-Learning, Home Schooling, and Un schooling teach knowledge in an alternative way. Once the useful ideas that appear in the alternative education system are accepted in public education, the methodology is implemented. Among these, the alternative education system is being followed in the 21st century. The other two education systems are already in place. Alternative education has been systematically followed in today's era of the corona virus. Direct education was not possible during this period of the Corona epidemic. Therefore, the government is giving more importance to online education.

Keywords: Education, Corona, Online education.

INTRODUCTION

Education is a social organization that helps to develop children with the value of knowledge and virtue in physical and mental development. Education comes throughout a man's life. But as they learn in childhood, they reach full dimension and transform into full human beings and help society. There are three types of education: formal education, informal education and alternative education. Of these Alternative Education is taught differently. For example, Alternative Schools, Self-Learning, Home Schooling, and Un schooling teach knowledge in an alternative way. Once the useful ideas that appear in the alternative education system are accepted in public education, the methodology is implemented. Among these, the alternative education system is being followed in the 21st century. The other two education systems are already in place. Alternative education has been systematically followed in today's era of the corona virus. Direct education was not possible during this period of the Corona epidemic. Therefore, the government is giving more importance to online education.

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Corona virus Changed Education

Training of tribal students in schools and private schools in changed parts of India has become more challenging since the spread of the corona virus. The environment in which internet access is not available to everyone has become a major challenge in the education of Indian students after the onset of the corona virus outbreak. The virus has prompted educators around the world to think about the need to re-examine existing education policies and create restructuring. In the West Countries, Zoom App and Google Meet App teach processors. Most of the students there have a private room; There is good internet facility; including laptop facility; They also have relatively high technical knowledge. But schools and universities in India have just started online classes. The experience of the teachers who train the students here through online is very limited. Some university, college and school students in India face the problem of internet access; Students staying in areas, especially in the hilly areas, face this. Most of the private schools and colleges in India have also started classifying with the Zoom and Google meet processor. But this is a temporary arrangement made to avoid a break. Students continuously study the lessons through the Zoom and Google Meet processor. It seems that there is something wrong with educating students through the internet. But this education system does not help to meet the teachers directly and improve them. Due to the spread of the corona virus the experience of students on educational campuses is completely affected. There is a growing need for college students to take their semester exams online mode. To that end, many colleges and universities have begun to offer all of their lessons online (Google Class Room). But this time the science departments will be more challenging for the subjects. Because laboratory facilities will be required to study those subjects. It is impossible to read only through the internet. Schools and universities are exploring how to run if educational institutions reopen. One of the most important things to consider after the opening of educational institutions is to follow the social gap in those places. Some colleges offer body temperature tests every time students enter.

What will e-learning be like for students from economically backward classes?

The corona virus has caused a number of problems, including the economic crisis, unemployment and Immigration. Thus the education sector has also been greatly affected. Colleges, universities and schools in many countries have been closed due to the corona infection. The situation was similar in India. The general freeze was extended in several areas last September despite the federal government saying it could open schools and colleges with guidelines. Schools and colleges are not open. During this period, students face problems such as lack of technical facilities, inability to study due to family environment,

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malnutrition, economic stagnation by unemployed parents, and inability to maintain parent-student-Teacher friendships. This has affected the education of students and changed the socio-economy. Students without technical facilities relied entirely on teachers and schools. But the corona impact has put the lives of these people in question. For most girl students, going to school or college is the most important opportunity to escape from household chores; There they enjoy other benefits besides studying, meeting friends, conversing with them, Now they have lost it all.

The challenges of online learning

There are, however, challenges to overcome. Some students without reliable internet access and/or technology struggle to participate in digital learning; this gap is seen across countries and between income brackets within countries.

Is learning online as effective?

For those who do have access to the right technology, there is evidence that learning online can be more effective in a number of ways. Some research shows that on average, students retain 25-60% more material when learning online compared to only 8-10% in a classroom. This is mostly due to the students being able to learn faster online; e-learning requires 40-60% less time to learn than in a traditional classroom setting because students can learn at their own pace, going back and re-reading, skipping, or accelerating through concepts as they choose.

Nevertheless, the effectiveness of online learning varies amongst age groups. The general consensus on children, especially younger ones, is that a structured environment is required, because kids are more easily distracted. To get the full benefit of online learning, there needs to be a concerted effort to provide this structure and go beyond replicating a physical class/lecture through video capabilities, instead, using a range of collaboration tools and engagement methods that promote.

What is the future of students without the Internet?

Over one-and-a-half years since the Covid pandemic broke out in India, the digital divide continues to pose challenges in remote teaching and learning, according to experts. Teaching and learning activities had to move online when the pandemic forced the closure of schools and colleges. for example: 60% students do not have internet access in India: Report.

In the aftermath of the Government epidemic, all school students, both public and private, were required to study online. The status of marginalized students and those living in remote villages without internet access has been in question since the beginning. Despite the easy availability of internet facilities in the cities, many students suffered from not being able to afford the equipment including cell phones, tapes or computers they needed to access it. Some of the students who had the opportunity to attend online classes also experienced some

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problems due to prolonged exposure to cell phone and computer screen.

Online Kalvi radio works to address this shortcoming. Data is more expensive when students study through the internet. Learning via video may require as much as one GB per day. Unnecessary ads, pornographic ads, etc. may also come across. But when listening to online radio there are no opportunities for them. Similarly there is no need to download any processor alone.

The Government of Tamil Nadu has introduced a new program called 'illam thedi kalvi' during the Corona period. A home-based education program is to be implemented to rectify the learning gaps and losses of students in grades one to eight in government schools. The future of the students may not be affected by this program.

Changes in the Future

Nowadays, parents, students and teachers across Europe are adapting to the 'new normal' with education from a distance. As schools start reopening again, there are two time horizons against which changes can be observed. In the short-term, schools need to guarantee that proper hygiene and social distancing measures are undertaken, they need to create trust among parents to allow their children back in schools, and they need to consider possible learning losses and how to compensate for those. In the long term, possible permanent changes to the educational systems could be observed. Not only does this require adapting to the use of technology but – with growing volumes of data being created about the students' behavior and performance – it also forces schools to further consider the privacy and protection of the pupils' personal data. (https://data.europa.eu/en/impact-studies/covid-19/education-during-covid-19-moving-towards-e-learning)

CONCLUSION

The Corona period was marked by new changes in the education system. Emphasis was placed on e-learning. However, most students are not able to attend online education. The long live direct class was abolished and the emphasis was on online education during this period. Introduced various Courses on the Online NPTL, MOOC, Swayam.

Students should be educated by realizing that education is the immortal wealth. During the Corona period many students had to go to work due to family circumstances. Thus the future of the students is in question. Many students suffered without internet access. The government has taken various measures to address this.

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E - LEARNING: CHALLENGES FOR EDUCATION IN RURAL AND REMOTE AREAS

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ABSTRACT

Due to the emergence of the COVID-19 pandemic, educational institutes across India have been closed since mid-March 2020. Due to the closure of institutions, schools and colleges in rural and distant areas of India are facing unprecedented challenges. In light of this, the current article looked at the problems of online learning in rural areas from the perspective of all stakeholders. Two pupils, two parents, and two teachers from rural locations participated in this qualitative study. The study is unique in that it looked at online learning issues from the perspectives of students, teachers, and parents. The study discovered that online teaching-learning is difficult due to a variety of obstacles including a lack of technical devices, bad network access, and power outages.

KEYWORDS: COVID-19. Online Learning. Rural Areas. Unprecedented Challenges

INTRODUCTION

The global spread of the COVID-19 epidemic has affected almost every nation of the world and has triggered a series of public health responses. The epidemic has forced the closure of all types of organizations around the world. The closure of all educational institutions was an important step away from the government of various countries to prevent the spread of this infectious disease. Primary education, education applications, and forums can be used by schools and teachers to connect with students and prevent disruption of education [1]. Online education was introduced into the first decade of this century in the Indian education system as a means of teaching grades. This learning method requires access to digital devices and an internet connection. Video conferencing, PDFs, instructional videos, and audio attachments are tools, used in this way. Various apps like Zoom, Google Meet, Jio Meet, etc. used for video conference. WhatsApp and Telegram are used to share reading materials with students.

At the time of the closure, all classes for the promotion of classrooms in tamilnadu schools were suspended and students were promoted to higher grades according to their term marks. The new session resumed in April 2020 to avoid academic delays. The tamilnadu Government Department of School and Public Education has adopted an online teaching approach to resume the teaching and learning process. This

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instruction has become quite commonplace for rural students as they live in a regular classroom, where the teacher is present to guide students and monitor their learning directly. Learning online is something new for students in rural areas.

Problem

With the government's decision to re-introduce inclusive classes, traditional education suddenly changed to an online teaching method. This transition from standard to digital changed the education system in ways and the results are yet to be determined [2]. Teachers and students need to find ways to connect and face the challenges of transitioning from the ordinary to the new learning-teaching approach. Whether grade or actual learning, teachers have a challenge to reach almost all of their students [3]. Prior to the epidemic, online learning existed but not all teachers knew the technology. As they were confined at home, with the challenge of quickly learning new technologies, many teachers face one of the most stressful episodes of modern age [4]. Students in isolation and isolation were required to develop new desirable e-learning skills [5].

Online education may also widen the learning gap between children from low-income and high-income families [6]. Children from homes below the poverty line live in conditions that are not conducive to learning online. The biggest obstacles to moving to internet education in India were inadequate digital gadgets for students and the lack of internet connection at home due to poverty. Children from low-income households find it difficult to complete their homework online because of poor home environment [6]. Recently, news broke that another father had committed suicide, as she is unable to provide smart phones for her children to learn [7]. Elsewhere, a family that had to sell their cow, the only source of income for the family, bought a smart phone, and it became a hot topic [8]. Saddened by not having a smartphone for use in online classes, a 17-year-old 11th-grade girl in Punjab committed suicide. [9] Away from school with friends students find boring online classes [10]. The sudden disruption of education as a result of COVID-19 has created a need for research and has documented significant changes in teaching methods and responsibilities for teachers [11].

Reason

Translating IT capabilities into an extended learning space for all is the goal of online learning. The Indian government has introduced the National Mission on Education through ICT (NMEICT) to make democracy an opportunity to learn online. In order to promote digital education, various initiatives such as SWAYAM, SWAYAM Prabha, ShodhGanga INFLIBNET, National Digital Library, and the National Academic Depository by the Department of Human Resource Development have been taken. In addition to these platforms, MHRD has developed the Diksha App with channels and numerous online learning programs in India. As there were no alternatives, intermediate and regional governments mandated online learning during the closure period in order to continue the learning process.

This study is based on this key idea, which looks at how people who are

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challenged can come up with an effective solution to their problems. To date, participants in the study were home students, parents, and teachers who had difficulty teaching and learning online. Therefore, the following research questions were developed: What changes in work have the teacher experienced, and what are some of the challenges she faces in providing online instruction for students? What is the challenges students face during online teaching? How did parents view online teaching skills and what are the challenges? Research questions address key research areas in this field by involving key stakeholders such as students, teachers and parents.

OBJECTIVES

- The purpose of this study was to showcase the experiences of school teachers, students, and parents who receive online education during the closure of COVID-19.
- This study aims to understand the challenges teachers, students, and parents face in implementing the online teaching process in the context of school closures due to COVID-19.

REVIEW OF LITERATURE

The pandemic in various ways affected the lives of people in terms of occupation, education, communications, financial resources, and health. For the well-being of society, governments throughout the world closed the educational institutions. This unexpected and exceptional interruption in social life and the educational system altered the work of many teachers abruptly, and in several aspects [12]. A study exploring the critical challenges and factors influencing the e-learning system usage during the COVID19 pandemic found that technical factors were one of the significant factors that influenced the practice of e-learning systems [13].

A study in South Africa and found that many rural learners are deprived of the online teaching-learning process, owing to a lack of digital gadgets to connect to the Internet, the learning management system, and software[14]. Using both qualitative and quantitative data, the professional life of a secondary school teacher was examined who had continued teaching his students in rural Alaska (United States) by online mode during COVID-19. It was found from the study that the teacher experienced extra workload and viewed that the online education should be inclusive and carefully designed [15].

In developing countries, the e-learning process might be hindered by technological knowledge, education and literacy background, and socio-economic problems of the people [16]. In Southeast Asia, large sections of the population neither possess electronic devices nor have access to the Internet. Even people with access to the internet, experience inconvenience because of several factors including the inconsistency of internet speeds in different regions. The urban population often enjoys significantly faster internet compared to those living in less developed areas [17]. Internet connectivity and access to digital gadgets remain a persistent equity question, particularly in rural areas [18,19].

A study conducted in Nepal shows that many students got disturbed during their online class because of electricity problems

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(63.2%), and because of Internet problems (63.6%). Similarly, about half of the teachers got troubled by their online teaching because of the power problems (42.3%), and because of Internet problems (48.1%) [20]. News that children are sitting on the trees, near any high places or river banks for attending classes is seen through electronic media and social media platforms in tamilnadu [21].

METHODOLOGY

Design

This descriptive and descriptive quality study focuses on the concept of changes in teaching processes from standard classroom practices to online mode by students, teachers and parents. Although qualitative research has its limitations [22], the strong point of this approach was that it considered the views of all active participants, i.e., students, teachers and parents. The study examined the teacher's voice in depth, the student's attitudes and ideas, and the problems of parents using a variety of data collection methods.

Data were collected through direct observation by participants in their workplace, structured interviews, open-ended questions, and telephone interviews. The researchers were well acquainted with the teacher's workload and working conditions. They were aware of the problems of parents and students in rural areas regarding technical knowledge before the change of online education. Therefore, they remain vigilant throughout the study to assess the impact of school closures and switch to online education as seen by teachers, students and parents.

Participants

The participants of this study included two teachers, one male and one female teacher, two students, one boy, and one girl, and two guardians, one male, and one female. All the participants of the study belong to a rural government school in the dharmapuri district of tamilnadu. The teachers have more than fifteen years of experience in the schools where they are posted. Owing to their long residency at the school, they had thorough knowledge about the students and the area where the school is located.

RESULTS

Responding to the first question Teacher X said, “This is a big challenge to do online classes due to the non-existent or limited network. Sometimes I have to get out of my home with network problems. One day while I was busy picking up a classroom on the roof of my house, a group of monkeys suddenly jumped from my neighbour's roof onto mine and had to stop the class and run. Online learning is appropriate in urban areas where there is no network problem. All students are not able to benefit from online learning, as they are accustomed to reading traditionally. The students in my school need the constant support and guidance of teachers, as their parents' ability to guide them. I feel sorry for them and feel depressed and guilty, as the students are not treated well under this system. ”

Teacher Y also expressed her concern about online learning problems. “I bought a smart phone after being instructed by the authorities to study online courses. It took me days to read the online application. At the behest of the authority, we teachers form a WhatsApp group with students. But we can add a few students, as they did not have smart

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phones. All the teachers in my school went from house to house distributing textbooks and other materials. Most people are day laborers, auto-rickshaw drivers, and vegetable vendors and do other jobs. They can't afford a smart phone, and internet connection and data usage are another problem." Both teachers have expressed their concern over student involvement and participation. Their voice is similar in terms of student participation. "Even though there are about 40 students in one class, only eight to ten students are asked their doubts and bring assignments. Some do not have a machine, some have poor communication skills and some do not have supervisors to guide them. We introduced the students and their caregivers to the Diksha channel and asked the students to watch the channel as a program. We were not able to visit their homes regularly because of fear of pollution.

One caregiver (male) said, "I am a rickshaw driver. I have a cell phone but I always have it all day, as people call me to book cars to go to the hospital or station. Because of the closure, I have very little or no money at all. I do not include one rupee in my children's education. The government provides everything, such as clothing, books, lunch, and a free education cycle for my child. I can't afford to buy a new phone even though I wish to give it to my baby."

To determine the response of students with smart phones and computers connected to the network, investigators recorded two students' responses to their online learning experience. Both students responded that they had smart phones but the network was not always available. Although it is very interesting for them to read online, common distractions create frustration. "Electricity problems are always there in our area. Sometimes I also lose interest in reading on my own. At school, it's very interesting to read with friends. Breaking the cycle of doubt is also easy, as we can ask friends and teachers whenever they have a problem understanding ideas."

DISCUSSION

This study was carried out in the Madurai district of tamilnadu in 2020 and pointed out the challenges of online education in rural areas. In most of the schools, there are no facilities for online classes till now, and teachers are still getting training on how to conduct such classes. In short, the benefits of conducting online classes are not that great in rural and remote areas. Even though telecommunication and the internet are available in grass root areas of India, not every place has a strong network and Internet services. So, students do not get chances to attend classes or take examinations. When the lockdown started, all the educational institutions got closed all of a sudden. Students become carefree and fickle, as there were no regular classes or tuitions for them. Lack of teacher-student, student-student interaction, and blackboard method of teaching and learning affected the quality of education given to the students. Doubt-clearance becomes very difficult in the online method.

After the students, if anyone is getting affected worst, they are the teachers of rural schools. In rural schools, the teachers and students are habituated with the traditional teaching-learning method. This study found that teachers did not have proper knowledge about online classes and had not been given any training. As the teachers are

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middle-aged or old, they usually do not know how to conduct online classes via smart phones or laptops. They are seen taking help from their children or grandchildren. Due to online classes, some teachers faced lower self-esteem, productivity in teaching, and their motivation level decreased. Besides teaching, the teachers were also engaged in various works like distributing books, re-admission of the students and some had to take care of the quarantine centres situated in their schools. Teachers reported being stressed due to all these challenges. The findings of the present study come in line with earlier studies conducted by Baired (2020), Fagell (2020), and Kaden (2020).

CONCLUSION & RECOMMENDATIONS

Prior to the onset of the outbreak and closure of COVID-19, the education system in rural India was in poor condition even after the implementation of many welfare programs. Through research, it has been revealed that although online learning seems to be one of the most important learning modes in the COVID-19 era, the use of technology is concerned with a few things. Online education for school children is a challenge due to many problems such as lack of network access, lack of gadget purchasing resources and required data, power outages, insufficient knowledge, bad weather at home, and lack of direct communication between student and teacher. Although the study has limitations such as a small sample size, it looks at the issue in depth by including all participants.

The findings of this study are important for the application of online education. It is suggested here that appropriate training should be provided to both students and teachers. Teacher care and training are some of the conditions for recovery in a crisis situation and a future sustainable education practice. Cell phones and other necessary extensions should be provided to economically poor students. If possible, schools and other educational institutions should be reopened in line with the community's distance and appropriate measures to protect people from being affected.

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DIGITAL EDUCATION BARRIERS IN RURAL INDIA

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INTRODUCTION

The digitalization of education in the semi-urban and rural regions of India remains a challenging feat to achieve and we still have a long way to go. Digital Education has been envisaged as a panacea to tackle all the existing issues that come in the way of imparting education in Rural India. There has been a shared belief that access to digital education can overcome the problems of shortage of teachers in rural schools, access to quality education, lack of innovative methods and techniques in teaching-learning process, high drop-out rate and paucity of quality learning material.

According to the Father of the Nation, Mahatma Gandhi, "True education must correspond to the surrounding circumstances, or it is not a healthy growth." These words reflect the ceaseless need for educational institutions to keep evolving and comprehending the imperative demand of students by providing them with necessary means. The transition from chalkboard teaching to prompt, flexible online teaching requires appropriate technology-enabled learning. Digital education has often been considered a viable solution for Rural India to address the existing gaps in imparting education. It is believed that digital education can curb the issues related to quality education delivery, the inadequacy of teachers in rural schools, high rate of drop-outs, insufficiency of innovative teaching-learning methods and lack of standard learning material.

Even the National Education Policy (NEP) 2020 focuses on digital learning as a substitute to the traditional classroom model for interaction between teachers and students. While there are numerous benefits of digital education, the barriers are still manifold to make education a complete online phenomenon in rural areas. The present Covid-19 crisis has had a major impact on the digital divide in the country, particularly from the perspective of education with digital access. It has also brought into sharp focus the challenges that exist for digital representation of education in the Tier III and rural areas of the country.

CHALLENGES

Digital Illiteracy and No Infrastructural Support

A significant proportion of the rural population continues to fall short of the required internet bandwidth and knowledge to recognize devices and digital

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terminologies. Another major issue involves the absence of supporting infrastructural facilities such as a stable flow of electricity and unavailability of high-speed internet.

Access to proper devices and cost of data for rising use of content consumption

While talking about digital learning, it important to observe the accessibility of accurate devices for each student to avail digital content. In rural areas, only a nominal section of people have the privilege of accessing laptops and computers. Even students with access to desktops and laptops cannot avail the internet and the costs incurred in the procedure. Apart from that, the phone screens available to them are not favourable enough for long learning hours. The data packages and their prices also tend to restrain both teachers and students from going ahead with live classes. Though, subsidizing learning data plans by telecom companies can be an attempt to bridge this existing gap.

Inadequate Skills

The inadequacy of skills among the teachers of the rural areas to operate digital platforms is another key factor affecting the advancement of digital education. As the teachers lack the necessary training to use digital platforms, they are averse to adopt these educational methods.

Language Barrier

Almost 85% of the population living in India does not speak English. The lack of access to standardized content in Hindi and other regional languages causes a slow rate of further online course adoption. Standardized digital content covering every major curriculum from K-12 to higher education level seems far-fetched. Curation of any quality content from open sources will amplify the expenses and will require the Government's synchronized effort. The syllabus also needs to be re-contextualized from a blended learning approach.

Gender Inequalities

The penetration of online learning amongst the female population in the rural parts of India is even more taxing. Just like most domains, the availability of internet and literacy in rural India is primarily available to men.

While the above challenges manifest the existing gaps for dispersal of digital education in rural India, there are several initiatives taken by the Government to encourage online learning under the National Mission on Education through Information and Communication Technology (NMEICT). Other than that, eBasta is presenting a framework to make school books available in digital form as e-books to read and use on tablets and laptops. Further initiatives include SWAYAM Prabha, SWAYAM Spoken Tutorial, Free and Open Source Software for Education (FOSSEE), National Digital Library (NDL), Virtual Lab, E-Yantra, and MOOCs. Additionally, the Government's Digital India initiative also

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covers a massive plan to link the rural parts with high-speed internet networks.

Though these schemes are supposed to be quite beneficial, there is a huge amount of work that remains to be done considering the size of the country's population and the targeted areas. These tasks can only be accomplished when all stakeholders direct their efforts in conjunction. Here are a few ways in which stakeholders can contribute to overcoming the barriers of digital education in rural India:

- Ed-Tech companies should provide cheap multi-lingual platforms that could work on low bandwidth and provide access to quality content. To promote this, the Government can offer tax benefits to these companies.
- The present situation will precede an analysis on topics such as penetration of digital learning in rural areas, economical learning platforms, redefining learning science from a blended mode of approach thus being more favourable for learners at large.
- State Governments can arrange online content delivery training for teachers.
- Innovative solutions can be initiated to create the process of online education more interactive and vigorous.
- The rural areas of the country can be better equipped with the essential infrastructure provided by the public-private initiatives.
- The successful gambits under the CSR (Corporate Social Responsibility) of corporate bodies fostering digital education in schools of rural areas need to be further promoted.
- Schools in rural areas should be provided with digital learning kits, and substitute sources of energy such as solar power should be installed in these schools.

CONCLUSION

The digital education barriers in Rural India can be eliminated through the provision of affordable and accessible e-learning modes. Content Standardization, Facilitating all the vital amenities and services in government schools through PPP (public-private partnership) model, up-skilling the teachers by providing them with customized teacher-training programmes on online education, blended learning in schools as well as the advancement of initiatives in digital learning space by NGOs & CSR wings of organizations need to be considered to propel digital education in rural India. Other than that, all stakeholders should come together and provide an ingenious pedagogy, accessible educational devices, proper infrastructure and a quality ecosystem for the expansion of digital learning in rural India.

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ONLINE EDUCATION: CHALLENGES FACED BY RURAL COMMUNITIES

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Abstract

Education is the medium that gives us the skills, techniques, information and knowledge to know, understand and respect the duties we have towards our society, families and the nation. Therefore, the magnitude of the importance of education in life is huge as well as multifold. The importance of education in life is that it helps everyone develop a good perspective of looking at the world and our society. Education helps us in getting new ideas and exploring new ideas. Education can be both formal and informal through the method of teaching which is called pedagogy. Formal education is achieved through educational institutions such as preschool, primary school, secondary school, colleges, and universities. However, informal education comes from self-directed learning, evidence-based learning, open learning, and electronic learning. With technology changing the face of education, students can utilize digital advancements to gain an all-round understanding of their chosen field of interest and develop an awareness of the prevalent issues and further to contribute towards the betterment of it. The COVID-19 pandemic and consecutive lockdowns have affected the education system of India. In this paper, the challenges faced by rural students, while implementing online education are analyzed.

THE ROLE OF INSTITUTIONS

An institute refers to any organization that has a particular purpose more so one involved with activities in training of students to impart professional skills and knowledge on them. Education is very crucial as it enlightens individuals in different aspects of life. As a result, the institutes for students automatically become very vital for students.

The institutes are essential to students as they build students' confidence level. They become brave enough to face people during class work and focus group discussions, and this improves their ability to communicate. The communicative competence earned assists them to have confidence in various aspects of life.

Institutions across the globe, recognizing the importance of education in one's life, operate with flexible previous studies criteria and along with considering multiple other factors such as experience and extracurricular activities, amongst others. This encourages individuals hailing from a diversity of backgrounds to apply and gain access to best-in-class infrastructure, leading professors and a multicultural study environment.

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Online Education

Online learning is catalyzing a pedagogical shift in how we teach and learn. There is a shift away from top-down lecturing and passive students to a more interactive, collaborative approach in which students and instructor co-create the learning process. The Instructor's role is changing from the "sage on the stage " to " the guide on the side."

Good Factors of Online Education

Some of the main advantages of online learning include:

- ***Convenience:*** Access from any online computer; accommodates busy schedules; no commuting.
- ***Enhanced Learning:*** Research shows increased depth of understanding and retention of course content; more meaningful discussions; emphasis on writing skills, technology skills, and life skills like time management, independence, and self-discipline.
- ***Leveling of the Playing Field:*** Students can take more time to think and reflect before communicating; shy students tend to thrive online; anonymity of the online environment.
- ***Interaction:*** Increased student-to-teacher and student-to-student interaction and discussion; a more student-centered learning environment; less passive listening and more active learning; a greater sense of connectedness, synergy.
- ***Innovative Teaching:*** Student-centered approaches; increased variety and creativity of learning activities; address different learning styles; changes and improvements can translate to on-ground courses as well
- ***Improved Administration:*** Time to examine student work more thoroughly; ability to document and record online interactions; ability to manage grading online.
- ***Maximize Physical Resources:*** Lessen demand on limited campus infrastructure; decrease congestion on campus and parking lots

- ***Flexibility:*** In physical classrooms, there's a limitation to the local population of the students but if we talk about digital classrooms, faculties will be able to address not just the local population but also the global population. Even in terms of faculty, we will not be confined and will be able to hire an expert professional from around the globe. For the working groups who wish to continue their education or learn something new, online education is a good option for them. It is more flexible, can adjust to their existing schedules and they can complete the assignments without sacrificing hours from their existing jobs or important chores of their household.
- ***Affordability:*** Comparing to the expenses of colleges, online education is more affordable and is helpful for aspirants who wish to go to college but couldn't. Also, they can continue earning while gaining the education they needed.
- ***Nature friendly:*** By going digital, we are actually doing the earth a favor. Trees are

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used in the construction of paper, so if there would be less production of textbooks, the number of cutting down of trees will significantly decrease.

- ***Time saver:*** Traditional methods of teaching includes years of studies and months of waiting for the final examination results but with the digital implementation of the classes we are getting the content on spot, can give examinations with the ease of sitting at home, and can get the results instantly (or within few days) on our smart phones and laptops which is less stressful and saves a lot of time.

Online Education in Rural India

Online education is the growing face of the education system in India. Covid-19 has caused destruction and devastation worldwide in ways nobody could anticipate. Due to the global pandemic, online education has fallen into the most basic level- schools and colleges. For the students who have long-distance commutes, they find it a more flexible and easier option as education is reaching them and not vice versa.

Educational institutions took to online teaching. The start of this change felt rather very enticing for the students with not having to rush and get ready to reach the institutions, and being in the comfort of their homes. However, this peace didn't last as long. Online education has taken a huge toll on the mental and physical health of students as well as their teachers.

Major Challenges while incorporating online education in Rural India

- **Socioeconomic divide:** India is a diverse country and within these diversities come wide varieties of cultures and beliefs, and because of it, India suffers a huge socioeconomic divide – the division of classes like high, low, and middle and that is a major drawback. Not even one-third of the population receives online education. For the low-class community like farmers, maids, household staffs, sweepers who have low income, affording a laptop or computer is a really difficult task.
- **Gender differentiation:** Another challenge is the differentiation between girls and boys in our country. According to a recent survey done in the government schools of Bihar, out of 733 children, only 28% of the girls had smartphones compared to 36% of the boys. In the majority of the cases, these smartphones belonged to male adults often lesser accessible to girls than boys. Half of these families couldn't afford internet packages and their children had to rely on the lessons that were aired on televisions. But in those cases, girls were found to spend more of their time completing the household chores than boys, which often overlapped the time of telecast.
- **Poor Net connectivity:** In rural areas, lack of internet connectivity, less to no power supply, and inability or unaffordability to buy relevant devices is the major concerns. Many teachers had complained about the non-reachability of study materials to lower class students

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because they are unable to attend live sessions due to a lack of network. Conducting live sessions and streaming them for the children who belong to the rural part of India is not possible because of the poor network connectivity. Even if the rural areas are gaining knowledge about new technologies like smart phones, laptops, or tablets, and are doing everything to afford it, the lack of internet network supply is still a big issue.

- **Internet drawbacks:** It's a big challenge to use the internet as a source of online education. Google, Firefox, and other web browsers are good sources of information but using these platforms for online education isn't easy. For teachers who had always worked in schools and universities, expecting them to be up to date with creating digital content and delivering it effectively online and for the children to easily adapt is completely unfair.
- **Practical Learning:** Practical learning is not possible in online classes. Even if teachers can explain the theoretical aspects, students still need practical training to grasp what they have learned, which is most common in subjects like science and practical arts.

The major drawbacks of Online Education

Digital media today is the blend between the classical and conventional way of learning like books and notebooks and digital software like eBooks and pdfs. Online education has drastically changed the way we study but the year and half of attending online classes from home has led to a string of mental and physical health issues for both students and teachers.

1. Lack of interest

Humans are social animals, and the most introverted ones also need to see faces and have human interactions once in a while. The children have grown to lose interest in their classes.

Most of them switch off the camera and go about their other activities. The lethargy has inculcated the loss of interest in not only the studies but everything overall.

The pressure of after-school homework and assignments has triggered a great toll on the mental health and mood.

2. Stress and anxiety

The concentration levels of students dropped in online learning as the eye meanders elsewhere on the screen. This in response made it difficult for most students to keep up with the teachings.

The pressure to concentrate and produce the required results has resulted in a great amount of stress and anxiety. Tasks, assignments, and homework slacked. Most children were seen lagging behind and succumbing to the pressure. The mental state of the children was fragile and tampered with.

3. Zoom fatigue

Zoom fatigue refers to the exhaustion after having attended zoom classes, or video conferences. With the screen time increasing drastically, the mind is overwhelmed with information and the brain finds it rather difficult to register all the information. Over involvement of parents also has added to the pre-existing anxiety and stress. Parents are

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confined to the walls of their houses and have taken it upon themselves to get extensively involved with their children and their online classes.

4. Eyesight problems

Increased screen time has increased the strain on the eyes, resulting in major headaches. This was applicable not only to the students but also to teachers.

5. Lack of classroom ethics

The classroom ethics have been compromised to great lengths. The posture, regularity, lack of routine, attentiveness has all resulted in health hazards. Constant sitting has caused weight concerns as well. No physical activity has made the students restless and frustrated. This too took a toll on the eating habits, thus resulting in damages to the physical health.

6. Bad ergonomics

Human factors and ergonomics is the application of psychological and physiological principles to the engineering and design of products, processes, and systems. Studying online has resulted in poor/bad ergonomics, thus resulting in a lot of issues as regards back pain and fibromy algia pains.

7. Lack of physical activities

The lack of physical activities has caused children to become obese. Thanks to binge eating and watching, it's only gotten worse.

Muscle spasms, muscle rigidity, and lack of calcium, etc are all based on lack of physical activity.

8. Lack of Vitamin D

Online Education surprisingly has resulted in a lack of Vitamin D. Lack of sunlight, poor diet, and exercise have resulted in more problems than one could anticipate.

9. Excessive screen time

Excessive screen time also becomes an issue to the parents whose children attend these classes. With class works, home works, assignments, everything going digital, children will be engrossed in their smart phones / laptop screens and it's not good for their mental health. It puts a strain on their eyes and brain.

Conclusion

Online education initially started as a great advantage but took a drastic turn and didn't work so much in the same spirit. With the increased screen time, eyesight issues, headaches, and strain have increased a great deal. Not only that, children have also been exposed to stress and anxiety from an early age and parents only add to the pressure. Physical well-being has gone for a complete toss. It is important for us to keep in mind all these aspects to prevent any future harm that might turn into lifelong problems. E-learning offers more freedom for learners, but also requires planning of their own self-development and high self-discipline. It means that self-discipline becomes highly important to ensure learners accomplish ments and allow them achieving learning goals.

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ONLINE EDUCATION: CHALLENGES FACED BY RURAL COMMUNITIES

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ABSTRACT:

Online study is generally associated with the terms flexible and flexibility. Many students choose to study online specifically for the flexibility that is offered, hoping they can combine their studies with multiple other responsibilities in their lives. For students living in regional and rural areas, such flexibility can be even more important, given the additional difficulties they face in accessing campus facilities. While a flexible learning environment has the potential to contribute positively towards equity in higher education, this equity can be compromised when university policies and processes that have been designed for on-campus students are applied equally to online students. This paper examines the experiences of a group of regional and rural Education students who have chosen to study online, to a large extent because of online learning's promised flexibility. Their experiences demonstrate that equal treatment may in fact undermine flexibility and result in an inequitable student experience.

Keywords: Online education;e-learning;Regional, rural and remote students.

INTRODUCTION

With the COVID-19 a novel corona virus disease spreading across the globe, many countries have ordered closure of all educational institutes. Educational institutions have come to a functional standstill since they had to protect their students from viral exposures, which are likely in a highly socializing student community. As on 10th March, school and university closures globally due to the COVID-19 has left one in five students out of school. According to UNESCO, by the end of April 2020,186 countries have implemented nationwide closures, affecting about 73.8% of the total enrolled learners (UNESCO, 2020). Even though the lockdown and social distancing are the only ways to slow down the spread of the COVID-19 by breaking the chain of transmission, the closure of educational institutions has affected a large number of students.

As the schools and colleges are shut for an indefinite period, both educational institutions and students are experimenting with ways to complete their prescribed syllabi in the stipulated time frame in line with the academic calendar. These measures have certainly caused a degree of inconvenience, but they have also prompted new examples of educational innovation using digital interventions. During this time, most of the

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universities have shifted to online mode using Blackboard, Microsoft Teams, Zoom, or other online platforms.The educational institutions in affected areas are seeking stop-gap solutions to continue teaching, but it is important to note that the learning quality depends on the level of digital access and efficiency. The online learning environment varies profoundly from the traditional classroom situation when it comes to learner's motivation, satisfaction and interaction (Bignoux&Sund, 2018).

Educational institutions in India have also made a transition to an online teaching environment soon after Union Government's decision to impose nationwide lock-down. However, the major concern is about the quality of learning which is closely related to how well the content is designed and executed. The effectiveness of learning also depends on how the content is curated to the online environment and also in understanding and addressing the constraints faced by students. The study is even more relevant considering that in India the system of online education has never been tried at this scale and this is like a massive social experiment. In this line, we have examined students' perceptions regarding online education and various attributes which could make online learning more effective and successful.

Current scenario

Schools being shut down across the globe due to the pandemic, the education system has been affected drastically. This has led to a rise in e-learning or blended learning. While there are certain benefits to this, there are numerous challenges related to online education as well, especially in the rural backdrop.Even though the education system in India is the largest after China, quality education in the rural and village areas remains one of the biggest challenges. Numerous studies have demonstrated the gap between rural and urban education.

Advantages of E-learning

One of the most obvious advantages of e-learning is that you can save time and money. You can manage your schedule and take online courses at your most convenient time, whether early in the morning, late afternoon, or evening. You save money, too, because you don't have to pay for transportation or worry about eating on the go.E-learning makes use of different platforms like Pedagogue, which provides interactive content. Also, you can share your thoughts and opinions with others. The more engaging the lessons, the more students can remember the information.You can choose your learning path and study at your own pace. You become more motivated and invested in the course.Students aren't the only ones that can save money in e-learning. Many educational institutions save money through this set-up because there's no need to use a physical classroom, which translates to reduced monetary spending.E-learning is also more environmentally friendly because it doesn't contribute to the pollution brought about by paper production.

Disadvantages of E-learning

E-learning is one of the causes of social isolation because you don't see your teachers and classmates face-to-face anymore. Interaction is very limited to none.Consider yourself lucky if you're located in an area where the internet connection is fast and stable. Unfortunately, some have very limited access to the internet.

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They have to go to internet cafes or use public Wi-Fis which is very inconvenient.E-learning includes assessment, just like in a regular classroom setting. However, there are no teachers or proctors to watch over you during exams. It's easy for online students to share answers knowing there's nobody watching.You're basically on your own in e-learning. You have to motivate yourself to study hard, take down notes, and gather more information. You should also manage your time well by learning how to juggle studying while doing other things like household chores or earning money part-time.You'll spend most of your time listening to podcasts, watching videos, and looking at slide presentations. There's no hand-on experience like conducting experiments.It's the most modern way of learning that requires only a gadget and internet access. However, it's not for everybody. Being aware of the advantages and disadvantages of e-learning can help you decide whether this is for you or not.

Issues being faced

As per a survey report titled 'Annual Status of Education Report (ASER), 70% of students in class V and 60% of students in class VIII from rural schools cannot do simple basic division. In addition, 56% of class V students and 31% of class VIII students from villages cannot read class II textbooks. Also, 57% of rural and village Indian schools have only three or even fewer teachers.The disparity of wealth, poor infrastructure, paucity of trained and skilled teachers, student-teacher ratio, inadequate teaching material, lack of availability of electricity, and limited or no access to learning material are amongst the challenges faced by Indian rural schools.While education in urban areas is evolving with newer teaching techniques, rural areas continue to follow the traditional method of blackboard teaching. There is an urgent need for reinvention in the education structure in rural areas that would provide students with the option of distance learning.The rapid influx of technology in the education system amidst the pandemic has given rise to a new era where the traditional methods of teaching should be revamped and enhanced by introducing and adopting newer teaching techniques.

Various solutions

A digital education solution that provides hybrid learning and replicates a physical classroom is the need of the hour. An important factor to keep in mind while implementing the hybrid learning approach is to ensure that the quality of the learning experience is the same as in-class training.Social innovations in the form of solar-based digital education have enabled digital classrooms in remote areas in the absence of electricity. While solar power based digital education is a potent technology combination, the introduction of projector-based virtual classrooms is helping provide safe distance education to children.While there are multiple benefits of digital education, lack of funds is a major barrier in introducing it in rural areas. These barriers can be eliminated when all stakeholders join hands to provide affordable and accessible e-Learning solutions to augment the education system in rural India. These tools paired with upskilling teachers by providing them with teacher-training programs on online and technology-based education would contribute to the expansion of digital learning

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DIGITAL EDUCATION: A VIABLE SOLUTION FOR RURAL INDIA TO ADDRESS THE EXISTING GAPS IN IMPARTING EDUCATION.

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ABSTRACT

Educational institutes across India have been closed since mid-March 2020 due to the outbreak of the COVID-19 pandemic. Schools and colleges in rural, remote areas of India are experiencing unprecedented challenges due to the closure of institutions. Against this backdrop, the present paper explored the challenges of online learning in rural areas for all stakeholders. This qualitative investigation was conducted on two students, two parents, and two teachers in rural areas. The uniqueness of the study is that it analysed the challenges of online learning from the perspective of students, teachers, and parents. It is found from the study that online teaching-learning is challenging due to multiple factors such as lack of technical gadgets, poor network connectivity, and electricity problems. Lack of previous experience in online teaching is a major shortcoming for teachers. Parental literacy and student interest are other hindrances. Stress has been experienced by parents, students, and teachers due to the transition from traditional to online learning.

Keywords: COVID-19. Online Learning. Rural Areas. Unprecedented Challenges

INTRODUCTION

The global spread of the COVID-19 pandemic has affected almost all nations of the world and has triggered an array of public health responses. The pandemic forced the closure of all kinds of organizations across the world. Closures of all sorts of educational institutions was a significant physical distancing measure adopted by the government of different countries to curb the spread of this contagious disease. Distance education, educational applications, and platforms can be used by schools and teachers to be in touch with students and curb the interruption of education.

The transition from chalkboard teaching to prompt, flexible online teaching requires appropriate technology-enabled learning. Digital education has often been considered a viable solution for Rural India to address the existing gaps in imparting education. It is believed that digital education can curb the issues related to quality education delivery, the inadequacy of teachers in rural schools, high rate of drop-outs, insufficiency of innovative teaching-learning methods and lack of standard learning material.

The National Education Policy (NEP) 2020 focuses on digital learning as a substitute to the traditional classroom model for interaction between teachers and students. While there are numerous benefits of digital education, the barriers are still

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manifold to make education a complete online phenomenon in rural areas. The present Covid-19 crisis has had a major impact on the digital divide in the country, particularly from the perspective of education with digital access. It has also brought into sharp focus the challenges that exist for digital representation of education in the rural areas of the country.

Challenges of Digital Education in Rural India

Digital Illiteracy and No Infrastructural Support

A significant proportion of the rural population continues to fall short of the required internet bandwidth and knowledge to recognize devices and digital terminologies. Another major issue involves the absence of supporting infrastructural facilities such as a stable flow of electricity and unavailability of high-speed internet.

Access to proper devices and cost of data for rising use of content consumption:

It is important to observe the accessibility of accurate devices for each student to avail digital content. In rural areas, only a nominal section of people have the privilege of accessing laptops and computers. Even students with access to desktops and laptops cannot avail the internet and the costs incurred in the procedure. Apart from that, the phone screens available to them are not favourable enough for long learning hours. The data packages and their prices also tend to restrain both teachers and students from going ahead with live classes. Though, subsidizing learning data plans by telecom companies can be an attempt to bridge this existing gap.

Inadequate Skills

The inadequacy of skills among the teachers of the rural areas to operate digital platforms is another key factor affecting the advancement of digital education. As the teachers lack the necessary training to use digital platforms, they are averse to adopt these educational methods.

Language Barrier

Almost 85% of the population living in India does not speak English. The lack of access to standardized content in Hindi and other regional languages causes a slow rate of further online course adoption. Standardized digital content covering every major curriculum from K-12 to higher education level seems far-fetched. Curation of any quality content from open sources will amplify the expenses and will require the Government's synchronized effort. The syllabus also needs to be re-contextualized from a blended learning approach.

Gender Inequalities

The penetration of online learning amongst the female population in the rural parts of India is even more taxing. Just like most domains, the availability of internet and literacy in rural India is primarily available to men.

Digital Education has been envisaged as a panacea to tackle all the existing issues that come in the way of imparting

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education in Rural India. There has been a shared belief that access to digital education can overcome the problems of shortage of teachers in rural schools, access to quality education, lack of innovative methods and techniques in teaching-learning process, high drop-out rate and paucity of quality learning material.

CONCLUSION

The digital education barriers in Rural India can be eliminated through the provision of affordable and accessible e-learning modes. Content Standardization, Facilitating all the vital amenities and services in government schools through PPP (public-private partnership) model, up-skilling the teachers by providing them with customized teacher-training programmes on online education, blended learning in schools as well as the advancement of initiatives in digital learning space by NGOs & CSR wings of organizations need to be considered to propel digital education in rural India. Other than that, all stakeholders should come together and provide an ingenious pedagogy, accessible educational devices, proper infrastructure and a quality ecosystem for the expansion of digital learning in rural India.

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CHALLENGES FACED ON ONLINE EDUCATION INRURAL INDIA

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INTRODUCTION:

Focus on rural education - Mahatma Gandhi said, "The future of India lies in its villages. If the villages perish, India will perish too." This alone explains the significance of focus on rural education. We should have schemes and schools that provide good education to children living in villages. Also, it should be assured that good and experienced teachers are there to impart education to children.

Learning is a lifelong key to success, especially for career-oriented individuals who hope to advance on both a personal and a professional level. Many teachers and students in rural areas are not able to match up to the technical skills of educationalists and students in cities.As the country takes to online education, the current pandemic is impacting rural students more than those who live in cities.In India, people are relying heavily on strong internet connections, computers, or smartphones to get back to business during the new normal. The crisis has nudged students to pick up e-learning opportunities, as there is no end in sight.

As the country takes to online education, the current pandemic is impacting rural students more than those who live in cities. Moreover, people in rural areas have to also deal with intermittent power supply and older electronic devices, which are often a hindrance to seamless access. Unfortunately, students in rural India are denied the newest devices and levels of accessibility to online content that urban Indians enjoy daily. Unlike their counterparts in cities, a lower percentage of students in villages possess desktop or laptop computers. They depend on their family members, mobile phones for learning and attending classes, making it adifficult exercise. Watching small screens to consume as much information as possible for long hours could be detrimental to students' health.

Digital literacy and the digital divide have been serious concerns for our country for over a decade. Many teachers and students in rural areas are not able to match up to the technical skills of educationalists and students in cities.Collective efforts of civil society organizations, policymakers and the government are required to create a user-friendlydigital interface so that teachers and students find it conducive for uninterrupted learning.On the bright side, all the stakeholders have made significant investments in improving access to digital services and e-learning; building on pre-

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existing infrastructure could ease the process of digital inclusion. Teachers would be able to transition smoothly if they receive the requisite support. Local and national governments must work together with the IT and EdTech sectors to speed up the process of bringing innovative and cost-effective online education tools to rural India.

It's absolutely true that the future and overall development of any country depends upon the fact that how educated its citizens are.

Challenges of online education in rural areas:

Providing multimedia teaching tools to teachers and students and utilizing smart classroom equipment like virtual classroom, digital board, digital teaching system, digital content, digital language lab, etc can help teachers boost education scenario in rural settings.

The following, we shall explore the biggest challenges facing online education today.

Lack of Motivation in Students, Infrastructural Problems, Digital Literacy and Technical Issues, Lack of In-person Interaction, Lack of EdTech and Online Learning Options for Special Needs of Students.

Rural schools face severe challenges that are unique to their environment. A lack of parental interest in children's education, insufficient funding from the state, a lack of resources, underqualified teachers, and multi-grade teaching are some of the barriers to effective education.

Advantages of online classes:

- Online classes are convenient
- Online classes are flexible
- Online classes are more affordable
- Online classes foster more interaction
- Online classes unlock more learning opportunities

The major advantages of online classes are the tremendous amount of savings for the learning institution. During online class, teachers have the option of administering online quizzes to ensure every student is engaged. Everyone can edit and enrich videos to create a better learning experience online. In online education, students have the option of learning form instructors in any time zone all over the world at any time. In online class everyone can accessed from your laptop or smartphone.

Disadvantages of online class:

- Online learning may create a sense of isolation
- Online learning requires self-discipline
- Online learning requires additional training for instructors
- Online classes are prone to technical issues
- Online Learning means more screentime

Instructors need to get a deep understanding of the different approaches to teaching and learning to avoid just replicating the physical class environment

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and miss out on all the added advantages and tools that e-Learning and blended learning have to offer.Of course, instructors also need proper training to tackle the technical aspect of online learning: the use of video and audio recording equipment, virtual classroom and lecture capture software, and of course the Learning Management Software (LMS). The combination of all these new skills represents a steep learning curve for the teacher, but thoughtful investment in proper training will pay off tenfold for the institution, the teacher, and the students alike.

Online classes can be accessed through the click of a link without the need to install anything.It's pretty much inevitable in 2022, but darn do we spend a frightening amount of time in front of screens. Online learning sadly contributes to this problem. Excessive screentime can lead to all sorts of physical ailments like poor posture or headaches. But it can also be a personal issue to students who struggle with learning from or focusing on screens.

Improve our online education system:

- Skill Based Learning
- Focus on Rural Education
- Free Basic Computer Skills Classes
- Teachers Training
- Subsidies and Grants for Professional Courses
- Educate Parents
- Health education
- Smart Classes
- E-libraries
- Making Sports Compulsory

CONCLUSION:

There are advantages and disadvantages of online learning for higher education. But as technological capabilities have reached new heights and many of the major concerns of students taking online classes have been addressed, the advantages of online classes are beginning to drown out the disadvantages. Remember, the education system of ancient India has always marked its impression all over the world. So why not achieve another milestone in education by making some more improvements. With little effort, planning, hardwork and a positive attitude, we can definitely take our education system to new heights

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ONLINE EDUCATION : CHALLENGES FACED BY RURAL COMMUNTITIES

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ABSTRACT

Online education is a form of education which is delivered and administered using the Internet. The COVID-19 pandemic has triggered new ways of learning. All around the world, educational institutions such as schools, colleges and universities are moved to online learning platforms to continue with the process of educating students and conducting examination in online. While using online, students and teacher being faced many types of problems. This article explores what are the challenges faced by rural commuters inonline education.

Keywords: Covid-19 Epidemic, Online Education, Rural Area

INTRODUCTION

The COVID-19 pandemic has affected almost all nations of the world it forced the closure of all kinds of organizations across the world. Closures of all sorts of educational institutions was a significant physical distancing measure adopted by the government of different countries to curb the spread of this infectious disease. Distance education, educational applications, and platforms can be used by schools and teachers to be in touch with students and restraint the interruption of education. Online education was implemented in the Indian education system as a method of distance education. This method of learning requires access to digital devices along with Internet connectivity. Video conferencing, PPTS, PDFs, educational videos, and audio clipping are the tools, which are used in this method. Various apps like Zoom, Google Meet, Jio Meet, etc. are used for video conferencing. WhatsApp and Telegram are used for sharing study materials with the students. In Online education where a teacher is physically present to guide students and monitor their learning directly. Online learning is new to students in rural areas.

Disadvantages of Online Education

Lack of Interaction: In Online Education no face-to-face interaction with teachers and students. In someteachers sharing the material through email. For some students, it can be difficult to study in such a situation.

Issues With Technology: Knowledge of technology is one of the key factorsto handle online classes. If the teacher and the students

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don't have required knowledge of technology, then online education will be fail. Problems with technology can make online learning frustrating, especially if one can't access materials and notes if there is no good bandwidth connection.

Lack of Motivation in Students

online learning would be the new interactive and immersive method to teach students. By frequently conducting quizzes, assignments and MCQ's have led to students losing motivation to keep revisiting the learning portal.

Financial constraints

Purchasing data plans for online learning could also incur a lot of expenses for families who face financial constraints. It could further affect the participation levels of both teachers and students live classes.

English Communication - Day by day importance of the English language is increasing, whereas in rural areas the majority of schools are in vernacular language. Hence, speaking and writing in English are given less importance. This leads to poor English communication and then low interest in the science field in higher education. Most of the rural students prefer to choose arts or commerce instead of science just to avoid the English language.

CONCLUSION

Today is a very exciting time for technology and education. Online programs offer technology-based instructional environments that expand learning opportunities and can provide top quality education through a variety of formats and modalities. In order to successfully participate in an online program, students must be well organized, self-motivated, and possess a high degree of time management skills in order to keep up with the pace of the course. For these reasons, online education is not appropriate for younger students (i.e. elementary or secondary school age) and other students who are dependent learners and have difficulty assuming responsibilities required by the online paradigm.

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ACCESS DENIED: CHALLENGES IN ASPIRING EDUCATION, NUTRITION AND BEHAVIOUR DURING COVID-19

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ABSTRACT

The disruptive effects of the Covid-19 pandemic are borne disproportionately by already disadvantaged social groups. When all educational institutions across India shifted from offline to online and by distance learning modes from March 2020 to comply with a nationwide complete lockdown. They already have significant disadvantages encountered by rural Indian schoolchildren were exacerbated. Rural schoolchildren and College students have historically been disadvantaged in terms of educational quality and opportunities compared to their urban counterparts, as stressed by two recent large-scale survey reports. Exposure to food-related advertisements and promotion packaging, particularly advertisements related to fast food and sugar-sweetened beverages, is significantly higher in areas with families with low income and racial and ethnic minorities. However, nutrition educators can encourage more healthful dietary choices by shifting core beliefs about children's food and educating about how children can eat the same foods as adults.

Key Words: Covid-19, Educational policy, child marriages, mal-nutrition and online education.

INTRODUCTION

Corona infection: There are no sectors that are not affected by the arrival of Covid 19. Whatever department is affected, the professionals working in it will come and recover it. What if the educational institutions that develop such professionals are affected? What if the education of students who are tomorrow's experts is affected?

Tamil Nadu schools were closed for about two years. The students were at home by providing the online education system, since education is essential to all community people If they come up with something out of the ordinary, then they have to re-think their position. Who benefits? What is the version caused by this project? Who is affected? How can this be fixed? It is usually practiced only after examining the various stages. But as our education system has become more fully commercialized (Codd *et al*., 2005 and Lewis *et al*., 2020), we have started a system where for-profit educational institutions can teach from home (Patten *et al*., 2021).

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There are many who have lost their jobs due to corona. Where is the tuition fee for online education when three working meals is a question mark in many families (Stotz *et al*., 2021). The number of girls who did not go to school before the Corona period was 4.1 million in India. Studies show that at present the figure could be as high as 11 million, and if not, it could be as high as 11 million. 14.9% of the total students in Rajasthan do not even enroll their names in schools. This aside, child rights activists say the highest number of child marriages in India in the last two years has taken place in Tamil Nadu. Child marriages in 2020 are 40% higher than in 2019. There are 12 million births worldwide each year. Of these, 7.3 million births are due to teenage pregnancy.

In many villages, the school line majorly prevented the girls from getting married. Do not tell what will happen if there are no schools. Next are child labours. Children who are involved in child labour are more likely to be abducted. Otherwise it may have been sold by the family to another person. Children make up 27% of the total population affected by human trafficking. If the abducted children are girls, they are often involved in sex work. Children who are unable to continue their education due to family circumstances often come from families affected by unemployment during the corona period (Larson *et al*., 2020). If you want your education and future life to be good, you have to accept this. They convince the children that the future will definitely be better. But what they get is the complete opposite.

Sexual violence:

Madhya Pradesh, Maharashtra, Uttar Pradesh and Tamil Nadu are the top four states in India in terms of child sexual abuse, respectively (Bhattacharyya *et al*., 2015). The National Crime Records Bureau (NCRB) claims that 96% of sexual assaults are committed by persons known to the child. There were 28,065 minor sexual assaults on minors in 2019 and 2020. Of these, only 26,934 happened to children. Apart from this online education system is unique in that it is conducted on mobile phones (Mishra *et al*., 2020).

Only the education system of the students was greatly affected during the Corona period. Beyond all this, the situation where students go back to school has re-emerged. That's what was affected. Recovering from it will also happen. But the question and expectation of many is when that return will be and whether the students' education system will always be the same at that return (Azorín *et al.*, 2020).

Against the backdrop of a yawning rural–urban digital divide, state governments employed a mix of methods to implement distance learning for rural schoolchildren. The ASER 2020 survey highlights that these efforts have yielded disappointing results. During the reference week, approximately

- 20 per cent of rural children had no textbooks at home
- 28 per cent of students had received no educational assistance from family

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- 29 per cent of children had not engaged in any educational activity
- 66 per cent of children had not received any instruction from their school
- only 11 per cent had attended live online classes
- 32 per cent of children with smart phone access had not received any materials.

In addition, access to devices and the internet does not guarantee ability of use for educational purposes. As the key indicators of household social consumption on education in India show, only 20 per cent of people in the 5–35 age group had basic digital literacy, while only 8.5 per cent of women knew how to use the internet (Stephens *et al*., 2013; Finkelhor *et al*., 2015; Ware *et al*., 2021).

1. Teaching schoolchildren is a specialised, professional activity

Their lofty status in predominant Indian cultures notwithstanding, the public perception of teachers (especially government and rural teachers) is not favourable. School teaching is also perceived as something any educated person can manage. It can be hoped that with millions of families now tasked with their children's education, there will be a greater appreciation of the work of schoolteachers, which should subsequently lead to more efforts towards enhancing their salaries and professional capacity (Azevedo *et al*., 2020).

2. Educated parents and a conducive home environment are essential

School closure suddenly shifted the locus of all educational activities to the child's home and family. While the number of first-generation learners in rural India is steadily decreasing, many students still do not receive educational or motivational support at home. Better educated parents are more capable of supporting their children's education through direct assistance, having higher expectations, and providing more resources. Therefore, adult and lifelong education should be treated as important aspects of improving rural education (Atchoarena & Sedel, 2003; Azorín *et al.*, 2020). With limited physical space and money for educational resources in most rural households, a positive study environment at home can be created through simple acts such as not assigning household/farm chores to children, not turning on the television when the children are studying, and by asking them questions about what they did in the school that day (Weiner, 1991; Azorín *et al.*, 2020).

3. Limited ways in which technology can support education:

Even if issues of access to suitable devices and network connectivity were resolved, technologies cannot meet the pedagogical and social requirements of rural education (Ferri *et al*., 2020). Technologies require the support of traditional educational inputs such as dedicated learning environments, hands-on classroom activities and supportive family environment. Most importantly, they require capable teachers who can use them along with other pedagogical materials to suit the needs of individual students (Huang *et al*., 2020). For

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rural students, teachers are often the only source of motivation and guidance which are essential in ensuring students continued enrolment. Future policymaking efforts would be remiss to focus on EdTech at the cost of traditional educational inputs (Atchoarena, Wallace, Green, & Gomes, 2003).

Prolonged school closure can seriously affect lifetime educational achievements of rural Indian children (Azavedo, Hasan, Goldemberg, Iqbal, & Geven, 2020). Prompt remedial actions and policy measures must be adopted to ensure these children are not denied of their fundamental right to education.

4. Access of Education and Nutrition:

Exposure to food-related advertise-ments and promotion packaging, particularly advertisements related to fast food and sugar-sweetened beverages, is significantly higher in areas with families with low income and racial and ethnic minorities (Larson *et al*., 2020). However, nutrition educators can encourage more healthful dietary choices by shifting core beliefs about children's food and educating about how children can eat the same foods as adults. For example, situating the social construct of kids' food within a social ecological context may help identify and leverage modifiable factors to challenge assumptions about the kids' food archetype and improve the overall quality of food for children (Prowse *et al*., 2020; Cook *et al*., 2021). Nutrition educators can contribute to this effort by collaborating with the food industry to improve perceptions and selections of healthy options. By conducting research, raising awareness and collabo- rating with the restaurant industry, nutrition educators can help incorporate more appealing language and advocate for a wider variety of healthy options (Conrad *et al*., 2021).

Figure: Non functioning of School due to Covid 19, which causes isolation, no group play, no human interaction, studies in the street and no Food leads Mal-nutrition.

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CONCLUSION

Nutrition instructors are important in shifting consumer demand and cultural norms about food choices and also they assist for the improvement of unhealthy aspects of the kids' food prototype. This kind of transformation helps both adults and children to enjoy their food and behaviour changes at the individual, family, and community levels. By recognizing the challenges of the current food environment and by partnering with governments, legislators, schools, and industries to address these challenges, nutrition education can play an integral role in decreasing lifetime risks of obesity, chronic disease, and other adverse health outcomes related to diet and food choices. Huge efforts are taken by the government to overcome the challenges created by the COVID-19. During the pandemic situation, the government has released various educational policies to improve the education services through online but for many students which can't be reachable and/or practically feasible. Merits and demerits are found in the online classes not only to rural area students but also for urban area students. Food provided from the School to satisfy the hungry. Among them, rural area Government school students were affected majorly by the educational and nutritional access which leads to mal-nutrition in the future.

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ONLINE EDUCATION: CHALLENGES IN RURAL COMMUNITIES

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ABSTRACT

Indian education is the biggest and well-known education systems in the world. The development of any country depends fully on the education of its people. In ancient period the education was mostly imparted in ashrams, gurukuls, temples, houses. The education system of ancient India has some special feature and uniqueness which was not found in any other ancient education system of the other countries. It was mostly given in forests under the blue sky, which keeps the student's mind fresh and alive. Medieval and modern period students were trained by teachers in such a manner that they can survive and live in that era. The spread of the covid19 pandemic has affected almost all nations of the world and has triggered and array of public health responses. The pandemic forces the closure of all kinds of organizations across the world. A closure of all sorts of educational institutions was a significant physical distancing measure adopted by the government of different countries to curb the spread of this contagious disease. Cornovirus has affected almost all areas of human life, including education. Therefore, there is a need to promote online education. Online learning has become one of the most popular ways of gaining access to an education. Unfortunately, students in rural India are denied the newest devices and levels of accessibility to online content that urban Indian enjoy daily.

Keywords: Online education, rural areas, advantages and disadvantages

INTRODUCTION

During the ancient and medieval periods of education, students were trained by teachers in such a manner that they can survive and live in that era. After independence, there is a tremendous growth in the Indian education system providing teaching and training in all aspects, but it does not satisfy the global demands of the market. In the changing era, where everything is going digital today, the field of education is also not behind in this matter.

Aim of education

Ancient period

The main objective of education was to equip the students with a good quality of education. The main objective of education was to equip the students with a good quality of education. The education mostly focused on the enrichment of culture, character and personality, development and cultivation of noble ideals. The objective was gaining the mental, physical and intellectual personality of students, to make the students future-

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ready and survive in any situation. During the medieval period the objective of education during the medieval period was the spread of knowledge and propagation of Islam. The purpose of education system was to make people religious minded. In the middle of the medieval age, the British invaded India and started to capture. The modern education was introduced during the British empire. In 1830s Lord Thomas Babington Macaulay introduced the English language. The objective of modern education was to inculcate values in students such as equality, secularism, education for all, and environmental protection and employability.

Online education

Online education or online classes for students has come out to be new normal during this period of the Covid -19 pandemic. The schools and universities had to enforce strict lockdown measure and close up classroom to avoid the spread of the pandemic the complete shutdown of the education institutions caused a major interruption in the academic year and brought a huge gap in the learning for students. However most of the educational institutions managed to organize online classes for students offering safe learning through online to fulfil the learning gap among the students. Education is an important part of our life, it can also make our future and if it is not taken properly it can also spoil. The process of learning and teaching in online education takes place through digital platforms. It enables students to gain educational experience through technology. Online education includes an electronic way of learning and teaching. It takes place outside the classroom through digital platforms. It can be delivered in the form of lessons, animation, audio, video and images.

Online education was included in the earliest decade of this century in the Indian education system as a method of distance education. This method of learning requires access to digital device along with Internet connectivity. Online education refers to the use of electronic applications and learning processes. For online education important connections like internet connection, computers smartphones etc are required.

The Online teaching in India has got a long history with broadcasting space provided by the All India Radio and the Doordarshan for telecasting recorded educational programmes for not only higher education but also for school-going children. Though many educational institutions including UGC, IGNOU and NCERT using the services provided by all India Radio and Doordarshan still there was a need for interaction from the learners to be fulfilled since all these broadcasting was in recorded form. In 1994 there was a paradigm shift as the ISROU provided the teleconferencing facility at IGNOU headquarter in New Delhi for the first time. It was a one-way video and two-way audio communication through phone line providing scope of live interaction for the learners. The

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teleconferencing facility was booster for a large number of online courses. For several years a large number of educational institutions and various government and private organizations utilizing the service of teleconferencing provided by ISROU and headquarter. In the year 2000, the teleconferencing got the recognition as an official education channel under the Gyandarshan platform. Along with other channels of Gyandarshan it was then made available in the DTH as GD interactive channel. There was still the need for two way video communication to be fulfilled. In 2005 an effort was made by ISROU in collaboration with MHRD and IGNOU in this regard with the launching of EDUSAT satellite designed by late APJ Abdool Kalam during his tenure as President of India. Despite all efforts, EDUSAT could not fulfil the need as expected as the communication technology still to be developed to support such an initiative. In 2020 one way find it very easy today. But it is a fact that even 15 years back from today it was a big challenge to establish a two-way video communication between one to many. . Fortunately, the technology advancement of 2020 provided the scope for creating the virtual classroom by making a bridge between the teachers with learners from their home. It is a big challenge now towards the teaching end to make online teaching more useful. Today in 2022 both the teachers and learners must be fortunate to have so many apps developed for two way communication even in mobile. Now the challenge is how to make the online teaching more access and useful for rural people.

India is predominantly a rural country with two third of population and 70 per cent workforce residing in rural areas. Large majority of the population living in rural areas, education is highly dependent on government-run or aided and non-governmental organizations. But rural areas still face various barriers to access online education. Online teaching –learning is challenging due to multiple factors such as lack of technical gadgets, poor network connectivity, and electricity problems in rural areas. Many students don't have laptops, computers and smartphones to their disposal to attend their daily classes. These students are still not able to attend the online classes.

Advantages of online education

Through online education, the teaching of classes is being made more interesting, due to which students are paying more and more attention to it.

Efficiency

Online learning offers teachers an efficient way to deliver lessons to students. Online learning teachers can use all tools as part of their lesson. Beyond the traditional textbooks to include online resources, teachers are able to become more efficient educators. Students also can also learn new technology for their study.

Accessibility of Place

Online education allows students to attend classes from any location of their

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choice. It also allows schools to reach out to a more extensive network of students, instead of being restricted by geographical boundaries. Additionally, online lectures can be recorded, archived and shared for future reference. This allows students to access the learning material at a time of their comfort.

Affordability

Another advantage of online learning is reduced financial costs. Online education is far more affordable as compared to physical learning. Online learning eliminates the cost points of student transportation and student meals. Online methods are less costly and easily accessible. Online education is also environmentally beneficial because the dependence on online will reduce the need for copies and books. Additionally, all the course or study materials are available online, thus creating a paperless learning environment which is more affordable, while also being beneficial to the environment.

No Disparity

Traditional learning in a physical setting is the most natural and best way to interact. But that is not necessarily true. In an online class, no student sits in the back row. Everyone sits basically front and centre. A student uncomfortable with broadcasting to the entire class may even opt to mute their microphone or disable their camera while continuing to participate in the lesson. In the physical classroom, the teacher may write notes on blackboard, in hopes that students are jotting the information down themselves. With online learning an instructor can write down notes on a digital whiteboard or even assign a student to write real-time notes that students can easily download after the class.

Additional training for instructors

Online classes imply an initial learning curve and extra effort on the teacher's behalf to create a successful online course. Instructors need to get a deep understanding of the different approaches to teaching and learning to avoid just replicating the class environment and miss out an all the added advantages and tools that e-learning and blended learning have to offer. Instructors also need proper training to tackle the technical aspect of online learning.

Time consuming

It saves time, as well as a greater diversity of knowledge. With the help of online education, students can get quality education from the best best teachers. Learners find the online learning environment a convenient way to fit education into their ever busy lives. The ability to study a course from any computer with Internet access is a tremendous incentive for many students today. The better online learning platforms and software out there have all kinds of tools and features to help students staying attentive and engaged.

Disadvantages of online class

Taking online classes is a different experience than learning from a teacher's offline. The advantages of offline classes are the disadvantages of online classes.

Sense of Isolation

Students can lean a lot from being in the offline of their peer. However, in an

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online class, there are minimal physical interactions between students and teachers. This often results in a sense of isolation for the students.

Self-discipline

Physically attending classes increases accountability. If a student does not feel they are getting the proper guidance, they may not have enough self discipline to full engage in the lessons themselves.

Technical Issues

Another key challenge of online classes is internet connectivity. There was no flow of electricity and unavailability of high-speed internet. While internet penetration has grown in leaps and limits over the past few years, in rural areas a consistent connection with decent speed is a problem. Without a consistent internet connection for students or teachers, there can be a lack of continuity in learning for the child. This is unfavourable to the education process.

Health Issue

During online classes, students have to sit before the screens of their devices for long period of time. The classes may take four to five hours that can be quite tiring for students Some students may suffer from eyesight issues. Also creates drowsiness. Long exposure to screens may also induce headache in may students. Sometimes students can also develop bad posture and other physical problems due to learning towards their screens.

Lack of social interaction

When in school or college students get to learn a lot from their peers. While being with friends, they learn to be patient, get rid of disappointment and compete as well. There are many students who are habitual of enhancing their learning by participating in group studies and lively group discussions. However, in an online class, there are minimum or no physical interactions between students and teachers. This may result in a sense of isolation for the students that can affect their studies quite badly.

Social Media

Especially since the internet is geared to distract students with social media and entertainment. For taking online classes, one's device must be connected to the internet. This makes various social media and other sites easily accessible that comes to be the biggest distractions for students. Thus, while listening to the online lectures for long hours, the biggest challenge for students for students is to stay focused. Such situations can be avoided by being an active learners and keeping up the meaningful and relevant conservation with the teacher.

Inadequate skills

The inadequacy of skills among the teachers to operate digital platforms is another key factor affecting the advancement of digital education. Very often, teachers have a very basic understanding of technology. As the teachers lack the necessary training to use digital platforms, they are averse to adopt these educational methods.

Increased the responsibility of parents

Online education has increased the responsibility of the parents of students as

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they are required to observe their daughter or son closely. They have to keep an eye on their children to check if they are being attentive in the virtual class and are not wasting time in other activities. Studying in an isolated environment with virtual classmates may not be convenient for some learners: Too much comfortable learning environment may cause some learners to fall back but can be overcome with self-discipline. Since online classes can be taken from home or location of choice, there are fewer chance of students missing out on lessons. There is no chance in offline classes. Percentage of attendance must be needed in offline class.

Online course, we have greater flexibility in choosing the best time to study. We may not be able to find a face-to-face instructor to teach but our options are infinitely greater online. Online courses ultimately enable us to achieve our professional and educational goals in a manner that fits our schedule.

Unfortunately, students in rural India are denied the newest device and levels of accessibility to online content that urban Indians enjoy daily. Unlike their counterparts in cities, a lower percentage of students in villages possess desktop or laptop computers. They depend on their family members' mobile phones for learning and attending classes, making it an arduous exercise. Watching small screens to consume as much information as possible for long hours could be detrimental to students' health.

Financial constraints

Purchasing data plans for learning could also incur a lot of expenses for families who face financial constraints. It could further affect the participation levels of both teachers and students concerning live classes. Digital literacy and the digital divide have been serious concerns for our country for over a decade. Many teachers and students in rural areas are not able to match up to the technical skills of educationalists and students in cities. They face roadblocks when moving from offline to online education, which could be a reason for discontentment amongst rural communities. Collective efforts of civil society organizations, policymakers and the government are required to create a user-friendly digital interface so that teachers and students find it conducive for uninterrupted learning.

Conducting online classes in a rural area has its own challenges and many students who do not have access to smartphones or internet service get left out in the process. According to the Father of the Nation, Mahatma Gandhi, “True education must correspond to the surrounding circumstances, or it is not a healthy growth”. These words reflect the ceaseless need for educational institutions to keep evolving and comprehending the imperative demand of students by providing them with necessary means. The transition from chalkboard teaching to prompt, flexible online teaching requires appropriate technology-enabled

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learning. Digital education has often been considered a viable solution for Rural India to address the existing gaps in imparting education. It is believed that digital education can curb the issues related to quality education delivery, the inadequacy of teachers in rural schools, high rate of drop-outs, insufficiency of innovative teaching-learning methods and lack of standard learning material. While talking about digital learning, it is important to observe the accessibility of accurate devices for each student to avail digital content. In the rural areas, only a nominal section of people have the privilege of accessing laptops and computers. Even students with access to desktops and laptops cannot avail the internet and the costs incurred in the procedure. Apart from that, the phone screens available to them are not favourable enough for long learning hours. The data packages and their prices also tend to restrain both teachers and students from going ahead with live classes. Though, subsidizing learning data plans by telecom companies can be an attempt to bridge this existing gap.

While the above challenges manifest the existing gaps for dispersal of digital education in rural India, there are several initiative should be taken by the Government to encourage online learning.

- Government can give free data for students to access education for students to overcome the financial problems
- Telecom Companies should provide cheap multi-lingual platforms that could work on low bandwidth and provide access to quality content. To promote this, the Government can offer tax benefits to these companies.
- Governments can arrange online content delivery training for teachers.
- Using of public announcements systems to reach to rural students.
- Innovative solutions can be initiated to create the process of online education more interactive and vigorous.
- The rural areas of the country can be better equipped with the essential infrastructure provided by the public-private initiatives.
- A good solution to this would be to give the students plenty of breaks from the screen to refresh their mind and their body.

There are advantages and disadvantages of Online learning for higher education. But as technological capabilities have reached new heights and online classes have been necessary today.

CONCLUSION

Online education has grown significantly due to the digital age and the Covid19 Pandemic. It can be said about online education that there are some challenges in online education that must be overcome. Also, the benefits of online education are more as per the situation today. Technology has become the key to a new world of education. Online learning has become one of the most popular ways of

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gaining access to an education. It must be taken for granted that the future mode of teaching will further develop with more and more and more with online education. But the most important thing we should keep in mind is that the usefulness of online teaching always depends on live interaction rather than silent participation. Traditional classroom studies have been and would always be the best mode of learning that not only helps students grow mentally but socially as well. But at this time, students should focus on online studies and chalk out strategies to do best in their academics keeping aside all the odds and difficulties.

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DIGITAL EDUCATION – A BOON OR BANE TO THE SOCIETY IN THE DIGITALIZED ERA

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ABSTRACT

The new method of education system for the millennium generation is "Digital education". The increasing use of online education tools has become persistent. All over the world, educating communities are looking towards online learning platforms to process student's education. In this method of education, the reflection of learning with online education is the essence of this transformation. For most of the educational institutions, it is a totally new way of education that they have to acquaint. This scenario has paved way for the researcher to analyse the impact of this transformed form of education on the society at large. The paper aims to understand the various tools of digital education such as platforms like Google Meet, Zoom, Ms Teams, etc. Further, online courses are enabling securing parallel degrees and diplomas. SWAYAM, Udemy, Coursera, etc. are excellent examples of platforms offering short term and long-term courses for upskilling and upgrading professional knowledge. At the outset the other objective of the study is also to understand the edge of Digital education and its shortcomings too. The advantages of modesty, efficiency, convenience of time and place, enhance students' attendance etc., accepts a diversity of learning styles. Lack of ability to focus on screens, technology complications, sense of segregation etc., are disadvantages of Digital education. A compilation of the related literature is also sought out in the study.

Keywords: Digital education, online learning platforms, courses offered, advantages and disadvantages of digital education

INTRODUCTION

Digital Education is a new learning process of opportunities for students, those who are engaged in online. Digital Education is a hybrid course of Teachers and Digital environment.

India is well-progressing towards digital education, backed by rising adoption of digitisation by universities and colleges, increasing internet penetration and soaring demand from students. As per RedSeer Consulting, the online education market (higher education and lifelong learning market) in India is forecast to reach ~US$ 5 billion by 2025, driven by the government's focus on designing online education programmes, strengthening digital infrastructure across the country and catering to the rising demand for upskilling among students.

Digital education has been significantly driven by the government's focus on strengthening digital infrastructure in the country, including providing internet connectivity in the remote areas. According to IAMAI-Kantar Cube report, active

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internet users in India is estimated to reach 900 million by 2025, up 45% over 622 million active internet users in 2020. Also, internet penetration in the country is expected to reach >55% by 2025.

The Indian government also launched the 'Digital India' initiative in July 2015, to strengthen online infrastructure and expand internet accessibility among citizens (for example, connecting rural areas to high-speed internet networks). As part of 'Digital India' initiative, the government also started e-Education initiative to provide online education in remote and urban areas using smartphones, apps and internet services.

Further, amid the pandemic, the Indian government has taken several initiatives (e.g., PM eVIDYA programme, DIKSHA, etc.) to make it at par with some global online education best practices and relaxed regulations for universities and colleges to offer extended online and distance learning opportunities to students.

Digital Education Initiatives and their Purposes

Key initiatives taken by the Indian government to boost digital education activities are as follows:

- ***National Digital Educational Architecture (NDEAR)***

In the Union Budget 2021-22, the Indian government established the National Digital Educational Architecture (NDEAR) to strengthen digital infrastructure and support activities related to education planning. The NDEAR aims to offer distinct education ecosystem architecture for advancement of digital infrastructure in the country and guarantee autonomy of stakeholders, especially states and Uts.

- ***PM eVIDYA Programme***

The government introduced the PM eVIDYA programme in May 2020 to make e-learning more accessible for Indian students and teachers and promote & strengthen digital education in India. The programme aims to converge all activities related to online/digital education and is expected to benefit ~25 crore school students.

The programme will also encompass designing unique e-content for hearing and visually impaired students and offering radio/podcasts and QR-coded digital textbooks to school students (Classes 1 to 12) on the DIKSHA portal.

Under this, top 100 universities were permitted to begin online courses, provide better learning prospects to 3.7 crore higher education students and enhance e-learning by relaxing regulatory framework for distance/open/online education.

- ***DIKSHA***

In September 2017, the government introduced DIKSHA (Digital Infrastructure for Knowledge Sharing), a national portal for school education, to offer school curriculum-based engaging learning materials to students, teachers, and parents. The portal supports >18 Indian languages and has been implemented by 35 states/UTs.

- ***SWAYAM***

In 2017, the government launched Study Webs of Active Learning for Young Aspiring Minds (SWAYAM) to offer an integrated platform for online courses at affordable

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costs to all citizens, especially the underprivileged section in the country.

The portal hosts Massive Open Online Courses (MOOCs) to offer quality education on various subjects for students (from Class 9-12 to Under Graduates and Post Graduates).

- ***SWAYAM PRABHA***

In 2017, SWAYAM PRABHA, a group of 34 DTH (Direct-to-Home) channels dedicated to broadcasting educational programmes 24x7, was introduced.

The channels broadcast new content for a minimum of four hours every day, and this is repeated five times in the same day for students to select a convenient slot.

- ***ePathshala Portal***

In 2015, the government launched the ePathshala portal to build a resource store for educational videos, audios, flipbooks, etc. Resources on the portal are available in Indian languages such as Hindi, English and Urdu and can be accessed via smartphones, laptops, desktops and tablets.

- ***NISHTHA***

In FY21, the National Initiative for School Heads and Teachers' Holistic Advancement (NISHTHA) - Phase II was launched at the secondary level to tailor modules for online education. As per the Union Budget 2021-22, ~5.6 million teachers will be trained under the NISHTHA training programme in Fy22.

- ***OLabs***

To offer students lab learning experience via the internet, the government introduced OLabs in November 2014 for those who do not have access to physical labs.

- ***Virtual Labs***

The Government of India introduced a pilot virtual lab in 2009 and the main one in 2010 to enable undergraduate and post-graduate students (pursuing science and engineering courses) remotely access the labs and enhance their study experience.

The virtual labs offer students a Learning Management System and various study aides such as video lectures, web resources, self-evaluation and animated demonstrations.

Along with these, other digital initiatives taken by the government include Shiksha Vani for widespread use of radio, the Central Board of Secondary Education's (CBSE) podcast, sign language content on the National Institute of Open Schooling (NIOS) website/YouTube and Digitally Accessible Information System (DAISY) for accessing special e-content for hearing and visually impaired learners, and Free Open-source Software for Education (FOSSEE).

Objectives of the Study

- To identify the Advantages and Disadvantages of Digital Education.
- To Know the Various Tools of Digital Education.

Review of Related Literature

Lawrence Haywood (2021) Explored the pros and cons of digital education are Flexibility, Independent skill will improve, preparation of remote futures. More way of interactive Online document is vast easy to Organise, Lots of supervision Pandamic Poof etc.,

Praveen Kumar & Vasimalai Raja (2019) Explored that Digital Tools inlearning Educational technology is the use of both physical hardware and educational theoretic. According to the author, Teachers are using many of the tools while they are

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teaching like you Tube channels, Google Classroom, Class Dojo. Prezi, Edmodo, Edublogs, Socrative etc., With the help of the mentioned tools are used for the students to do research projects, analyse data, solve problems, design product and communicate knowledge and understanding. In future digital tools is important for learning.

Ashutosh Chauhan (2018) Exploredthat the most popular digital education for teachers and the students. According to the researcher, hundreds of digital education tools was created to improving academic processes encouraging Collaboration and facilitating communication between teachers and the learns. Researchers mentioned Edmodo, Socrative, Projeqt, Thinglink, TED-Ed, cK-12, Class Dojo, educlipper, Story bird, Animoto, Kahoot etc., are used digital education tools.

Article by custom – writing Organisation experts listed out the research tools, that will be very useful for every stage of learns. Researcher explored many tools of digital education to make the task as easy. Topic Generating tools, Research Database tools, Digital libraries tools, Dissertation Databased tools, Research tools for data analysis, Data vishuvalisation tools and Organisational tools for schoilar.

Pawel Makosa (2013) Explored that Digital Education would not possible without rapid development of computer and internet. Fashion prevailing among young people and the fascinating with electronic and digital devices. Open educational resources are very important of e-book qualities of modern education technology were improved. Economic efficiencies is an equally important advantages of digital education. Risk arising from digital education are increasing risk of psychological problems, like anxiety, depression, insomnia, dizziness, memory loss etc.,

Harpreet Kaur (2019) Explored that advantages of digital education is increasing productivity, Cost efficiency, easy to access, enhanced security, Information Presentation, Disaster recovery, Stay competitive, Environmentally friendly, Digital Transformation etc. The author explored the disadvantage, in Teachers are the learners of technology, Computer creating poor studying habit, technical issues, wastage of time, many of the websites are copied and pasted information without checking its authenticity, update technology is very expensive. He concluded new technology can pave new experiences and new discovery with new way of learning.

Abhinandan Sigh (2019) explored that Pros and Cons of digital education. Quick to access information, Self-learning, Horizontal communication, learning aids more interactive, creativity, evaluations are the pluse point of Digital education. Huge information, Students required prior training, costly, creates social inequalities and creations of dependency are the minus point of digital education.

Ashyley Deal (2009) Explored A Teaching with Technology white paper collaboration Tools. Researcher presented a working model collaborative process and an over view of technology tools. Current real time communication tools allow students can exchange their ideas with face to-face experience. Web – based tools also support

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mapping, collaborative writing, software development and issues taking, slide sharing etc.,

Advantages

For strengthening digital education in India, the govt. eased regulations on online education and finally allowed universities and colleges to extend >20% of a degree online from 2020 onwards. This initiative has enabled Indian institutes to further improve their portfolio of higher education internationally.

Many EdTech businesses (e.g., upGrad, Virohan, BYJU's, etc.) have also gained traction in the recent years and are determined to deliver unparalleled learning management resources, such as blended learning, 3D and DIY kits, and AI-based innovative and engaging learning. According to a report published by RedSeer and Omidyar Network India, the EdTech market in India is expected to reach ~US$ 3.5 billion by 2022, due to higher uptake of EdTech offerings among students.

Further, increasing digital education in India is also helping the government to improve accessibility in rural areas and impart quality education to students in small towns and villages. Further, this also provides an opportunity to private players to venture in the Indian digital education sector. For example, in January 2021, Esper collaborated with 'Teach for India' and 'ITeach Schools' to assist in e-learning programmes for rural kids.

Rising adoption of digital education in India is also attracting global key players to offer online courses to students and extend opportunities to learn new skills. For example, in January 2021, Amazon India launched 'Amazon Academy', an online platform enabling engineering aspirants to prepare for competitive examinations such as the Joint Entrance Examination (JEE). Further, Amazon India launched Machine Learning Summer School in June 2021 to help Indian students learn new skills.

Disadvantages of Digital Education:

Digital education tends to struggle with student feedback. Students completing regular assessments become dissatisfied when they experience a lack of personalized feedback. The traditional methods of providing student feedback don't always work in an E-Learning environment, and because of this, online education providers are forced to look towards alternative methods for providing feedback. Providing student feedback in an online setting is still a relatively unresearched topic area, and it might take a while for any specific strategies to become fully research-based and proven to be effective.

The Digital education methods currently practiced in education tend to make participating students undergo contemplation, remoteness and a lack of interaction. As a result, many of the students and teachers who inevitably spend much of their time online can start experiencing signs of social isolation, due to the lack of human communication in their lives. Social isolation coupled with a lack of communication often leads to several mental health issues such as heightened stress, anxiety, and negative thoughts.

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Digital education methods are proven to be highly effective at improving the academic knowledge of the students. However, developing the communicational skills of the students is an area often neglected during online lessons. Due to the lack of face-to-face communication between peers, students and teachers in an online setting, the students might find that they are unable to work effectively in a team setting. Neglecting the communicational skills of the students will inevitably lead to many graduates who excel in theoretical knowledge, but who fail to pass their knowledge on to others.

Conclusion

Many institutions like Amity University, Christ University, AIMA (All India Management Association), IIMs (Indian Institute of Management), Ashoka University and ISB (Indian School of Business) have now transferred their examination procedures online.

The government is also focusing on research and innovation to identify sectors that can further support and strengthen digital education initiatives in India. In July 2021, the government stated that space technology (such as satellite communication) is being used for digital education in India. At present, under the Tele-education Programme, 19 states and A&N Islands have been leveraging satellite communication for beaming educational content in the digital form. Indian institutes such as Bhaskaracharya National Institute for Space Applications and Geo-informatics (BISAG-N) is leveraging satellite communication for beaming 51 educational channels. Institutes such as the Indian Institute of Remote Sensing is also leveraging digital platforms to train beneficiaries (such as working professionals, UGs/PGs, doctorate students, academicians, school students and school teachers) on space technology and its applications.

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ENHANCING RURAL EDUCATION WITH ADAPTIVE LEARNING

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ABSTRACT

Education is a basic necessity and a portal for betterment. The use of technology in education has had a positive impact on the students, educators, as well as the educational system as a whole throughout the country. However, due to the poor economic condition, many rural areas are not capable of affording the modern innovative education technologies developed by computer systems. This has brought an urban-rural digital divide affecting the student strengths in building their career-based objectives. In order to attain career-based objectives at their higher education phase collaborative education management systems would help them. The existing education management systems are not reachable to the rural areas due to various factors like lack of infrastructure, maintenance cost, lack of expertise, etc. This motivated us to investigate the technology advancement aiming for empowering digital education in Indian rural education system.The main theme of this paper is to propose an approach for changing education management systems abstracting the features of adaptive learning.

1.INTRODUCTION

Education is the doorway to the wider world and an exposition on rural infrastructure is incomplete without an assessment of the extent to which we have been able to open this door for the children of rural India.Adaptive learning is a technology-based or online educational system that analyzes a student's performance in real time and modifies teaching methods based on that data.It arrived on the educational scene in the 1950s. Behaviorist, B.F. Skinner, who have the credit for creating this method. Skinner constructed a teaching machine that focused on effectively teaching new concepts instead of reinforcing memorization. The machine worked by allowing the student to practice new concepts by answering questions. If the questions answered correctly, feedback and positive reinforcement have given. If the answer was wrong, instead of just having the student try again, smaller steps have taken towards the right answer through a series of small hints. This allowed students to not only study at their own pace, but also receive immediate feedback so they could see how they were doing.Since then, adaptive learning integrated into various different fields outside of just education. NASA uses it for simulations, various branches of the military use it to train for asymmetric warfare, and we can even see it used on the internet through social media. Example platforms like Amazon and Netflix.

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2. Objectives of Rural Education

- To provide Coordination, at the national level, for rural education programs and activities.
- To provide leadership for rural education – related conferences and workshops.
- To provide a forum for all those involved in public education in rural areas – including teachers, administrators, board members, and members of the rural community at large whereby they may come together professionally and exchange ideas.
- To promote state, regional and local delivery systems which bring about efficient and effective education for children in rural areas.
- To stimulate discussion, research, and policy development regarding equal educational opportunities for all students.

3. Challenges related to rural education in India

Lack of Availability of Resources

There is a lack of availability of resources in the rural regions in India. There is also a lack of infrastructure in the schools situated in rural areas—no availability of benches, playgrounds, laboratories, washrooms or if present they are in the worst condition. Sometimes the textbooks are not available in proper quantity, or they are not in good condition. Another challenge is there is no transportation availability as there is poor connectivity from one place to another place.

Lack of awareness of the importance of education

Another reason for the low literacy rate in rural regions in India is the lack of awareness of the importance of education. People in rural regions are mostly engaged in agricultural and allied sectors. Children from the beginning are engaged in these sectors and not give much importance to their studies.Many rural Indians believe that children, especially girls, should not study much and don't have to cover a long distance to go to school. Instead of getting the education, they should focus on some work that helps them in earning.

Less availability of school

There is also less availability of schools in rural regions. Many students have to go from one village to another village by covering miles of distance. Another challenge is the non-availability of transport. It takes long hours to reach school and to come back home. This challenge also aids in increasing dropout student ratios in rural India.

Digital Dividend

Another challenge in rural education in India is the digital dividend. In a globalized world, where everyone is technology prone and using their application in daily life. It is necessary that everyone should have knowledge about their use. During the corona time, education is given in online mode, but due to poor connectivity, rural children are not able to get an education. This also creates a barrier in the education of rural India. Some of them also do not have a smartphone due to which they cannot access education.

4. Concept of Adaptive Learning

To overcome the obstruction to boost education in India. In order to boost up this, we need to adopt the modern teaching technologies. Adaptive learning is one technique for providing personalized

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learning, which aims to provide efficient, effective, and customized learning paths to engage each student. Adaptive learning systems use a data-driven and nonlinear approach for instruction and remediation. They dynamically adjust to student interactions and performance levels, delivering the types of content in an appropriate sequence that individual learners need at specific points in time to make progress. These systems employ algorithms, assessments, student feedback, instructor adjustments/interventions, and various media to deliver new learning material to students who have achieved mastery and remediation to those who have not.

Working structure:

The systems generally fall into three groups:

- ✓ Closed systems come with existing, off-the-shelf course content to allow for rapid implementation.
- ✓ Open systems allow users to control all of the configuration and content decisions.
- ✓ Hybrid systems allow for limited configuration, such as selecting lessons to be included in the course or importing course content.

There is a movement toward the hybrid model because it balances the time needed to develop an adaptive learning course with the flexibility for faculty to control content and assessments. For modules within the adaptive learning system, the learning content, the concept sequencing, and the assessments are set up to reflect the learning objectives for the course. Systems display content based on the performance of students of similar demographics or abilities, or they use predetermined learning paths based on assessment data. As students' progress through a lesson, they may see information presented in various ways, tailored to their learning needs. The systems "learn" from student interactions and then adjust the path and pace of learning. If the system is open or a hybrid, faculty can adjust algorithms, content, and assessments to the needs of students each semester.

5. Importance of Adaptive Learning

For students, adaptive learning respects their prior knowledge, responds to their learning needs, and reduces gaps in their understanding. By ensuring that students reach mastery before moving on, adaptive learning avoids "teaching to the middle," which fails to account for advanced students or those who are lagging. Meanwhile, instructors can more easily monitor which students need assistance, measure curriculum performance, and maximize learning outcomes. Instructors can have a better sense of content areas where students are struggling, and system metrics allow intervention before individual students are at risk of withdrawal or failure. In these ways, the role of the instructor changes from content provider to learning facilitator. For the institution, adaptive learning enables the delivery of personalized learning at scale, contributing to greater levels of academic success for more students in a cost-efficient manner, while reducing cheating because the content and assessments can vary for each student.

6. Downside of Adaptive Learning

Adaptive learning can be time consuming to implement. It requires detailed

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curriculum mapping and content development that supports learning objectives, and sometimes those objectives require delineation. The algorithms used in adaptive applications vary widely. Vendor reluctance to share the details of their products raises questions about how adaptive the systems really are and, as a result, whether they are worth the money and effort, adaptive learning is typically more applicable to entry-level courses in certain fields, when the material demands higher-order thinking, these systems might be less effective.

7. CONCLUSION

In India, education in the rural segments is not only important to eradicate poverty and illiteracy, but for a variety of other social, economic as well as cultural and political reasons.Adaptive learning can be an effective way to bring individualized learning to large numbers of students for courses that lend themselves to the assessments, learning goals, and concept sequencing that adaptive learning requires. Particularly in rural education, adaptive learning can provide tailored support and guidance to all students. Within the context of the overall learning process, adaptive systems can support changes in the role of faculty, enable innovative teaching practices, and incorporate a variety of content formats (text, graphics, and video) to support students according to their learning needs. At the same time, these tools can furnish new evidence about the relative effectiveness of varying sequences and approaches to learning.

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RURAL EDUCATION IN INDIA

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ABSTRACT

The saying "Real India live in villages", is as true today as it was when the country got independence 74 years back. As more than half of the population of the country lives in villages. Rural development is an eminent factor for the development of our economy. The important factor for the development of the economy in today's time is education. To explore this significant role of education in rural India, this paper tries to explain the present condition on rural education, comparing rural education and urban education, failures and problems being faced by rural education. The various initiatives been taken by the government and some of the suggestions for improving the education system in rural India

HIGHLIGHTS

There is a gap between rural and urban education systems for which rural children face many difficulties. The Annual State Education Report survey shows that two thirds of rural children in India did not receive learning materials or activities at all during the period of the pandemic. Education in rural India is a catalyst to improve the economic and social well-being of the nation. According to the Annual State of Education Report (ASER) 2019, only 16% of children in Class 1 in 26 surveyed rural districts In India can read the text at the prescribed level, while almost 40% cannot even recognise letters.

To achieve the dream of Skilled India, there has to be an enhanced focus on upgrading the rural education system.The disruption of education caused by Covid-19 has adversely impacted rural India wherein children could not cope up with the normal owing to lack of adequate digital infrastructural support.

There is a need to provide a holistic solution to ensure quality education at the grassroots level.Every village has its own unique challenges.

The importance of education in rural areas

Education is the mirror of society and the seed of socioeconomic development. It transforms people from ignorance to enlightenment, from shades of social backwardness to social improvement light, and a nation from underdevelopment to faster social and economic development. In rural development, education, economic

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development, physical and social infrastructure play a major role. Rural development is also characterized by its focus on economic development strategies that are produced locally. Rural areas are highly distinctive from each other as opposed to urban regions, which have many similarities. This is why a wide variety of approaches to rural development are being used globally.

Rural development actions are primarily aimed at rural areas social and economic development. The term is not limited to developing countries because indeed, many developed countries have very active programs for rural development. Rural government policy's main objective should be to develop undeveloped villages and locally controlled, practical, applied, problem-solving and focused on functional specialization must be the education that contributes to rural development. Education is essential for growth and development and serves as a critical index for measuring development agenda's progress.It is therefore necessary to make deliberate efforts to develop the education sector, especially in rural areas, providing infrastructure and facilities for education, sustainable curriculum and policies, hiring more teaching staff, and strengthening supervisory functions on educational facilities and student scholarships. Education is the most powerful tool for poverty reduction, ensuring peace and stability, and advancing a people. Education has a desirable control over rural individual, family, community, and society development, leading to poverty reduction, income equity, and controlled unemployment. Education plays a key role in supply, production, marketing, staff maintenance, education, health care, and governance systems in rural areas. Education functions include bringing about social change, improving individual social status and living standards, activating participation in rural and cultural development, increasing rural people's critical ability to diagnose their needs, asserting their rights and taking greater control of decisions affecting their lives, providing skilled labor in rural areas, linking rural and urban areas.Urban rather than rural needs-oriented education can do more harm than good by accelerating rural migration to urban migration, generating youth unemployment, and leaving students unfit to succeed in a rural environment. In India, the right to education is a fundamental right which states that every citizen of India between the age of 6 to 14 years gets free and compulsory education.This provision ensures that every citizen of India should get education up to 14 years without any discrimination. But the reality is far different from this.The literacy rate in India is 77.7%. However, the literacy rate of Urban regions in India is 87.7% whereas in rural India it is only 73.5%. There are many reasons behind the difference between these two. Some of the challenges or problems are given below.

Problems in education in rural India

Nearly 65.53% of the population of India resides in a rural area. There is a wide gap

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between urban and rural education systems. The literacy rate of the urban area and the rural area are also wide.

Problems related to education in rural India

- Lack of availability of resources
- Lack of awareness of educational importance
- Less availability of schools and colleges
- Digital dividend
- Financial condition and more.

The problems faced by rural India in achieving education are less number of schools and resources, less availability of teachers, religious and societal norms, the large distance between the school and home, lack of awareness of education. During the corona time, education is given in online mode, but due to poor connectivity, rural children are not able to get an education. This also creates a barrier in the education of rural India. Some of them also don't have a smartphone due to which they can't 8access educationLess availability of school

There is also less availability of schools in rural regions. Many students have to go from one village to another village by covering miles of distance. Another challenge is the non-availability of transport. It takes long hours to reach school and to come back home. This challenge also aids in increasing drop-out student ratios in rural India. Many rural Indians believe that children, especially girls, should not study much and don't have to cover a long distance to go to school. Instead of getting the education, they should focus on some work which helps them in earning.Another challenge is there is no transportation availability as there is poor connectivity from one place to another place.

Another challenge is less availability of teachers. In India, the schools in rural areas have only one or two teachers.Prolonged closure of schools since the pandemic began has had "catastrophic consequences" on children's education, according to a new survey of 1,362 schoolkids from under privileged homes in 15 states and UTs. The survey revealed that in rural areas, 37% of the sample students were not studying at all—it's 19% in urban areas— and only 8% were studying online regularly. As many as 48% of the rural children surveyed were not able to read more than a few words.Only 51% of rural households surveyed had a smartphone. Even among houses with a smartphone, though, only 31% or children were studying online regularly in urban areas and 15% in rural areas. One key reason was children's access to smartphones, which are often used by working adults. The survey found that only 12% of rural children surveyed had their own smartphones.

Other issues of online access are poor connectivity and lack of money for "data". As many as 57% of urban children and 65% of rural children in the sample reported "connectivity problems in online classes. Many found it difficult to follow online material with 46% of the urban sample and 43% of the rural sample reporting this issue.

Most parents feel that their child's reading and writing abilities have gone down during the lockout.The National Education Policy

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2020 emphasises digital learning as an alternative to the conventional classroom model but implementing this in rural India will face some challenges.

Financial issues

The meagre income leads to education taking a backseat. Parents tend to see education as an expense rather than an investment. They would rather have the children work and earn. When it comes to higher education, lack of good institutes close by means students have to look at shifting to cities, which adds to their expenses. This leads to low rates of enrollment and higher dropout rates.

Lack of guidance

Students in smaller regions have great potential and are motivated to study but lack right mentoring. This is required not just for the children but also for their parents.

CONCLUSION

The literacy rate of India is 77.7%, but it is different in rural and urban India. There is a wide gap between the literacy rate of urban and rural India. However, the reason behind the low literacy rate in rural India is many.

The way to improve the present scenario of education in rural India is the construction of schools in every village, providing proper and adequate infrastructure and other resources, using modern technologies in education, creating awareness about the importance of education and rights. Ways to boost rural education in India. We need to overcome the above said obstruction to boost education in India. In order to boost up this, we need to adopt the following measures:

Encourage free education.

Increase the number of schools

By adopting modern teaching technologies

By providing scholarships

Proper infrastructure and availability of resources

Digital dividend.

In a globalized world, where everyone is technology prone and using their application in daily life. It is necessary that everyone should have knowledge about their use.

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ON LINE EDUCATION - CHALLENGES FACED BY RURAL STUDENTS

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ABSTRACT

The pandemic situation caused by COVID19challenges in all aged groups including teachers and parents. The unprepared lockdown leads to lot of difficulties to get the facility and adapted to a new environment. The virtual learning was eagerly adapted to get continue of school and college students' education and constantly updating the knowledge. The virtual learning has lot of advantages than the traditional class with some disadvantages. The disadvantages lead to face many challenges to the students, parents and teachers particularly in rural areas. Here we presented what are all the challenges against the students.

Keywords: Virtual learning, online learning, technology dependence, unprepared students, teachers motivation

INTRODUCTION

The perpetuation of the covid19 infected over 82 million people worldwide. The worldwide mortality rate was reported more than 1.8 million people (1). The mortality led everyone become selfish and avoiding the infected people visit led they were isolated from their society. The reason behind this situation is lack of medicine to control the covid19. The lock down in the countries greatly affected the economy, education and hospitality. The import, export and production in the industries and the traditional teaching methods, schools were stopped without ending date.The house arrest led to anxiety, mental disturbances in all age groups. The prolonged time to find a suitable medicine also causes mental illness throughout the world. To avoid this pandemic hit, many challenges were inevitable to face. In this short review paper, we look the challenges against the covid19 situation in rural areas particularly education.

Challenges of online education

There are many challenges against the education. We focus the following challenges;

- Technology dependence
- Student discipline changes
- Teachers motivation and emotional encouragement
- Home atmosphere and its impact on classes

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- Role of family
- Unprepared student
- Over expectations of the parents from School/Teachers
- Parents are equally responsible for the classroom management by ensuring the resources.

Technology dependence

The technology era of twenty first century introduced many tools and software which makes our works easier in all the fields (2). Today all the age group of students get their knowledge more than the school. They easily understand with the pictures, animation and videos. They fetch the knowledge in more effective manner. They are exposed to globally with enhanced teaching and learning.Eventhough technologies helping to understand the basics, it causes many health issues. The long time online classes led to cause severe anxiety problems. The continuous use of online chatting led to reduce the writing skills and also the forgot the spelling for the words. They felt tired even sit in front of computers. The term zoom fatigue introduced during the covid situation. Zoom fatigue refers to the felling of exhaustion after long zoom classes or virtual classes. Facing the screen for longer time causes students being mentally drained (3).

Impact on discipline

Self-discipline greatly impacts the online education. The digital era of learning led to students to find out more tools (graphical calculators, high tech watches, mini cameras and bluetooth devices) for cheating. The online world makes the students to become lack of concentration in studies and sports.Students playing in mobile phones in front of elders, relatives and they use mobile phones in streets and all over the places. While free in the online learning time they distracted more with the advertisements. The temptation of the advertisement led students waste more times in the online (4).

Unprepared students

Every teacher's faces unprepared students in their classes. The unprepared meaning they did not bring pencil, scale, books and notes in offline classes. In case of online education, the unprepared refers the students' loss of their interest in class, disconnect if the class is boring and involved in group making and chatting (5).

Teachers' motivation and emotional encouragements

Teachers' motivation gives energy to the students naturally (6). There are two different aspects of motivation; one is doing or deciding something and persisting in doing something (7). In other words motivation can be either change the direction or magnitude of human behavior (8). The famous quote from John C Maxwell is *"Students don't care how much you know until they know how much you care"*. The change in the students' behavior and their discipline is the major impact in online education. This motivation is reduced during the pandemic period. Loss of the teachers' motivation led to students become more stressful and sometime become

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isolated. Even college students lack their self confidence level and they worried about their near future. Encouragement is the most powerful tool to break the masked skill underlined with the students (9). A famous quote says,*"Everyone has inside them a piece of good news. The good news is you don't know how great you can be! How much you can love! What you can accomplish! And what your potential is."- Anne Frank.* The virtual learning lacks this kind of motivation and encouragement. The lack of students' attention in online class led to not realize the original characters and their stories. The fear about the future comes naturally to the students by lack of this motivation and encouragement.

Home atmosphere and role of family

Home atmosphere for virtual learning divided based on physical, structural and psychological manner. Physical factor contribute 25% of the student progress. Physical factors include color, cleanliness and the tools used for virtual learning. The structure represents the furniture used for the physical comfort. The first two factors required for the maintaining psychological habits. The behavior and the thinking capacity can change by various sources like family issues, friends break up and negative thought of relatives (10).

Overexpectation of the parents and teachers

Parental expectation and concern about the schools or colleges have to introduce new virtual tools for making their kids globalized. The new environment adapted many parents to think work from home for the college students. To fulfill the parent's expectations some colleges conducting interviews through online and get to be placed. Especially the gender inequality arises here. The girl's parents were willing their daughter to be work from home during this pandemic and also with other psychological reasons. From teacher side they face the new environment (virtual class) for students and gained the achievement in academic progress. For that teachers formed different kinds of assignments, quiz and other activities. But in reality those affects the students learning in lot of ways especially when the assignment lacks the creativity or thinking. The average achievement is sufficient than the full achievement in off line classes (11).

Parents are equally responsible

The chance of issues arises more compared to offline classes. The issues are sensitive content, equal access to technology, privacy information, political contents and memes. The abundant information available in the world wide web led students have to analyze and evaluate the source material. Parents have to use parental control softwares to avoid the distraction of the son/daughter. Encourage physical activity of the children during the break in online class. Parents have to monitor their children in their social network (12).

CONCLUSION

The covid19 give chance to challenges to everyone in a different way. The challenges leads to some students make

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success in their life from arrears to get pass easily.Sadly this virtual learning affects the top grade students in the class. To overcome this problem, we have enable the proper tools for on line examination and reduce the cheating. Thereby at least we reduce some bad habits from the students. The finding of new tools in the digital era is not antough process. The new tools may help the students, teachers and parents to face their challenges in the current scenario.

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E-LEARNING IN TODAY'S ENVIRONMENT

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ABSTRACT

Another homeland in education is e-learning. Although there are applications in this internet way of education. It is still a failure for the rural people. The difference between those who have money and those who do not has it is very clear in this education. The village is the source of a nation. Therefore, education should reach every grassroots person in the countryside. This education system, which was started due to carona, is a curse to the rural students.

Keywards: E- Learning, internet, learning, teaching, environment, problems.

INTRODUCTION

Education is the basis of a country's development. Intellectual society thrives on education. There are many changes in the way education is taught over time. Teachers and students work together on a live classroom event called Learning and Teaching. In today's world of automation can be a daunting task. With the great development of information technology, the world may be contained within a small mobile phone. In an environment where the corona virus is threatening the world, educational institutions, government offices and public institutions are all paralyzed by the general freeze. There have been setbacks in the lives and economy of the people. This situation has also had a major impact on the future education of students. Online education for students is in great demand in today's environment.

E- Learning education

"It simply came to our notice then
For the life of the eye"

Our elders, who fully realized Valluvan's promise of excellence in education, taught education through the Gurukul and later through the boarding schools. Tamil societies played a major role in teaching education during the Sangam period and the Sangam Maruviyak period. Schools became places of learning only after English domination began to take root in India.

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Education by Christian machineries was general to all, and a formal education was taught with syllabi throughout the country. The field of education has undergone many changes in line with the times, needs, scientific advances and technological advances. With the advancement of communication due to technological advancements, it has become necessary to introduce it in the field of education as well. Vocational training and formal education training through the Internet, arts-based training classes, started a few years ago and have been running successfully. But they have been a fruit only accessible to the upper classes. All educational institutions have been closed for more than a year as the world has come to a standstill due to the rapidly spreading corona infection since the beginning of 2020. The environment has developed where children have to be paralyzed at home. Children's education has become a major question mark

Learning - Teaching

It is necessary to use modern communication technologies to provide education, as befits the times. For this, we need to bring together academics, principals, teachers, and technicians to make the right decisions on technologies, training, and financial needs. In colleges and universities, examinations begin in April and May, and in June and July, a series of new student admissions are blocked; The ban will be lifted. As you can see then, academia should not be. In this new, modern world of versatility, all kinds of books are available for free on the Internet. Learning - Many websites related to teaching have changed in the way they are now used for free. For example, online libraries, online classes, skills development websites, etc. can be used for free.

The way of the internet

Teachers need to develop curricula, with a variety of teaching methods, such as video, computer, mobile, video, PowerPoint, and YouTube to enhance their teaching skills. In the future, curricula are more likely to come through the Internet. In addition to the methods of creating yarn, with the new technology, you need to know how to create. Many scientific texts have appeared on the Internet in the form of texts. As such, teachers should seek to introduce other disciplinary texts. In this context, students and the teachers who guide them must continue to work. Following the path of the Internet is very useful. Teachers need to teach this to students, effectively. Today's students and his parents are paralyzed at home. Parents are concerned about the future of young people, students, and children, as well as the nature of their education. Students and teachers who are facing the exam are forced to streamline their academic learning through the internet at the next stage.

Specials

E-learning, with its all-encompassing facilities, helps educate and develop students' learning and cognitive abilities. Students will benefit greatly from

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classes where a lot of data is collected and provided by competent teachers and many doubts can be dispelled by discussion after class.

Problems

There is an environment where devices such as cell phones, laptops, etc. are weakened by heat due to long classes that take place on the Internet. Similarly, students are more likely to have physical problems such as headaches, eye damage, and depression. Occasional distractions during classes can cause distractions. Not all students have a cell phone. Internet connection is not available all the time, even if it is a smart phone. There is an environment where poor, simple students in rural areas cannot get education online. So there is a lot of potential for ups and downs in education. There is a situation where some students commit suicide due to not being able to participate in online classes due to lack of knowledge. There is a situation where it is not possible to conduct class on time and get assessment due to technical glitches while studying online. We face many problems like these in the online education system

Solutions

The duration of a class can range from 45 minutes to 1 hour. When learning online, students can learn to wear glasses to avoid problems such as headaches and eye damage. The government can set up a panel of experts with academic. E-learning can be implemented based on the report of the committee. For the benefit of all students, the government can set up a permanent television station for education and run it under the control of the Department of Education. Students who do not have the technical equipment such as smart phones, laptops and computers can also learn through television. It is somewhat comforting to know that the Government of Tamil Nadu has now published e-classes for TV students with a timetable.

Completely, in line with the 'old passing and new infusion', we need to innovate in the education system and provide learning events that are beneficial to our generation. Bharathi says, "Education is the best Tamil Nadu" and Bharathidasan says, "Everyone in Tamil Nadu is uneducated. "Education is the best human resource in the country.

CONCLUSION

In today's world e-learning is becoming more and more important. Therefore, online education cannot be equated with direct classroom education. This can be a temporary solution. So we need to make e-learning accessible to all. That is the duty and need we now have to fulfill for the education sector.

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DIGITAL EDUCATION IN INDIA: STRUCTURAL CONSTRAINTS AND THE NEP 2020

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ABSTRACT

According to the World Bank, education is a powerful driver of development and one of the strongest instruments for Reducing poverty, Improving health, Gender equality, Peace and Stability. In 2012, 31 million Global primary school student are drop-outs. Averagely 10 percentages is increase of future income for every additional year of education in developing low-income countries. Two out of three illiterate people in the world are women. Many higher education institutions in the world are planning to offer or offer online courses. New circumstances and realities require new initiatives. The recent rise in epidemics and pandemics necessitates that we are ready with alternative modes of quality education whenever and wherever traditional and in-person modes of education are not possible. In this regard, the National Education Policy 2020 recognizes the importance of leveraging the advantages of technology while acknowledging its potential risks and dangers. This paper analyse the challenges in implementation of online education in rural India and identify the measure taken in New Education Policy 2020.

INTRODUCTION

Online education is quickly becoming a major phenomenon around the world due to the ease and convenience. It offers learners who are trying to balance work, family, and other obligations with completing a degree or certification programme. Edu.gov defines "An online course as one in which at least 80 percent of the course content is delivered online. Face-to-face instruction includes courses in which zero to 29 percent of the content is delivered online; this category includes both traditional and web-based courses." That is, to take an online course, a student must have a computer or regular access to a computer with a current operating system and an Internet connection (high-speed broadband access is recommended). In addition, some courses may require video or audio playing software or other specific software applications.

Given these basic requirements, some countries and well-do-to families may

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have the resources and capabilities to switch easily from traditional to online education. Other families and countries, including most developing and underdeveloped, do not have some or all the resources and capabilities needed to offer or take online courses. Even in developed countries, some families cannot afford to get the required equipment and software to access online courses. For example, in the United States, some families with school-age children do not have a computer or a tablet (e.g., an iPad) or have an Internet connection to go online. As a result, students are provided learning packages to be picked up by their parents. Likewise, many instructors in developing countries cannot afford to buy a computer or have access to the Internet. As a result, the majority of students and instructors cannot take or teach online courses due to a lack of computer equipment, knowledge about computer technology, or access to high-speed Internet. Developing countries should not jump in offering online courses without proper preparation and knowing the technological conditions existing in the country. Otherwise, the consequences will be disastrous for the institutions, the country, and students.

New circumstances and realities require new initiatives. The recent rise in epidemics and pandemics necessitates that we are ready with alternative modes of quality education whenever and wherever traditional and in-person modes of education are not possible. In this regard, the National Education Policy 2020 recognizes the importance of leveraging the advantages of technology while acknowledging its potential risks and dangers. It calls for carefully designed and appropriately scaled pilot studies to determine how the benefits of online/digital education can be reaped while addressing or mitigating the downsides. In the meantime, the existing digital platforms and ongoing ICT-based educational initiatives must be optimized and expanded to meet the current and future challenges in providing quality education for all.

Review of Literature

Ishmirekha Handique Konwar(2017) in his study "A Study on Attitude of College Students towards E-learning" found that found that students who used e-learning as a learning strategy received higher scores or percentages than the lower user of the elegance strategy.

Obaid Ullah(2017) in his study "Students' Attitude towards Online Learning at Tertiary Level" that found, the results of the study did not reveal any significant relationship between the interests of computer students and the acquisition of knowledge through online learning at the undergraduate level.

Michelle Fong (2014) in his study "Student attitudes to traditional and online methods of delivery" found that male students who prefer online learning technology place relatively less emphasis on communication opportunities than female students.

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Statement of the Problem

According to the World Bank, education is a powerful driver of development and one of the strongest instruments for Reducing poverty, Improving health, Gender equality, Peace and Stability. In 2012, 31 million Global primary school student are drop-outs. Averagely 10 percentages is increase of future income for every additional year of education in developing low-income countries. Two out of three illiterate people in the world are women. Many higher education institutions in the world are planning to offer or offer online courses. Whether online education is better or worse than traditional face-to-face education is no longer a question. Due to the pandemic of COVID 19, almost all educational institutions are now forced to offer some or all of their courses online.

The NEP-2020 replaced the existing National Policy of Education-1986. One of the core principles guiding the education system, according to the policy, would be the 'extensive use of technology in teaching and learning, removing language barriers, increasing access, and education planning and management. This paper analyse the challenges in implementation of online education in rural India and identify the significant impetus to the role of technology in New Education Policy 2020.

OBJECTIVES

1. To analyse the Structural Constraints in implementation of online education in rural India
2. To identify the significant impetus to the role of technology in New Education Policy 2020.
3. To offer suitable suggestions based on findings.

Challenges in Implementation of Online Education in Rural India

In many developing countries (e.g., India, Pakistan), besides the lack of equipment and other hardware and software problems, the worst problem is the shortage of electricity. Most villages and small towns do not have electricity and, if they have it, it is only for one or two hours a day. Even then, the voltage is so low that it does not light up a bulb. Further, electricity is so expensive that many people try to conserve to avoid a high electric bill.

Some challenges online education faces are high-level of poverty, illiteracy, political and economic instability, and poor infrastructure, among others; however, the first obvious problem in many developing countries is the lack of Internet connection due to the poor infrastructure and lack of global communication technologies. The unreliable Internet causes a very high frequency of internet disconnection. During periods when the internet connection is supposed to be working, its narrow signals do not allow clear instructor-to-student communication. The constant Internet interruption results in wasted time and, sometimes, observable signs of frustration if not exasperation from both students and instructors and may triple the time the

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interaction normally should take. The average connection rate in developing countries has a frequency capacity of one-fifth of the broadband connections available in developed countries. Thus, technology is not conducive to a productive, pleasant learning environment. This alone may discourage many students and instructors from participating in online education.

Online courses are designed to guide students toward self-directed learning. In addition, students have to rely on self-learning, which may be hard for some students. Online courses require a student to remove barriers and obstacles in learning subject matter while attempting to achieve quality learning. Therefore, some students may not be capable of removing these obstacles and barriers in addition to learning the subject matter. This conflict will cause more frustration, which may cause students to drop out. To avoid failure will require constant support and course material that is easy to access and easy to comprehend without requiring a lot of interaction between the students and the instructors. In addition, some institutions must provide tutorials and seminars to train students and instructors on the use of course materials and provide a technology helpline to answer questions about any problem that arises during the learning process.

Role of Technology in New Education Policy 2020

Among many changes that the country is undergoing at present, the 'New Education Policy' (NEP) 2020' is a harbinger of directional change. The new policy, which has come after 34 years, is expected to bring new opportunities for India's education sector in the 21st century. It is set to provide a significant impetus to the role of technology in all aspects of education.

1. Digital infrastructure

During the pandemic, India's education system went through a phase of realization and learning. When the infectious coronavirus disease started to spread, over 260 million students, the second-largest school-going population in the world went under lockdown. To continue teaching, educational institutions hacked their way to find a quick solution to the crisis. Schools and universities were forced to adopt online learning, leaving behind classroom education. This unplanned and sudden shift, with no training, insufficient bandwidth, and lack of facilities to attend online classes felt by students highlighted the digital divide in the country. The new policy addresses these issues. NEP lays a special focus on developing digital infrastructure.

2. New Autonomous Body

The government has plans to set up a new autonomous body National Educational Technology Forum (NETF) to oversee the capacity building, develop e-content and provide a platform for educational institutes and stakeholders to share best practices leveraging technology. This will be vital to bridge the digital divide in the country and ensure a wider reach of online education in the times to come.

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3. Virtual labs

The creation of more and more virtual labs will give students remote access to hands-on experiment-based learning. Digital technologies such as virtual field trips, use of AR/VR in experiments, or online lessons reflect that the policy lays a strong focus on experiential learning. Hence, the adoption of these cutting-edge technologies will result in enhancing the immersive learning experiences.

4. Virtual classrooms and e-content

Not just this, the policy is futuristic in nature as it aims to make online learning and virtual classrooms accessible to every student in the country. The smart classrooms will provide a strong platform to initiate interactivity through webinars and live discussions. It is also intended at preparing alternative modes of delivering education, in times of crisis as the current pandemic, when conventional modes of education falter.

5. Digital literacy

Technology-oriented new education policy will surely benefit the youth of today and create employment opportunities. The new policy focuses on digital literacy, coding, and computational thinking from an early age. With most sectors moving to the digital platforms, learning of contemporary subjects such as Artificial Intelligence, Big Data Analysis, and Machine Learning is the need of the hour. The new approach of skill-based learning from an early foundation level of academics will help learners identify skill sets, thereby empowering them to be future-ready for the job market.

6. Edtechs at a brighter spot

The new policy has opened a whole new set of opportunities for the edtech sector. It aims to provide a range of educational services such as e-courses, available not just in English and Hindi but in several other regional languages. In addition to digital content, NEP also aims to provide learning apps, satellite-based TV channels, and teachers training to further strengthen online learning. The schools and universities are likely to collaborate with content providers for advanced content in line with the curriculum. This paves the way for the edtech players such as Bright Tutee to create innovative products and content. Edtechs can indulge in designing immersive technology for future classrooms and online learners.

The Indian education community has been realized the increased need for skill-based learning, and to educate future generations with the new-age technologies. The new education policy boosts India's vision towards creating an online pedagogy.

SUGGESTIONS

1. For a successful online learning experience, a student must be engaged and actively participate in learning. Suitable adaptive learning technologies such as user-friendly software should be used to give students and families some control over how they structure their learning time.
2. The instructor role becomes more crucial to coach the students on self-directed learning activities and provide targeted

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interventions only. With proper data collection, instructors receive daily data on each student's activity and progress, which makes it easier for teachers and students to focus on areas of weakness of learning.

3. Develop suitable "intelligent" tutoring systems to assess students' current weaknesses and reasons for the weaknesses and adjust instructional materials to meet students' needs.
4. Provide proper training to the teachers and educators to get fruitful result in implementation of NEP.

CONCLUSION

With the internet now being able to make the impossible to possible. Countries all over the world are now beginning to enter the sector of eLearning, allowing people to have a broader access to learning opportunities that weren't otherwise possible in the past. With online learning, on the other hand, people don't have to wake up every morning just to attend a few lectures. People are now able to learn from the comfort of their own homes, and according to their preferred timings. No longer are people bound by time and location to learn, but the process has also become a lot easier than what it used to be before eLearning became a thing. Teachers and educators will have to overcome the obstacles and learn online strategies that range from virtual lectures, video conferencing, online laboratories, mentoring, to online exam proctoring. NEP-2020 is a Torch Bearer for the paradigm shift in Traditional Teaching-Learning Process; however any policy's effectiveness depends on its implementation. The policy itself mentions that, its implementation will require multiple initiatives and actions, which will have to be taken by multiple bodies in a synchronized and systematic manner.

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AN OVERVIEW ON ONLINE LEARNING IN THE RURAL AREAS

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ABSTRACT

Of course, educational institutions provide online classes to pupils who do not have access to home instruction. They contacted parents to alert them about the classes and developed a WhatsApp group for each session. They use WhatsApp groups to send study materials, movies, class exercises, and homework. Because of the digital divide, lack of access to gadgets, many parents who are uneducated, and simply a weak network connection, conducting online lessons in rural areas is a major difficulty. Parents and students are responding positively to educational institutions. Some students have organised home study groups in which they share their computers and other electronic gadgets. Our professors who live in the same village also share phones, and students visit their homes to seek assistance from their teachers and classmates.

Keywords:online classes, pupils, learning, online, rural, digital education etc.,

INTRODUCTION

The outbreak has hit the education sector at a critical time, as the last few sessions and assessments for the academic year 2019-20 were about to begin. Many institutions were unable to complete the curriculum with regular classes due to the lockdown. The subject of how and when to conduct examinations has been raised. To finish the curriculum, many institutions have turned to online classes. However, there have been issues with the implementation and effectiveness of online programmes, particularly among students in remote areas.

OBJECTIVES

To know the current situation of pupils

To understand the Challenges in the online education

To study the initiatives taken by the Government

To give suggestions based on the study

STATEMENT OF THE PROBLEM

Even the National Education Policy (NEP) 2020 emphasises digital learning as a viable alternative to the traditional classroom model for teacher-student interaction. While there are many advantages to digital education, there are also significant obstacles to making education a fully online phenomenon in rural areas. The current Covid-19 crisis has had a significant impact on the country's digital divide, particularly in

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terms of education with digital access. It has also brought the challenges of digital representation of education in Tier III and rural areas of the country into sharp focus. The transition from chalkboard teaching to prompt, flexible online teaching requires appropriate technology-enabled learning. Digital education has often been considered a viable solution for Rural India to address the existing gaps in imparting education. It is believed that digital education can curb the issues related to quality education delivery, the inadequacy of teachers in rural schools, high rate of drop-outs, insufficiency of innovative teaching-learning methods and lack of standard learning material.

REVIEW OF LITERATURE

Aman Jindal &ChahalB P S (2018)The advancement of technology has resulted in significant changes in practically every aspect of existence. Technology has also had an impact on the educational process. In the previous ten years, face-to-face education has undergone a significant transformation. Although face-to-face education is still the standard, online courses are becoming more popular in the fields of management and engineering. Instant, online, anytime accessible, self-driven, and on the go are some of the reasons for the exponential expansion of online education.

Stack, Steven Dr. (2015)In the last ten years, online education has become increasingly popular. His research indicated no significant differences in student performance between online and face-to-face classes.

T. Herman and S. Banister (2007) conducted a study on the cost and learning results of traditional versus online coursework. According to their findings, online courses engage students in the learning process, support high student learning outcomes, and save money for the university.

CURRENT SITUATION OF PUPILS

Since the start of the lockdown, many students studying at metropolitan colleges and staying in hostels or paying-guest lodgings have returned to their home areas. Poor data connectivity, lack of access to laptops and smartphones, and power concerns make it difficult for villagers to participate in online courses offered by their schools. Students have been known to journey to odd locations outside of their communities in quest of the illusive mobile wireless signal. An instance of a boy having climbed a tree to catch a good enough mobile signal, in Karnataka, has been reported in the media. Students, particularly girls, have a tough time managing their access to online programmes. However, due to academic demands, educational institutions in urban and even semi-urban areas are obligated to offer online classes. As a result, many poor students have been forced to miss online classes, resulting in unequal chances for pupils.

Unfortunately, pupils in rural India are denied access to the latest technologies and levels of internet content that urban Indians take for granted on a daily basis.

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Village kids, unlike their peers in cities, have a smaller percentage of desktop or laptop computers. They rely on their family members' cellphones to learn and attend lessons, which makes it a difficult task. Students' health may be harmed by staring at small displays for lengthy periods of time in order to consume as much knowledge as possible.

Furthermore, purchasing data plans for learning could result in significant costs for families with little resources. It may have an impact on both teachers and students' levels of participation in live classes.

For more than a decade, digital literacy and the digital gap have been major concerns in our country. Many instructors and students in rural regions lack the technical abilities that educators and students in cities possess.

They confront challenges transitioning from traditional to online education, which could be a source of dissatisfaction in remote areas.

CHALLENGES

1. Insufficient digital infrastructure

Although the Indian government is taking steps to create digital infrastructure, much more has to be done. The most serious issues are access to high-speed internet and a reliable power supply.In terms of internet speed and stability, India ranks 89th in the world. According to a World Economic Forum research, only 15% of households have Internet connection, and mobile broadband is still only available to a small percentage of the population, with only 5.5 subscriptions for every 100 people. Furthermore, broadband is now only available in around 600 corridors, mostly in and around India's top 50 to 100 cities, leaving rural areas with insufficient access. Today's necessity is 5G network technology, which will improve the speed at which data can be downloaded.

2. Limited Social interaction

Because online education may be accessed from anywhere, including at home, there is relatively little direct connection with the teacher and other students. According to Dhirendra Kumar (2010), there is very little debate among peers, especially in self-paced courses. The majority of the discussion occurs by e-mail, chat rooms, or discussion groups. There is no climate on campus that encourages social engagement. As a result, you are unable to form any social connections that would aid in your career advancement.

3. Questionable credibility of degrees

Despite the fact that the market has begun to recognise online degrees, there are still many bogus and non-accredited degrees available online. The number of con artists selling forged certificates with no credentials is on the rise. These schemes jeopardise not only the integrity of online certifications, but also prospective employers' trust in online education.

4. Motivation

Some pupils require an extra push to get to class. Students who are enrolled in

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self-paced online courses may procrastinate. Online education has a relatively high dropout rate. To finish the assignments and upload them on time, you'll need self-motivation and discipline. You can struggle in an online programme if you have trouble working alone, staying organised, or completing deadlines.

5. Language of the Course

India is a multilingual country with a rural population that makes up the majority of the population. The majority of online courses have English-language content. As a result, pupils who do not speak English face difficulties in finding linguistic content. As a result, computer professionals, educators, administrators, language content authors, and information disseminators must work together to provide a feasible framework and standard solution for learners who exclusively speak Indian languages.

INITIATIVES OF GOVERNMENT

There are several initiatives taken by the Government to encourage online learning under the National Mission on Education through Information and Communication Technology (NMEICT). Other than that, eBasta is presenting a framework to make school books available in digital form as e-books to read and use on tablets and laptops. Further initiatives include SWAYAM Prabha, SWAYAM Spoken Tutorial, Free and Open Source Software for Education (FOSSEE), National Digital Library (NDL), Virtual Lab, E-Yantra, and MOOCs. Additionally, the Government's Digital India initiative also covers a massive plan to link the rural parts with high-speed internet networks.

SUGGESTIONS

- Ed-tech companies could offer low-cost multilingual platforms that can operate on limited bandwidth while yet providing access to high-quality material. To encourage this, the government might provide tax breaks to these businesses.
- The current scenario will be examined before moving on to themes such as digital learning penetration in rural regions, cost-effective learning platforms, and redefining learning science as a blended mode of approach that is more beneficial to all learners.
- Teachers can receive online content delivery training from state governments.
- Innovative techniques can be implemented to make online education more engaging and dynamic.
- The country's rural communities can benefit from the vital infrastructure supplied through public-private partnerships.
- The successful gambits of business organisations' CSR (Corporate Social Responsibility) in developing digital education in rural schools need to be promoted even further.
- Schools in remote areas should be equipped with digital learning tools, and alternative energy sources such as solar panels should be deployed.

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- Civil society organisations, legislators, and the government must work together to establish a user-friendly digital interface that allows teachers and students to learn without interruption.

CONCLUSION

Rural India's digital education hurdles can be overcome by providing affordable and accessible e-learning options. To propel digital education in rural India, it is necessary to consider content standard isation, facilitating all essential amenities and services in government schools through a PPP (public-private partnership) model, up-skilling teachers by providing them with customised teacher-training programmes on online education, blended learning in schools, and the advancement of initiatives in the digital learning space by NGOs and CSR wings of organisations. Aside from that, all stakeholders should work together to develop innovative pedagogies, accessible educational gadgets, adequate infrastructure, and a high-quality environment to support the spread of digital learning in rural India.If implemented in partnership with industry, universities, and government, online education has the potential to transform the future of education. To close the gap, drastic adjustments in course curriculum are required, so that students are industry ready after graduation.

With the usage of technology, the educational process needs to be modified to make it more practical. In addition, courses should be developed in a variety of languages to broaden their appeal and provide additional chances for rural Indian youngsters. Designing solutions to improve online learners' social skills would necessitate innovation.

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RURAL EDUCATION IN INDIA

"Education is the most powerful weapon we can use to change the world!" - Nelson Mandela.

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ABSTRACT

Education is a stairway to the growth and development of humankind. Education shapes society into a better world. The stakeholders of education, namely, governments, organizations and students themselves agree on its multidimensional essentiality. High-quality education, particularly tertiary education is a major catalyst of development in families across the income spectrum. Further, with the integration of multidimensional goals, the importance of education has accentuated and individuals have grown more conscious towards the environment and society developing an awareness lacking in previous generations. Education in rural India is a catalyst to improve the economic and social well-being of the nation. According to the Annual State of Education Report (ASER) 2019, only 16% of children in Class 1 in 26 surveyed rural districts in India can read the text at the prescribed level, while almost 40% cannot even recognize letters. To achieve the dream of Skilled India, there has to be an enhanced focus on upgrading the rural education system. In this paper, challenges in ensuring education to rural people in India are explored.

Importance of Education for a Country

An uneducated individual can never be fully aware of their responsibilities towards each other as human beings and the country as a whole. As human beings, we have to give back to the society we live in and make it a better place to live for everybody. Proper education teaches an individual to think beyond than their own personal interests and helps them in developing an ability to make the country a happier, safer place for the next generation.

Mentioned below are the reasons why education is important for our country, as well as any country in the world.

- ✓ Citizens of a country understand their true potential through the means of education.
- ✓ Education helps is getting an individual a good-paying job, which helps in improving the economic status of his/ her family.
- ✓ It teaches an individual the importance of differentiating between good and bad as well as right and wrong.
- ✓ An educated person can strive for the betterment of a country.
- ✓ More educated individuals help in creating more jobs for everyone. This is turn helps in solving the problem of unemployment in the country.

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- ✓ Voting which is one of the basic tenets of our thriving democracy is better understood and utilized as a right only through the means of education.

Importance of Educational Institutions in Society

Educational institutions are a source of formal education for society. They are sources to dissipate education and its importance. Institutions teach the importance of educational psychology to society. At institutes, the students are also made aware of the importance of sociology of education to the society. Institutes are the building blocks of a peaceful and progressive society. Every nation should work upon building as many educational institutions as possible. Providing quality and world-class education is essential to make the youth as competitive and self-reliant as possible.

Educational Status of India

Indian society is one of the oldest civilizations where education is promoted. India is home to the oldest Gurukul to IITs and IIMs and the country's literacy rate is at 75%. Kerala has achieved the maximum literacy rate of 93% while Bihar is the least literate state in India with a literacy rate of 63.82%. At the all-India level, the literacy rate above 15 years old adults is 69.3% and that among males is 78.8% and females are 59.3%. A rural-Urban gap existed in the adult literacy rate for both females and males. The importance of female education in society has always been a social concern in India.

The concept and phenomenon of education based on school-going is of modern origin in India. Education in the past was restricted to upper castes and the content taught was also astrictive. However, today, to lead a comfortable life in this fast-changing world, education is seen as the most influential agent of modernization.

The educational attainments in terms of enrolment and retention in rural India generally correspond to the hierarchical order. While the upper castes have traditionally enjoyed and are enjoying these advantages, the Scheduled Caste and other backward castes children have lagged behind in primary schooling. Studies have revealed that children of backward castes are withdrawn from school at an early age, by about 8 or 9 years.

Challenges in Ensuring Education in Rural India

There is a discernable gap between rural and urban education system for which rural children face many difficulties. Rural districts are typically disregarded because of their small populations compared with larger single districts in more urban areas. In terms of funding, national and state legislation tends to be more directly applied to the larger districts in an attempt to effect the most positive change for as many students as possible. For the large majority of the population living in rural areas, education is highly dependent on government-run or aided schools and non-governmental organizations. But rural areas still face various barriers that directly impact the country's literacy rate.

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Financial issues: To start with, meager incomes lead to education taking a backseat. Parents tend to see education as an expense rather than an investment. They would rather have the children work and earn. When it comes to higher education, lack of good institutes close by means students have to look at shifting to cities, which adds to their expenses. This leads to low rates of enrollment and higher dropout rates.

Lack of guidance: Students in smaller regions have great potential and are motivated to study but lack right mentoring. This is required not just for the children but also for their parents.

Dearth of adequate number of schools: The rural parts of India are already struggling a lot when it comes to local transportation. This problem poses a huge threat to education is rural Indian due to limited or no schools in the vicinity. The problems in transportation coupled with schools located at a great distance in rural areas compel parents not to send their kids to the schools, thus keeping them devoid of education.

Lack of infrastructure and faculty: Children have limited or no access to basic learning tools such as well-equipped classrooms, computers, labs, playgrounds, among other things. Often, the teachers are not qualified or do not turn up, leading to a poor quality of education. This also leads to low morale among students to attend school.

Lack of Quality Reading: Rural students also lack consistent access to quality early reading opportunities because of the socioeconomic circumstances of some families and the absence of financial flexibility in rural districts to allocate money to address these issues. For example, while many students have access to local libraries not far from their homes in a rural setting, their districts may not have the time or funding to establish beneficial relationships with the library system that would enable and encourage families and students to take advantage of those resources, especially at the preschool level.

Parental Illiteracy: Parental illiteracy is another cause for lack of interest to become literates. Many rural children enrolled are thus first generation learners, who come from illiterate families thus, they have to single handedly grapple with school life, mastering language and cognitive skills without parental help and guidance. Most of these illiterate parents do whatever is possible to educate their children because education for them acts as a vehicle of social mobility. Moreover, education and the subsequent attainment of town jobs is often looked upon by many of these rural families, as a means to break out of their position in family hierarchy.

Girls' Education: Women in India were educated less due to the traditional belief that a girl child is married early and take care of the household. Eventually, people realized the importance of girl child education in the society. Women are equally rightful to seek education as men. In fact, women have outperformed men in several competitive and national exams. When a woman is

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educated, the entire society is educated. But when a man is educated, only he is educated. If we truly believe in the education system and its implication in daily life, then we have to promote education among girls. Only after imparting knowledge to women in society, a nation will progress together.

Drop Outs: An important reason for withdrawal of children from school is the cost and work needs of poor households. Income and caste are typically correlated with lower castes having lower incomes and higher castes having better endowments in terms of land, income and other resources. Thus, one fact is certain that there is a clear divide in the villages, along caste lines, regarding access to schools.

Impact of Covid-19: The disruption of education caused by Covid-19 has adversely impacted rural India wherein children could not cope up with the normal owing to lack of adequate digital infrastructural support.

Means to Overthrow Challenges

The solution to improving the rural education is introducing modern and better techniques to the education system which can help rural students come on par with the urban students.

Set up more schools: The parents in the rural India can be promoted to send their kids to schools only if there are enough schools near their homes and at a very minimal cost. To those who come from very low financial background, the government must provide for their textbooks, library and laboratory facilities so that they are not left with any reason for not attending the schools.

Amalgamate Technology with Education: It is very important for rural schools to lay emphasis on technology, especially basic computer knowledge so that they are not left far behind. Also, in the digitally growing world, it is very important for every child to be aware of basic technologies and their usage.

Focus on Conceptual Learning: Gone are the days when rote learning and facts learning were sufficient in order to be educated. Modern day education system required people to be aware of what they learning with the know-how of its application and this can be done only when basic concepts are cleared right from the beginning of their schooling.

Move outside classrooms: If we want to make education engaging for students, it is really important to start taking class lessons beyond the classrooms. It is very crucial for kids to be well aware of the world around them and this can be done only when they are being taken out and shown around. This will also help them understand the concepts practically and will remember them for longer.

Teacher as the best Educator: For rural students, it can be difficult to connect new learning with prior experiences. Many times, rural students lack life experiences that other students may have because of the typically isolated nature of their families and communities, which can limit their ability to fully benefit from a diverse curriculum. By engaging all components of the learning

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process—teachers, students, and families - teachers are more able to assess the specific needs of their students and address them with purpose. When positive bonds or relationships are cultivated between each of the components, teachers are more equipped to design learning experiences that fit the needs of their students.

CONCLUSION

Some specific challenges in educating rural students and the measures to overcome those challenges are discussed. While educators in rural districts are capable of designing curriculum in a better way, many may lack the experience or training to do so. There also may need to be a shift in the understanding of the nature of learning that may entail a period of adjustment to new styles of teaching. Rural students, in particular, require sound relationships between all of the stakeholders in their education, and teachers can create and foster this dynamic by taking a few purposeful steps toward a more collaborative and transparent classroom. Implementation of The National Education Policy 2020 which emphasizes digital learning can create a common platform unifying student across the country. Go**vernment, Corporate and community members have to work together to implement solutions for a sustainable education system in rural India.**

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RURAL EDUCATION IN INDIA

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INTRODUCTION

Rural education is one of the important factors in regional development supported by the central government. Implementing policies, it facilitates the effective functioning of the new roles With decentralization, local governments will have to assume greater responsibilities and would become the main centres for local development. Local governments have to be effectively linked with national levels as well as with local communities. They would be expected to undertake certain activities hitherto performed the central government, such as certain legal and regulatory functions and the provision of services like extension. In addition, especially with increased demand and diversification of economic activities mainly due to the growing emphasis on globalization and associated changes, they would be entrusted with extra responsibilities. As a result, these may include guiding local communities, especially at the take-off stage, facilitating the capacity-building of local communities, catalyzing the interactions between the community organizations and the organized private sector, installation of monitoring mechanisms, etc..

LITERACY RATE IN INDIA

In India, the right to education is a fundamental right which states that every citizen of India between the age of 6 to 14 years get free and compulsory education. This provision ensures that every citizen of India should get education up to 14 years without any discrimination.

The literacy rate in India is one of the major factors for socio-economic progress in addition to academic achievement. A literate person is a vital asset to the nation's development. According to the report published by the National Survey of India, the Literacy Rate of India in 2021 is 77.7 per cent. The literacy rate in 2011 was 73%. There is an increase of 4% in 2021 compared to the last census data. As per UNESCO, India will achieve Universal Literacy in the year 2060

The literacy rate in India is 77.7%.
However, the literacy rate of Urban region in India is 87.7% whereas in rural India it is only 73. 5%

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OBJECTIVES OF RURAL EDUCATION

- To provide Coordination, at the national level, for rural education programs and activities.
- To provide leadership for rural education – related conferences and workshops.
- To provide a forum for all those involved in public education in rural areas – including teachers, administrators, board members, and members of the rural community at large whereby they may come together professionally and exchange ideas.
- To promote state, regional and local delivery systems which bring about efficient and effective education for children in rural areas.
- To stimulate discussion, research, and policy development regarding equal educational opportunities for all students.

PROBLEMS IN RURAL EDUCATION

Nearly 65.53% population of India resides in a rural area. There is a wide gap between urban and rural education system. The literacy rate of the urban area and the rural area are also wide. According to ASER report, the survey was conducted and cover almost all rural districts; it was found that more than 50% of the children of age 3 to 16 years are not able to read and perform arithmetic abilities in the age group of 5to 16 years**.** However, the problems related to education in rural India are:

- Lack of availability of resources
- Lack of awareness of educational importance
- Less availability of schools
- Digital Technology
- Lack of pocket-friendly educational institutions
- Financial condition
- Rural-urban divide

Lack of availability of resources

There is a lack of availability of resources in the rural regions in India. There is also a lack of infrastructure in the schools situated in rural areas—no availability of

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benches, playgrounds, laboratories, washrooms or if present they are in the worst condition. Sometimes the textbooks are not available in proper quantity, or if available they are not in good condition. Also, the availability of stationery is also a challenge. Many rural Indians don't have enough money to bear stationary charges and other expenses. Another challenge is there is no transportation availability as there is poor connectivity from one place to another place. Another challenge is less availability of teachers. In India, the school in rural areas has only one or two teachers in the school.

Lack of awareness of the importance of education

Another reason for the low literacy rate in rural regions in India is the lack of awareness of the importance of education. People in rural regions are mostly engaged in agricultural and allied sectors. Children from the beginning are engaged in these sectors and not give much importance to their studies. Religious beliefs and some societal norms also a hiccup in the path of providing education in rural India. Many rural Indians believe that children, especially girls, should not study much and don't have to cover a long distance to go to school. Instead of getting the education, they should focus on some work which helps them in earning.

Less availability of school

There is also less availability of schools in rural regions. Many students have to go from one village to another village by covering miles of distance. Another challenge is the non-availability of transport. It takes long hours to reach school and to come back home. The rural parts of India are already struggling a lot when it comes to local transportation. This problem poses a huge threat to education is rural Indian due to limited or no schools in the vicinity. The problem in transportation coupled with schools located at a great distance in rural areas compels parents not to send their kids to the schools, thus keeping them devoid of education. This challenge also aids in increasing drop-out student ratios in rural India

Digital Technology

Another challenge in rural education in India is the digital dividend. In a globalized world, where everyone is technology prone and using their application in daily life. It is necessary that everyone should have knowledge about their use.

During the corona time, education is given in online mode, but due to poor connectivity, rural children are not able to get an education. This also creates a barrier in the education of rural India. Some of them also don't have a Smartphone due to which they can't access education.

Lack of pocket-friendly educational institutions: Residents of rural India usually come with little income sources which are usually consumed in the basic survival, making education out of their realm. The lack of government schools in the local areas

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discourages parents more to spend on their kids resulting in no education being imparted.

Rural-urban divide

Even though we are one nation, we still continue to have a rural-urban divide in every aspect and education also falls in that sphere. There are a number of studies which have demonstrated a wide gap coming in between rural and urban education. The gaps can be witnessed in various ways.

Ways to boost and upgrade the rural education in India

We need to overcome the above said obstruction to boost education in India. In order to boost up this, we need to adopt the following measures:

- Encourage free education
- Increase the number of schools
- By adopting modern teaching technologies
- By providing scholarships
- Proper infrastructure and availability of resources
- Promote computer literacy

Encourage free education

One of the most important ways to boost rural education is boosted up free education. As our constitution provide the right to education to all citizens of India. The government should focus on how they can increase the enrolment of children who reside in rural areas. This can be done by establishing more schools, providing proper infrastructure and resources. The government should also ensure that the number of children who are attending school must retain education up to elementary level. Another reason for encouraging free education is that people of rural India don't have much income so they can't afford high school fees and eventually drop out the school.

Increase the number of schools

The government should set up more school in rural India to boost up education. Most of the children have to leave their education due to the large distance between the home and the school. This is the case, especially for girls. Most of the girls drop out of school due to non-availability of transport. If the schools are set up at every village, it will aid in increasing the enrolment percentage and decrease the drop -out rate of rural children. The government takes an initiative to establish affordable schools which are pocket-friendly to the middle as well as lower economic groups of the society.

By increasing the modern teaching technologies

Modern technologies are very important in imparting education. Today in a globalised world where technology is rapidly emerging, it is necessary for every individual that they are updated with the current technology and also the focus of education should be on conceptual learning not on rote

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learning so that the students must use the applications of these new technologies.

By providing proper infrastructure and resources

Another way to boost up the education in rural India is by providing proper infrastructure and resources. The objective of education is the all-round development of the individual.

Availability of resources is also important for providing education. Resources include textbooks, stationery, laboratories, playgrounds, and benches should be in good condition and available for all the students. This will aid in achieving the objective of education and retaining the number of students in education. The government should make provisions and schemes to boost up education in India, especially focusing on rural India.

Promote computer literacy

The schools in rural India are required to get equipped with computer education and need to be imparted with technological education as well. This will help them be at par with the level of urban education and develop themselves better.

CONCLUSION

In India, education in the rural segments is not only important to eradicate poverty and illiteracy, but also for a variety of other social, economic as well as cultural and political reasons. The role of education, both urban and rural, is huge in growth of the country's economy. Although education in the urban areas has progressed rapidly during the last few decades, there are still some villages where education is not given sufficient priority.

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IMPACT OF PANDEMIC ON "MOBILE ADOPTION OF ONLINE EDUCATION - A BLESS OR A CURSE"

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ABSTRACT:

The COVID-19 pandemic has increased the popularity of e-learning platforms and has opened up a great opportunity for those in online education business. . The COVID-19 pandemic has increased the popularity of e-learning platforms and has opened up a great opportunity for those in online education business. E-learning will assume greater relevance and hence it is imperative to review the changing needs of students and address their concerns in the most effective way. Most high-end private and public institutions have made the switch smoothly using online platforms classrooms, Microsoft teams, etc., while many still find it a herculean task. The challenges of online education are multifaceted. A variety of smartphone available in the market and also number of users increases day by day. Smartphone usage among college students has tremendously over the last two years due to pandemic period. Educational institutions present electronic educational platforms as an official alternative for classroom activities.

INTRODUCTION

"It is okay to own a technology, what is not okay is to be owned by technology."

"Smartphone is definitely smarter than us to be able to keep us addicted to it."

With educational institutes closed due to the COVID-19 pandemic, the government has been encouraging online education to achieve academic continuity. The COVID-19 pandemic has *increased the popularity of e-learning platforms and has opened up a great opportunity for those in online education business. E-learning will assume greater relevance and hence it is imperative to review the changing needs of students and address their concerns in the most effective way.*Most high-end private and public institutions have made the switch smoothly using online platforms classrooms, Microsoft teams, etc., while many still find it a herculean task. The challenges of online education are multifaceted. The gap between students and staff was also increased during this pandemic period. This is because most schools closed physically, and students could no longer have face-to-face interactions with their teachers. Significant advancements are being made in online education in India as a result of its exponentially developing technology. With a population of over 1.3

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billion and the availability of high-speed internet and smartphones, India has a massive base of technologically-driven consumers as the educational landscape shifts in response to the COVID-19 pandemic. The pandemic has created a huge increase in demand for online classes for kids and teens. Health restrictions have made it difficult for us to move around and maintain a more active social life. This has directly affected our children's education, but fortunately, e-learning has allowed education to continue.Online classes not only allow the student to learn the subject. It also helps students to learn how to learn. Student developed the necessary skills to acquire knowledge more effectively. Technology can provide numerous didactic materials, videos, simulations, forums, etc. All this makes it possible to review content in a more dynamic way, which can be beneficial when studying. The pandemic has utterly disrupted an education system that many assert was already losing its relevance. In his book, 21 Lessons for the 21st Century, scholar Yuval Noah Harare outlines how schools continue to focus on traditional academic skills and rote learning, rather than on skills such as critical thinking and adaptability, which will be more important for success in the future.

STATEMENT OF THE PROBLEM

A variety of smartphone available in the market and also number of users increases day by day. Smartphone usage among college students has tremendously over the last two years due to pandemic period. In the modern business world due to the development of science and technology different type of new applications have been introduced in the market every year. Improvement of technology has more number of users, especially students have smartphone crazy. So they use new application mobile phones. The taste and preference of consumer also will change. This study will considered the amount of time tertiary level students used smartphone in learning activities and explored how it influenced their academic performance. Understanding the stated relationship may give insights as to whether smartphone usage has indeed contributed to increasing students learning opportunities or likewise affected their academic performance negatively.

OBJECTIVES OF THE STUDY

1. To show the various applications used for online education
2. To list out blesses of online education through mobile
3. To present the curse of online education through mobile

RESEARCH METHODOLOGY

This study is descriptive innature. The study is based on secondary data. Information are collected from books, journals, e-contents and websites relating to mobile adoption.

EDUCATION MANAGEMENT ON COVID-19

The education management of the COVID-19 crunch,90% of schools stated using pedagogic software tools., 72% used live streaming videos, 40% offers links to proceed with online materials,68% contributed towards virtual organization

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meeting and social media groups, less frequency, and small scale working groups. Electronic platforms like email, education tools, skype, Facebook, telegram, google are intensively used globally for theoretical content and currently adapting to this new persistence. Educational institutions present electronic educational platforms as an official alternative for classroom activities.

Online education VS Age Groups

The effectiveness of online learning varies amongst age groups. The general consensus on children, especially younger ones, is that a structured environment is required, because kids are more easily distracted. To get the full benefit of online learning, there needs to be a concerted effort to provide this structure and go beyond replicating a physical class/lecture through video capabilities, instead, using a range of collaboration tools and engagement methods that promote "inclusion, personalization and intelligence", according to Dowson Tong, Senior Executive Vice President of Tencent and President of its Cloud and Smart Industries Group.

Renowned applications used in Online education

- New norms of classroom conference, lectures utilized in video conference systems, namely Zoom, jitsi, Microsoft teams, WebEx, were employed at several institutions. Zoom and webEX are open and paid platforms that are exciting alternatives to the classroom environment, though they heavily depending on the quality of the internet connection.
- Smartphone is the primary mode for online learning for 79% of students in India, while only 17% have access to laptops and 4% to tablets for learning purposes or attending online classes, shows *India Lockdown Learning* report by Vidyasaarathi, a scholarship management portal promoted by NSDL e-Governance to assist students in their education financing process.
- For 59% students, online classes are being conducted over WhatsApp and Zoom calls, while only 30% of students are using the official online platform of the school or college they attend.
- The report further shows 60% of the students spend around 1-4 hours every day on online learning, while 31% around 4-8 hours and 8% around 8-12 hours, indicating a growing acceptance of online learning among students and teachers, despite challenges like limited screen size of smartphones and erratic internet connection.The usage of online learning isn't limited to education. So if 62% of students are using it for curricular activities, 38% are using them for extra-curricular activities, out of which 39% are taking online courses on art and craft.

BLESSES OF ONLINE EDUCATION THROUGH MOBILE

- Online education has changed the way of teaching. Teachers enable to reach out the students more efficiently and effectively through chat groups, video meetings, voting and also document sharing.

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- Online education allows for learning something beyond the norm. A learner has access to unlimited topics and global experts in niche subjects.
- Online class can be attended from anywhere, as there is no geographical border. The teaching can be recorded and kept in the system for future references.
- Every student has different types of learning and different ways to grasp a topic. Some students are online learners, whereas others are traditional learners. Some only prefer online because they get distracted by a large group of members. Online learning has a wide range of options and can be personalized accordingly to the student's needs.
- Save time by avoiding transportation and time for prayer, sports, and talking to friends.
- Spending on travel, tours, and buying study materials has fallen, leading to savings in these tough times.

CURSE OF ONLINE EDUCATION THROUGH MOBILE

The current pandemic has had an enormous impact on global education as more than 1.3 billion learners are unable to go to school now (As per article by UNESCO, dated 29th April 2020). The unplanned and rapid move to online learning – with no training, insufficient bandwidth, and little preparation – will result in a poor user experience that is unconducive to sustained growth, others believe that a new hybrid model of education will emerge, with significant benefits.

Social Media Statistics

India Social Media Statistics 2021The Indian population has taken to social media like duck to water. Indians, on average, spend about **2.25 hours** on social media daily. In India, the number of **social media users** have been growing in 2021 at a steady rate of **448 million** due to deep penetration of internet connectivity among people. The number of Internet users in **India** has grown to a whopping **624 million,** which is roughly 45% of the total population of India. Now, social media has become one of the most essential parts of daily internet usage in India.

Source : https://www.theglobalstatistics.com/india-social-media-statistics/

Table No. 1

Social Media Statistics

Total population in India	1.39 billion
Active social media users in India	0.448 billion
Number of Internet users in India	0.624 billion
Social Media Users via Mobiles in India	0.444 billion
Number of Mobile Internet users in India	0.572 billion
Annual growth in active social media users	31.2%
Annual growth of Internet users	8.2%

Source : https://www.theglobalstatistics.com/india-social-media-statistics/

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Falling smartphone prices have driven the massive increase in the usage of mobile smartphones across India. The easy availability of super-fast internet at very low prices is another factor for a large-scale rise in the adoption of social media. The number of Mobile Internet users has reached 572 million out of which 444 million are social media users accessing through mobiles. The YouTube, Whatsapp usage is due to the increased prevalence of fast internet connectivity. They keep offering unique user experiences to their customers is one of the reasons that it has surged past all other competitors and established a unique niche.

Most Used Social Media Platforms in India 2021

Table No. 2
Social Media Platforms

SL.NO	PLATFORM	PERCENTAGE
1	Youtube	85.80%
2	Facebook	75.70%
3	Instagram	70.60%
4	Twitter	50.60%
5	LinkedIn	37.70%
6	Pinterest	34.30%
7	Reddit	22.10%

Source : https://www.theglobalstatistics.com/india-social-media-statistics/

In India, **YouTube** is the **most used social media platform** in **2021** with **85.80%** of the social media users enrolled. After the US, India is the second-biggest market for YouTube, both in terms of views and subscribers. Along with YouTube, there are many YouTubers who have also become big. 79% of the users in India have profiles on Facebook and that makes it the second most popular platform. Among the commercial entities, the political class as well as the masses in India, Facebook is most favored and will remain a dominant force for many years to come. Facebook has been used by many top brands to engage with their fans.Facebook platform faces stiff competition from Instagram which has 70.60% of social media users in India. A big percentage of Instagram's users are young people, especially teenagers. Facebook, the parent company which paid $1 billion to buy Instagram. It has grown into a source of income for creators and a great sales channel for businesses.A few other social media platforms that are popular in India are Twitter (50.6% penetration), LinkedIn (37.7% penetration), Pinterest (34.3% penetration) and Reddit (22.1% penetration).

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STUGGLES FACED BY STUDENTS

The adoption rate of online classes is 50-60% and that of classrooms is 80-90%. The biggest drawback is the huge loss of jobs and lives in the country's economy. Many poor students do not have access to laptop computers, and students are naive enough to believe that there will be no unequal education. Educational activities have been hampered to a greater extent, and we feel a greater degree of confusion, postponement, and delay in examinations, academic sessions, and the like. Poor internet connection was reported to be the biggest challenge for 57% of the students, while 31% struggled to focus and 12% had difficulty in getting their doubts cleared during online learning. 20% of students had problems accessing online learning platforms.

CRIMES DURING LOCKDOWN

The COVID-19 related disruption also led to a greater registration of cases overall (a 28% increase in 2020 compared to 2019) largely due to a 21-fold increase in cases related to disobedience to the order duly promulgated by a public servant and over four times in cases involving violations of other State local laws. The COVID-19 pandemic has impacted crime and illicit economies such as organised crime, terrorism, street crime, online crime, illegal markets and smuggling, human and wildlife trafficking, slavery, robberies and burglaries.

STUGGLES FACED BY TEACHERS IN ONLINE EDUCATION

Increased distractions: Being at home means having toys, games or anything that can be distracting at student reach. In online classes it is easier for students to be distracted. Noise and space are the main disadvantage.

Demotivation of students: video calls in which the teacher explains the lesson to a large number of kids or adolescents will make it difficult for all students to participate. This makes the children, at certain moments of the explanation, totally disconnected and not listening to the lesson at all.

Connectivity issues, both for the teachers and the students and lack of a dedicated study space at home were seen as some of the most common deterrents to online learning and retention. Sixty-seven per cent of the students opinioned they found it difficult to study due to Internet connectivity issues.

- Entered into a separate chatroom with their friends while the class is still on!
- Busy playing with a toy thinking their teachers won't notice in the camera.
- Constantly changing the screen background.
- Showing their house, their pets, their toys & sometimes flashing the cameras right on their parents without their knowledge.
- Scribbling on the screen, randomly walking out without taking permissions, or lying on the bed instead of sitting in an upright position.
- Or switching off the camera for fun.
- Not responding to set instructions.

STUGGLES FACED BY TEACHERS

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PARENTS

Better educated parents were more capable of supporting their children's education through direct assistance, having higher expectations, and providing more resources. Where uneducated are economically backward parents are unableto meet the expenses ofOnline education. They stuggled a lot on regard of their childrens education.

REMEDIES TO OVERCOME THE PROBLEMS

- Arranging the required devices and tools for learning.
- Setting up a designated area for their children to attend the classes without disturbance.
- Helping with homework and in case of very young children, helping them upload the completed tasks on tools/apps as mentioned by the school.
- Enforcing routine and structure so that they treat it as a normal school.
- Getting familiar with the childs e-learning tool and helping them navigate through too, so they also feel comfortable using it.

CONCLUSION

"I believe that the integration of information technology in education will be further accelerated and that online education will eventually become an integral component of school education, "says Wang Tao, Vice President of Ten cent Cloud and Vice President of Ten cent Education.Traditional offline learning and e-learning can go hand by hand."A survey conducted among 5,000 respondents, including parents, students and around 70 academicians from 30 major cities across the country, suggests that around 93% parents strongly believe that traditional methods of learning's like in-person interactions, writing and learning and practical learning are best suited for their children and that they were worried about the physical and mental well-being of their children. Hence the government, academicians should come together to create a better infrastructure for this to sustain."Online education is not a solution for the pandemic period it is just a remedy for the current education.

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REVIEW OF E-LEARNING INITIATIVES IN INDIA

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ABSTRACT

E-learning activities are important for the development of any country. In modern era everybody thinks about growth and Educational development. A learning system based on formalised teaching but with the help of electronic resources is known as E-learning. While teaching can be based in or out of the classrooms, the use of computers and the Internet forms the major component of E-learning. A learning hub is a technology rich learning environment with both physical and virtual components that provide formal and informal opportunities for learners to come together with peers, teachers, and other experts in their field. E-learning is learning, utilizing electronic technologies to access educational curriculum outside of a traditional classroom. The study observed the various e learning initiatives available in our country in a detailed way.

Key Words: E-learning, e-learning hub, formal e-learning, informal e-learning

INTRODUCTION

E-learning is the revolutionary concept in the present learning system in rural education. Learning methods are classified in two categories - traditional and focused method. The education methodology is updated with the help of technology. In the present education system information plays a vital role with the influence of e-learning. In traditional method assume that books, journals, magazine and other secondary based data form a main source of information [1].

The government of India gives more importance e-learning system in the rural areas to improve education empowerment. A plan is prepared by the government to connect all the villages by internet to improve education environment in rural areas. Educational institutions in rural areas such as schools, colleges and deemed universities are growing in their capacity. India shows fast development in technical education especially in rural areas. The economy of the country also depends on information technology [2]. The use of technology in education is highly positive but the caveat is to avoid falling through the looking glass. The true challenge for education is to freeze a model that captures quality and computer technology into an integrated communication system.

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The major focus of this initiative is to cater to the information needs of the people living in the villages. There are different people with different information needs. These portals provide a wide array of services starting from online domicile certificate, caste certificate to income certificate and other information. Among these related services one section is education or e Learning[3].

OBJECTIVES OF THE STUDY

The basic objective of this study is to understand the concept of e-learning and to examine the type of E-learning. It also summarizes several opinions regarding the comparison between traditional learning, classroom learning and e-learning.

I) To understand the educational needs in rural India.

ii) To understand how eLearning hub can be helpful to meet those needs in a better way than existing practice.

SOME INITIATIVES AT THE NATIONAL LEVEL:

University Grants Commission (UGC)India's leading regulatory body for higher education, withthe collaboration of the Ministry of Human Resources Development (MHRD) Under the Govt. of India, has made continuous efforts to implement e-learning initiatives even during the COVID-19 pandemic in India. Some of the essential steps to incorporate e-learning are: -

1."Vidya-Daan," a programme focused on the crowd sourcing of teachers' content, was planned to synergies the country's innovations by supplying teachers and students from the various Metro cities to the remote areas or smallest villages for efficient quality content for elearning that can be downloadable at anywhere, at no price and at any time.

2.Weekly Practice Program is CCT(Creative and Critical Thinking) to improve learner cognitive skills and create interest by relating learning to real-life circumstances. Teachers can also use these things to facilitate conversations and involve learners in self-learning adventures.

3. Government of India's iGot programme uses DIKSHA for COVID-19 training of physicians, nurses, ASHA staff, NCC, NSS, NYKS volunteers. Between April and June 2020, more than 17 lakh individual training sessions have been performed and well, certified.

4. PM eVidya declared under the Atma Nirbhar Bharat policy that DIKSHA is the 'one nation; one digital platform' for education in India. DIKSHA is being converted into a forum for rich and diverse curriculum, linked to the e-content requirements of teachers and learners for all states and UTs, accessible via digital devices, to ensure continuity of access and learning experience.

5. Online MOOC courses related to NIOS (classes 9 to 12 of open school) are uploaded to the SWAYAM portal; about 92 courses have begun and 1.5 crore learners are enrolled. Teachers and students can access all courses modules-text, videos, evaluation

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questions, etc. through SWAYAM. Various online software like Zoom, Google Meet, YouTube, etc. are used for online courses and teaching.

6. We can access e-Textbooks using the e-PG Pathshala digital platform and phone app (Android, iOS, Windows) for learners, mentors, teachers, and parents. Around 600 eBooks, which includes approx. 377 digital textbooks from class I to XII and 3,500 NCERT video and audio contents, is available in different languages (Hindi, English, Sanskrit, and Urdu) in the public domain.

7. Apart from the preventative measures to be taken by academic institutions to deal with the rising situation of COVID-19, UGC has undertaken all steps to ensure that all higher educational institutions maintain regular interaction with students and teachers by electronic communication and keep them completely updated so that there is no distress among students, teachers, and teachers.

S.No	State	Initiatives
1.	Andaman & Nicobar Island	Doordarshan Local Broadcast, Tele-Classes, Radio Classes, and Digital Learning contents Online.
2.	ANDHRA PRADESH	T.V & Radio Lessons, SCERT & ICT Training Abhyasa APP for students and teachers, Primary school students through various programs on T.V, and for doubts Toll-free centre, Facebook live training program, etc.
3.	ARUNACHAL PRADESH	Radio School, Online Classes Programme on TV, Live Classes from EDUSAT, etc.
4.	ASSAM	Gyan Brikshya, Biswa Vidya, Tele Classes through Doordarshan, Career Guidance Portal, etc.
5.	BIHAR	Unnayan Bihar, Vidyavahini Bihar App, Mera DoordarshanMera Vidyalaya, Digital Education Portal, Bihar Easy School Tracking (BEST), etc.
6.	CHANDIGARH	Project Phoenix, Initiative by Khan Academy, under STCS the Online Teaching and learning for (OoSC), Online Evaluation, Kishore Manch, etc.
7.	CHHATTISGARH	PadhaiTunharDuvaar (PTD), DIKSHA, DiGiDuniya (ICT at Schools), etc.
8.	Daman and Diu &Dadra and Nagar Haveli	Various Survey, E-portal Adhyayan, Learning through Workbook, E-Notes, Vande Gujarat, etc.
9.	DELHI	"Parenting in the time of Corona", Digital Entrepreneur ship Mindset class,Online Capacity Building Programme (OCBP), Online Maths classes, etc.

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S.No	State	Initiatives
10.	GOA	E-content and Repository, "Effective Planning for Achievement of Learning Outcomes", Online Training Programs for Special Educators, etc.
11.	GUJARAT	Command and Control Centre (CCC), School Monitoring App, Gyankunj 2.0, Samarth 2.0, Facebook Workplace & Workchat, Vanchan Abhiyan, Career Counselling Portal, Science of Learning Portal, 'Parivar no maalo-salamatanehum-faalo' program, etc.
12.	HARYANA	Ghar Se Padhao WhatsApp Campaign, E-Mega PTM, Various Digital Learning Links, EDUSAT Broadcast on Television, etc.
13.	HIMACHAL PRADESH	Har GharPathshala Campaign, Online program of Education (MeraGhar Meri Pathshala) for CWSNS, "Karona, ThodiMasti, ThodiPadhai", Sampark Didi App, Swayamsidham, Sameeksha - Shiksha Saathi Mobile Application, e- Samwad, etc.
14.	JHARKHAND	"HamaraDoorDarshanHamara Vidyalaya", DigiSATH, Mohalla schools, etc.
15.	KARNATAKA	MAKKALAVANI, PARIKSHAVANI, ETB (Energized Textbooks), etc.
16.	KERALA	AvadhikalaSanthoshangal (Happy Vacation Times), AksharaVriksham (Tree of Letters), SAMAGRA Resource Portal, "First Bell", DIKSHA initiative, Hitech lab scheme, etc.
17.	LADAKH	"Department of School Education UT Ladakh", "DIKSHA", etc.
18.	LAKSHADWEEP	KITE - VICTERS Educational channel
19.	MADHYA PRADESH	Digital Learning Enhancement Program (DigiLEP), Online Lectures/ Broadcast through TV/VC, Top Parent App, CM RISE Digital Teacher Training, Gyan Pitara, etc.
20.	MAHARASHTRA	DIKSHA Abhyasmala campaign, BolkiBalbharti Audiobook, Bookyboo, mahacareermitraapp, etc.
21.	MANIPUR	Lairik app, "BOSEM eBook", etc.

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S.No	State	Initiatives
22.	MEGHALAYA	E-Learning Portal, Free Online Course for Teachers, e-scholar portal, etc.
23.	MIZORAM	Online Edu-Challenge 2020, Tutorial Class on TV, DIKSHA Mizoram, etc
24.	NAGALAND	Pre-Telecast Preparations, 'DoSE Nagaland', 'School Education, Nagaland', IEC materials, etc
25.	ODISHA	Odisha Shiksha Sanjog, Doordarshan, Odia, DIKSHA Portal, Madhu App, E-Vidyalaya App, Odisha Education Resource Portal, etc
26.	PUDUCHERRY	VetriNichayam, DTH TV Channel, Conduct of Online Classes, etc
27.	PUNJAB	"Edusat Punjab", DTH channel Swayam Prabha, Mobile Application & System Software (named iscuela learn), ICT Computer Labs and Smart Classrooms, etc.
28.	RAJASTHAN	Project SMILE, Shikshadarshan, Shikshavani, Hawamahal, Kala Utsav, DIKSHA – RISE, Shaladarpan, Shala Samvad, etc
29.	SIKKIM	SIKKIM EDUTECH APP, SAMVAAD TV, Facebookprograms, etc
30.	TAMIL NADU	TN-DIKSHA, Tamil Nadu Teachers Platform (TNTP), KalviTholaikatchi, TNSCERT YouTube channel, Student Mental Wellbeing in Partnership with UNICEF, Tamil Nadu VagupparaiNokkin, etc
31.	TELANGANA	Telangana Repository of Open Educational Resources (TROER), DIKSHA- TELANGANA,' English Language Proficiency', SIET, etc
32.	TRIPURA	State Repository of Open Educational Resources (SROER), "EmpowerU Shiksha Darpan", etc.
33.	UTTAR PRADESH	Prernaki e-Pathshala, UP SCERT, DIKSHA, etc.
34.	UTTARAKHAND	Sampark Didi Mobile App, Gyaandeep Programme, State Education portal (e-portal), etc.
35.	WEST BENGAL	BanglarShiksha Online, E-learning Portal, TV Channel like Zee 24 Ghanta &ABP Ananda, etc.

Table 1: Initiatives by State/UT regarding e-learning

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OPPORTUNITIES/POSITIVES EFFECTS:

New threats and new patterns have emerged as a consequence of the outbreak of Covid-19 in the higher education system, including teaching-learning, teaching methods, assessment & evaluation, and management. The Indian system of education has been allowed to transform from the conventional system to the new age. The following aspects may be added to consider the positive impacts.

1. Blended Learning: COVID-19 has increased the adoption of digital education technology. Higher education institutions have moved towards a blended model of education. It motivated both teachers and students to become more tech-savvy. New ways of implementing and measuring learning have opened up tremendous opportunities for significant improvement in the field of curriculum development and pedagogy.

2. Learning Management System: Use of teach management systems by schools and universities became a great demand. It opened up a great opportunity for various industries for developing and improving e-learning systems for use in academic institutions (Misra,2020). Online course and service providers like YouTube, Unacademy, Eduncle.com., India Education, Aglasem.com, Byjus, Virtual classrooms, etc. got increasing demands in the current market.

3. Flexible Schedule: Students and teacher can schedule the classes on Google Meet, Zoom, YouTube, etc. according to free time available to them which make comfortable conditions for both learner and teacher. During lockdown, teachers have to perform various tasks and training so through e-learning software they were easily doing time management. Students and teachers can agree flexibly on the specific teaching times and then meet online. This not only saves precious time that one can better invest in learning, but also money, which can be much better spend on other things than commuting

4. Improvement of Resources: There is a big opportunity for higher learning institutions to deals and begin with refining the standard of instruction and supporting materials used in learning and teaching method. This will equip the institution to incorporate a blended learning model in the sense of future which will add progress and accountability to the training process. This lockdown has given enough opportunity and time for the development of e-content.

CHALLENGES OF DIGITAL EDUCATION:

The education sector has suffered a great deal from the outbreak of COVID-19. Adopting e learning technology without careful planning will cost a lot of money, e-learning products that are not desirable and lead to problems. It has had many negative impacts on education, some of which are as follows:

1. Students: Students from Ladakh, Lakshadweep, Northeast states and Bihar, etc. are neither having android and

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smartphones, very fewComputers/Laptops due to various financial problems or constraints (MHRD,2020). Students with disabilities are lacking behind in online classes. Learners belonging to science and medical streams are not able to practice in labs and performing experiments as they do in offline classes. They are facing various health-related issues and feel stress as students study for long hours on smartphones/computers for online classes. Due to inconsistency an irregular schedule is harming the physical well-being of students andgoing for long hours of sleep.

2. Educational Institutions: From an infrastructural point of view, researchers have revealed that all the higher education institutions, schools, and colleges, are not ready or willing to perform online technology-based education and evaluation. All teachers from higher educational institutions are not trained or certified to teach online methods and software. Some educators are not ready for the immediate adaptation of the internet form of teaching-learning. The online teaching of a non-qualified teacher cannot reach expectations and learning goals for students (Bhowmik,2020).

3. Parents: Due to lockdown people working in the informal sector lost their job and no source of income leads to non-payment of fees. There are also other issues for parents in addition to payments for programs that the schools and universities are not prepared to offer. Who's going to pay for the data? Is there enough space and peace at home for students to focus on? How do you teach children at home to follow digital self-restraint? There are huge obstacles for working parents and disadvantaged people in the slum areas and rural areas.

4. Government: Lack of implementation of standard policies Like DIKSHA as the initiative fails to achieve its target goal. The government was not able to provide adequate digital infrastructure; i.e. was not able to reduce Digital Divide in urban-rural areas. Lack of clarity in the guidelines of government as people were not able to understand and follow up properly. Due to lockdown people working in the informal education sector lost their jobs and the government fails to solve their issues and the government was not able to solve the issue of fees between parents and educational institutions.

5. Miscellaneous: The connection of electricity is again an important challenge for both teachers and students of the rural area. Inadequate Internet Penetration according to the report of TRAL in India the internet penetration is 68.6 crores (49%) active users of internet in January 2020 with 138.00 crores Population in 2020 which is far less as compared to developed countries. 64.85% of Urban Area internet penetration with 48.30 crores population in urban area. 20.26 % from rural area internet penetration with 89.70 crores population in the rural area. Slow internet speed as a result students and teachers cannot attend all the classes online and there is a lack of Social Cohesion.

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SUGGESTIONS

1. To ensure the availability of digital infrastructure in rural areas to bridge the digital divide in rural and urban areas.
2. To use interactive Voice Response (IVR), SMS, and Radio to help students with no internet access in areas that are lacking behind in core infrastructure of connectivity.
3. Public-private partnership in Indian educational institutionsfor efficient education and learning system in terms of excellence and quality improvement.
4. As looking towards rising cases of COVID-19 in India there should regular cleaning and sanitization of schools, colleges, universities, premises, offices, and surrounding areas near the educational institutions.
5. The government of India with the collaboration of state governments must implement the policy measures related to e-learning at the ground level and ensure proper implementation and monitoring.
6. Parents should also focus on their children and be a teacher in the house so that students attend all online classes as scheduled by their respective teachers. Parents should also take part in E-PTM

CONCLUSION

This pandemic crisis has impacted immensely the education sector of India. While many challenges have emerged, new opportunities have also evolved. To safeguard education from the drastic effects of the pandemic situation, it is extremely important to revisit the future of learning and the change that could be done by equal access to quality education. India is not sufficiently prepared to provide education get to all regions of the country via digital channels. This is the students who are not fortunate, like the rest, will suffer from the choice of digital channels. But various universities and schools with the help of the Government of India are still trying to get to grips with various solutions to solve these issues and dilemmas. It's only through digital technology or e-learning that quality learning can be made available to everyone without being validated in actual classroom space.The lack of capability, technology infrastructure, and financial assets are major limitations in the implementation of e-learning in India.

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ONLINE LEARNING: CHALLENGES FACED BY RURAL COMMUNITIES

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ABSTRACT

Educational institutes across India have been closed since mid-March 2020 due to the outbreak of the COVID-19 pandemic. Schools and colleges in rural, remote areas of India are experiencing unprecedented challenges due to the closure of institutions. Against this backdrop, the present paper explored the challenges of online learning in rural areas for all stakeholders. This qualitative investigation was conducted on two students, two parents, and two teachers in rural areas. The uniqueness of the study is that it analyzed the challenges of online learning from the perspective of students, teachers, and parents. It is found from the study that online teaching-learning is challenging due to multiple factors such as lack of technical gadgets, poor network connectivity, and electricity problems. Lack of previous experience in online teaching is a major shortcoming for teachers. Parental literacy and student interest are other hindrances. Stress has been experienced by parents, students, and teachers due to the transition from traditional to online learning.

Keywords: COVID-19. Online Learning, Teaching, Rural Areas, Challenges

INTRODUCTION

The global spread of the COVID-19 pandemic has affected almost all nations of the world and has triggered an array of public health responses. The pandemic forced the closure of all kinds of organizations across the world. A closure of all sorts of educational institutions was a significant physical distancing measure adopted by the government of different countries to curb the spread of this contagious disease. Distance education, educational applications, and platforms can be used by schools and teachers to be in touch with students and curb the interruption of education[1]. Online education was included in the earliest decade of this century in the Indian education system as a method of distance education. This method of learning requires access to digital devices along with Internet connectivity. Video conferencing, PDFs, educational videos, and audio clipping are the tools, which are used in this method. Various apps like Zoom, Google Meet, Jio Meet, etc. are used for video conferencing. WhatsApp and Telegram are used for sharing study materials with the students.

During the lockdown, all class promotion examinations in schools of Odisha were suspended and students were promoted to higher class based on their term marks. The new session also started in April

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2020 to avoid academic delay. The School and Mass Education Department of the Government of Odisha adopted an online mode of instruction to resume the teaching-learning process. This instruction became a puff to rural students as they are habituated with a conventional classroom setup, where a teacher is physically present to guide students and monitor their learning directly. Online learning is new to students in rural areas.

Problem

With the decision of the government to resume classes to engage students, suddenly traditional education changed to an online mode of instruction. This alteration from conventional to digital changed the educational system in ways and the effects are yet to be determined. Teachers and students are required to find ways to connect and face the challenges of change from familiar to a new way of teaching-learning. Whether it's distance or virtual learning, teachers are challenged to reach virtually all of their students. Before the pandemic, online learning was there but all teachers are not familiar with the technology. Being restricted at home, challenged to quickly learn new technologies, many teachers experienced the single most distressing episode of the current age. The Students in social isolation and seclusion had to develop new skills desirable for e-learning. Online education is also likely to broaden the learning gap between children from lower-income and higher-income families. Children from below poverty line households live in conditions that are not conducive to online learning. The biggest hurdles to moving to online education in India have been insufficient digital gadgets for students and a lack of internet connection at home owing to poverty. Children from lower-income households are struggling to complete online homework because of the in conducive atmosphere at home. Recently news came that a father committed Suicide, as he could not provide smart phones to his children for study. In another place, a family that had to sell their cow, the only source of income for the family, to buy a smart phone, became a hot topic. Upset about not having a smart phone to use for online classes, a 17-year-old girl studying in class from Punjab committed suicide. Away from school and friends students find online classes boring. The sudden interruptions to education owing to the COVID-19 necessitated the study and document the major changes in teaching practices and teachers' responsibilities.

Rationale

To translate the power of IT into an extended learning opportunity for all is the ethos of online learning. The Government of India has launched the National Mission on Education through ICT (NMEICT) to democratise the opportunity of online learning. To promote digital education, various initiatives have been taken such as SWAYAM, SWAYAM Prabha, ShodhGanga INFLIBNET, National Digital Library, and National Academic Depository by the Ministry of Human Resources Development. Besides these platforms, the MHRD has developed the Diksha App and channels and numerous initiatives for the

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development of online learning in India. As there were no other alternatives, both the central as well as state governments ordered the online learning method during lockdown to resume the teaching-learning process.

The study is based on this fundamental idea, which views that the people who face the challenge can come out with an effective plan to solve their problems. To this end, the participants in this study were rural students, parents, and teachers who were facing difficulty with online teaching and learning. To the researchers' knowledge, no such studies have taken place to investigate the challenges of online learning in rural areas following the COVID-19 school closure. This study investigates the impact of online learning due to COVID-19 induced school closure on teachers, students, and parents who belong to rural areas of the Dhenkanal district in Odisha.

Thus, the following **research questions** were framed:

What changes in work did the teacher experience, and what are the challenges he/she faces to provide online instruction to the students?

What are the challenges students face for and during online instruction?

How did the parents perceive the online teaching experience and what are the challenges?

The research questions addressed important research gaps in this field by involving major stakeholders such as students, teachers, and parents.

Objectives

The objective of this study was to illustrate the experiences of school teachers, students, and parents adopting online instruction during the COVID-19 lockdown.

The study intends to understand the challenges faced by teachers, students, and parents to adopt the online teaching- learning process in the context of the closure of schools due to COVID-19.

REVIEW OF LITERATURE

The pandemic in various ways affected the lives of people in terms of occupation, education, communications, financial resources, and health. For the well-being of society, governments throughout the world closed the educational institutions. This unexpected and exceptional interruption in social life and the educational system altered the work of many teachers abruptly, and in several aspects. A study exploring the critical challenges and factors influencing the e-learning system usage during the COVID19 pandemic found that technical factors were one of the significant factors that influenced the practice of e-learning systems.

A study in South Africa and found that many rural learners are deprived of the online teaching-learning process, owing to a lack of digital gadgets to connect to the Internet, the learning management system, and software. Using both qualitative and quantitative data, the professional life of a secondary school teacher was examined who had continued teaching his students in rural Alaska (United States) by online mode during COVID-19. It was found from the study that the teacher experienced extra workload and viewed that the online education should be inclusive and carefully designed.

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In developing countries, the e-learning process might be hindered by technological knowledge, education and literacy background, and socio-economic problems of the people. In Southeast Asia, a large section of the population neither possess electronic devices nor have access to the Internet. Even people with access to the internet, experience inconvenience because of several factors including the inconsistency of internet speeds in different regions. The urban population often enjoys significantly faster internet compared to those living in less developed areas. Internet connectivity and access to digital gadgets remain a persistent equity question, particularly in rural areas.

A study conducted in Nepal shows that many students got disturbed during their online class because of electricity problems (63.2%), and because of Internet problems (63.6%). Similarly, about half of the teachers got troubled by their

online teaching because of the power problems (42.3%), and because of Internet problems (48.1%) [20]. News that children are sitting on the trees, near any high places or river banks for attending classes is seen through electronic media and social media platforms in Odisha.

METHODOLOGY

Design

This descriptive and explanatory qualitative study focuses on the perception of changes in the instructional practices from traditional classroom practices to online mode by students, teachers, and parents. Although the qualitative study has limits, the strong point of this method was that it considers the perspective of all active participants, that is, students, teachers, and parents. The study explored the teacher's voice in-depth, student's attitudes and views, and parent's problems using varied methods of data collection.

Data was collected by direct and participant observations in their workspace, semi-structured interviews, open-ended questions, and telephonic conversation. The researchers had a thorough knowledge of the teacher's workload and conditions of working. They were aware of rural parents' and students' problems regarding technology know-how before the change to online education. Therefore, they maintained vigilance throughout the study to explore the impact of school closure and the shift to online instruction as perceived by the respondent teachers, students, and parents.

Data Collection

Descriptive data about the teacher's experiences, student's perceptions, and parent's attitudes, and challenges faced by all the participants while adopting online learning were collected over two weeks from multiple sources. The semi- structured interview questions that included both open-ended and closed questions and daily discussion over the topic in social media were conducted and recorded. Interviews and discussions focused on the overall respondent observation of the effectiveness of an online learning model, the problems and challenges of online learning, and

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suggestions from all the participants about its implementation in the future as an alternative model. Open-ended questions were designed with a focus on content, clarity, and sequencing. All the discussions were held through a personal interview maintaining physical distance, via a telephonic conversation, and WhatsApp chats. Pseudo names have been used to keep the identity of participants secret.

Questions for the teachers were:

What are the challenges you face because of school closure and transition from classroom learning to online learning? How did you engage your students and what is your perception of student participation?

Questions for the students were:

What is your experience with online learning? Do you find online learning interesting? Do you face any problems with online learning?

Questions for the parents were:

What are the challenges you face because of school closure and transition from classroom learning to online learning? How did you perceive authority or the role of teachers to support you in online education?

RESULTS

Responding to the first question Teacher X said, "This is a serious challenge to take online classes owing to no or limited network. Sometimes I have to go outside of my home for network issues. One day while I was busy taking a class on the roof of my house, a group of monkeys suddenly jumped from my neighbour's roof to mine for which I had to stop class and escape. Online learning is suitable in urban places where there is no network problem. All students are not able to benefit from online learning, as they are used to traditional learning. The students in my school need constant support and guidance from teachers, as their parents are unable to guide them. I feel sorry for them and feel stressed and guilty, as students are not fairly treated under this system."

Teacher Y also expressed her concern regarding the problems of online learning. "I bought a smart phone after the direction from authority to take online classes. It took me days to learn the internet application. As per the order of authority, we teachers formed a WhatsApp group with students. But we could add only a few students, as they did not have smart phones. All the teachers of my school went door to door to distribute the course books and other study materials. Most of the people are daily labourers, auto-rickshaw drivers, and vegetable vendors and engaged in other occupations. They cannot afford to buy a smart phone, and Internet connectivity and data usage is another issue."

Both the teachers expressed their concern about student engagement and participation. More or less their voice is the same about student participation. "Although in one class there are about forty students, only eight to ten students ask

their doubts and submit assignments. Some do not have a device, some suffer from poor connectivity and some do not have guardians to guide them. We have informed the students and their guardians about the Diksha channel and asked the students to watch the channel as per the programme. We could not visit their homes frequently due to fear of contamination."

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One guardian (male) said, "I am an auto rickshaw driver. I have a mobile phone but that remains with me for the whole day, as people call me to reserve drives to the hospital or station. Due to the lockdown, I have very small or no income. I am not investing a single rupee in the education of my children. The government is providing everything, like dresses, books, mid-day meals, and a cycle free for the education of my child. I cannot buy a new phone though I wish to provide one to my child."

"I am a tailor and my husband has a roadside tiny tea-biscuit shop. We have two children, one studying in college and another in high school. We have a smartphone. The elder child attends online classes with this phone. We cannot provide two phones. The school-going child faces problems attending online classes, as the older child seldom gives the phone to him. The school-going child views the audio-video clip sent by the teachers in the WhatsApp group shared by his teachers."

Both the students and guardians expressed satisfaction over the role of teachers during the lockdown. Replying to the second question one guardian said, "Teachers of the school visited our house to distribute the books for the new session. They asked me to buy a mobile phone or a computer with an internet facility. They also informed us about the Diksha channel on television. Our child is also unable to fully attend the channel during class because of the electricity power cut. Teachers respond when my child calls for any doubt clarification. But I am sure, this is not a solution for all students."

To know the response of students who possess smartphones and computers with network connections, the investigators recorded the reaction of two students about their experience with online learning. Both students retorted that they have smartphones but the network is not always available. Though it is very interesting for them to learn online, the frequent interruptions create disappointment. "Electricity power problems always persist in our area. Sometimes I also lose interest in studying alone. In school, it is very interesting to study with friends. Doubt clearing is very easy also, as we can ask friends and teachers whenever there is difficulty in understanding the concepts."

DISCUSSION

This study was carried out in the Dhenkanal district of Odisha in 2020 and pointed out the challenges of online education in rural areas. In most of the schools, there are no facilities for online classes till now, and teachers are still getting training on how to conduct such classes. In short, the benefits of conducting online classes are not that great in rural and remote areas. Even though telecommunication and the internet are available in grass root areas of India, not every place has a strong network and Internet services. So, students do not get chances to attend classes or take examinations. When the lockdown started, all the educational institutions got closed all of a sudden. Students become carefree and fickle, as there were no regular classes or tuitions for them. Lack of teacher-student, student-student interaction, and blackboard method of teaching and learning affected the quality of education given to the students.

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Doubt-clearance becomes very difficult in the online method.

A chaotic environment at home, family fights and, lack of meals also affect the mental state of the students and prevent them from studying. Many people in rural areas live below the poverty lines. So, when having proper meals is difficult for these people, the families can't afford such expensive tools for the education of their children. As most of the parents have lack education, they face immense difficulties in guiding their children. They feel stressed and depressed, as they could not provide the basic necessity for online education for their children. The challenges of online education found by this study confirms the result of earlier such studies conducted by Almaiah (2020), Dube (2020), Babu and Reddy (2015), McLaren (2003) Azano and Stewart (2015), and Subedi et al. (2020)

After the students, if anyone is getting affected worst, they are the teachers of rural schools. In rural schools, the teachers and students are habituated with the traditional teaching-learning method. This study found that teachers did not have proper knowledge about online classes and had not been given any training. As the teachers are middle-aged or old, they usually do not know how to conduct online classes via smartphones or laptops. They are seen taking help from their children or grandchildren. Due to online classes, some teachers faced lower self-esteem, productivity in teaching, and their motivation level decreased. Besides teaching, the teachers were also engaged in various works like distributing books, re-admission of the students and some had to take care of the quarantine centres situated in their schools. Teachers reported being stressed due to all these challenges. The findings of the present study come in line with earlier studies conducted by Baired (2020), Fagell (2020), and Kaden (2020).

CONCLUSION & RECOMMENDATIONS

Before the onset of the COVID-19 outbreak and lockdown, the education system in rural India was not qualitative even after the implementation of numerous welfare schemes. Through the research, it emerged that despite online learning seems to be one of the possible ways of learning in the COVID-19 period but the application of technology is troubled by several factors. Online education for school children is challenging owing to multiple problems like unavailability of the network, lack of resources to buy the necessary gadget and data, power problem, inadequate knowledge, not conducive home climate, and lack of direct contact between student and teacher. Although the study has limitations like small sample size, it has approached the issue intensively by including all the stakeholders.

The findings of the study are significant for the implementation of online education. It is suggested here that proper training should be provided to both the students and teachers. Caring and training for teachers are some conditions of recovery from the catastrophic situation and sustainable education practice of the future. Smartphones and other necessary extensions

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should be provided to economically poor students. If possible, schools and other educational institutions should be reopened with adherence to social distancing and proper precautions to prevent the individuals from getting affected.

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AN IMPACT OF E- LEARNING IN RURAL INDIA

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ABSTRACT

Education is very important in any individual's life which leads to immense contribution to the development of a nation. In India, from last few years lot of schools and colleges are adopting new way of teachings in their classroom like they are using projector to explain and implementing e-learning tools for manage classroom activity like assignment submission , attendance record , notes , quiz etc. Technology is touching every aspect of society and changing it dramatically. But the important and indispensable part of the society that has been tapped by new innovations and discoveries and that is education with the concept of E-learning. Like all other areas, the urban are influenced to a greater extent than rural one. So much more could have been done to bring the revolution in learning process in rural areas of India. E-learning is learning, utilizing electronic technologies to access educational curriculum outside of a traditional classroom.

Keywords: Digital Education, Pedagogy, Problem, Solution

INTRODUCTION

India is a developing country and one of the largest education systems in the world. Right to Education is the primary right of every citizen of India, whether a child resides in a high profile society or in a far away not so developed secluded village. According to the Article 45 of Indian Constitution, the basic elementary education must be provided to all the children up to the age of fourteen years. Even after 68 years of independence some States in India are still struggling to achieve Universal enrolment, retention and quality education.

The COVID-19 pandemic has provided us with an opportunity to pave the way for introducing digital learning. E-learning tools have played a crucial role during this pandemic to facilitate student learning during the closure of universities and schools. The development of Smart phones, Artificial Intelligence (AI), Machine Learning (ML) and user friendly Applications are making everyone's life easy. In traditional way of teaching, educators and students used to interact or discuss in front of a blackboard without any visual presentation of any topic in class. But due to the poor economic condition, many rural areas are not capable of affording the modern innovative education technologies developed by computer systems.

DIGITAL EDUCATION

Digital education is the innovative incorporation of modern technology and digital tools to assist the progress of teaching

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and learning. It is also known as Technology Enhanced Learning (TEL), digital learning, or e-learning. The concept of digital learning is not new and has existed in various forms for many years now, but when the COVID-19 pandemic suspended face-to-face teaching its significance increased manifold. Most educational institutions are adopting digital education as a solution while traditional classroom setup takes a back seat for some time due to the currently prevailing pandemic.

The use of digital education tools such as Google Classroom, Zoom, virtual learning environment and social media and various group forums like Telegram, Messenger, WhatsApp and WeChat are explored and tried for teaching and learning for the first time ever to continue education. This can be explored further even after face to-face teaching resumes, and these platforms can provide additional resources and coaching to the learners.

PEDAGOGY IN E LEARNING

E-learning is a paradigm shift in the way educators of deliver quality education through various online platforms. The online learning, distance and continuing education have become a panacea for this global pandemic, despite the challenges posed to both educators and the learners. Transitioning from traditional face-to-face learning to online learning can be an entirely different experience for the learners and the educators. There is no one size fits all pedagogy for online learning. There are a variety of subjects with varying needs. Different subjects and age groups require different approaches to online learning. The use of suitable and relevant pedagogy for online education may depend on the expertise and exposure to information and communications technology (ICT) for both educators and the learners. Some of the online platforms used so far include unified communication and collaboration platforms such as Microsoft Teams, Google Classroom, Canvas and Blackboard, which allow the teachers to create educational courses, training and skill development programmes. They include options of workplace chat, video meeting and file storage that keep classes organized and easy to work. They usually support the sharing of a variety of content like Word, PDF, Excel file, audio, videos, etc.

The tracking of student's learning by using quizzes and the rubric-based assessment of submitted assignments. The flipped classroom is a simple strategy for providing learning resources such as articles, pre-recorded videos and YouTube links before the class. The online classroom time is then used to understanding through discussion with faculty and peers. This is a very effective way of encouraging skills such as problem-solving, critical thinking and self-directed learning. The virtual classroom platforms like videoconferencing (Google Hangouts Meet, Zoom, Slack, Cisco, WebEx) and customizable cloud-based learning management platforms such as Elias, Moodle, BigBlueButton and Skype are increasingly being used.

CHALLENGES IN TEACHING AND LEARNING

In the case of online learning in India, majority of the learners are from rural villages where parents are mostly illiterate farmers. Students are engaged in assisting parents in

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farm activities such as agriculture, tending to cattle and household chores or any other work. The economically backward children are unable to afford online learning devices like Smart phones or TV at home in addition to poor Internet connectivity.

Students with special needs having learning difficulties, such as hearing impairment, visual impairment and mobility disabilities, require additional training with support and guidance. Many caregivers and parents at home are not able to cater to such needs, hindering the learning of this group of learners. As all students' assignments and examinations are carried out from home, it is challenging for educators to find the authenticity of the work and the actual learning taking place.

Because of this novel infection, online education it becoming difficult to work on live projects, so employability would be affected.

Student assessments are carried out online, with a lot of trial and error, uncertainty and confusion among the teachers, students and parents. The approach adopted to conduct online examination varies as per the convenience and expertise among the educators and the compatibility of the learners.

The level of academic performance of the students is likely to drop for the classes held for both year-end examination and internal examination due to reduced contact hour for learners and lack of consultation with teachers when facing difficulties in learning/understanding.

The lockdown of schools and colleges has not only affected internal assessments and examinations for the main public qualifications.

Lack of parental guidance, especially for young learners, is another challenge, as both parents are working. There are practical issues around physical workspaces conducive to different ways of learning. Many of these students have now taken online classes, spending additional time on virtual platforms, which have left children vulnerable to online exploitation. Increased and unstructured time spent on online learning has exposed children to potentially harmful and violent content as well as greater risk of cyber bullying.

Broadly identified challenges with e-learning are accessibility, affordability, flexibility, learning pedagogy, life-long learning and educational policy.

REMEDIES

E-learning is now the way to transform the education sector. It is showing a positive transformation of schools and colleges in rural areas are also adapting to technology day by day. When it comes to Online Education or E-Learning, the government provide fast internet, uninterrupted power supply and electronic devices for rural population. And the steps taken to National Optical Fibre Network and digital infrastructures and promote Vidya-daan for rural india.

CONCLUSION

Development of any society depends on its access to information and the same is applicable to rural India. The study highlighted the different challenges and to remove the barriers for the development of digital education in the country. E-learning interventions in the rural areas will undoubtedly pave way towards sustainable growth.

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E-LEARNING: CHALLENGES IN RURAL INDIA

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ABSTRACT:

Mobile phones, internet, tablets, IPads, their applications, social media even travelling, cooking, communication etc are part of our lives from the start till the end of the day. Technology is touching every aspect of society and changing it dramatically. But there is one very important and indispensable part of the society that has also been tapped by new innovations and discoveries and that is education with the concept of E learning. Like all other areas, in this case also urban areas are influenced to a greater extent than rural one. So much more could have been done to bring the revolution in learning process in rural areas of India. In this research paper development through E-learning in rural India is observed. If it planned properly then proper results will be affecting positively. In this research paper, we observed that E-learning is an effective tool for development of educational sector in India. E-learning is learning, utilizing electronic technologies to access educational curriculum outside of a traditional classroom. In most cases, it refers to a course, program or degree delivered completely online. The basic objective of this research paper is to understand concept of e-learning and to examine the type of e-learning. The research paper focused on classroom learning and e-learning in rural India.

Keywords: Education, educational development, e-learning, formal e-learning, informal e-learning.

INTRODUCTION:

India is a young country on the move. More than half of the country‟s population is under 25 years of age and every year 10 million people join the workforce. India already has one of the largest education systems in the world. The country has 1.4 million schools, 35,500 colleges, and 600 universities. Right to Education is the primary right of every citizen of India, whether a child resides in a high profile society or in a far away not so developed secluded village.

According to the Article 45 of Indian Constitution the basic elementary education must be provided to all the children up to the age of fourteen years. Even after 68 years of independence some States in India are still struggling to achieve Universal enrolment, retention and quality education. There are more than one million rural schools among 6, 38,000 villages in India. Schools in rural areas are promoted to raise the level of education and literacy in rural India. The main aim of running these types of schools in India is to increase the rate of literacy in rural

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areas. More than 30 percent of India‟s population is illiterate and cannot read or write. Schools in rural areas are inadequate and often equivalent to being non-existent. Thus, government‟s initiative to set up schools in rural areas came into picture. India‟s education sector is being revolutionised by rapid increases in Internet penetration and the availability of low-cost mobile devices. Technology has the potential to multiply reach. E-learning is a combination of learning services and technologyto provide high values. Internet plays a vital role in e-learning. E- Learning is attaining significance in the world of internet. Due to the advantages of in internet, e-learning reached at anytime and anywhere. E-learning clearly has a role to play in resolving the problem. The sector is expected to grow rapidly at a CAGR of 17.4 percent between 2013 and 2018. To put things in perspective the market in India is predicted to grow more than twice as fast as the global average of 7.9 per cent.

Problems Faced in Rural Education in India

- Teachers of rural schools in villages and small towns receive low income so there is a possibility that teachers give less attention to children.
- Most of the schools do not have proper infrastructure. So they do not get most of the facilities such as computer education, sports education and extra-curricular activities.
- There are no proper transport facilities so children don‟t like to travel miles to come to school.
- There is no access to supplemental education. Providing quality education to a growing number of students means more teachers need to be trained to maintain adequate levels of personalised student teacher engagement.

Review of Literature

According to Deepali Pande, et al (2016) with respect to e learning, poor quality procurement practices (in all sectors but especially in the public sector) are a barrier to growth and adoption. So it is necessary to make a thorough evaluation when it comes to choose an e learning software for education in order to improve the knowledge of learners, the learning Outcomes, the performance outcomes, the business and policy impact and in order to value the money spent. Hardik Patel, et al (2014) Using E-Learning Tools you can tremendously improve learning process and earn learn in very easy hassles free environment. Another major benefit of the ELearning is that you can make learning always ON. ELearning is not restricted to any place and environment; you just need to connect with group or community, after you will receive all updates. Deep shikha Aggarwal (2009). The social implications of online learning center around one primary requirement that students need to feel a part of the class, regardless of where they are located physically or geographically. The missing of connection ‖ to the other students in the class and with the institution can impact the success of an online student. Bottom line: the Indian market is still young, but it will continue to adopt the concept of e-

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learning in order to meet its communication needs and seize business opportunities.

Objective of the Study

- To understand the concept of E learning to examine the type of E-learning.
- To study current state of e learning in rural India.

2. Concept of E- Learning:

E–learning is defined "as acquisition of knowledge and skill using electronic technologies such as computer and Internet based courseware and local and wide area networks." The term was introduced in 1995 when it was called "Internet based Training", then "Web-based Training" (to clarify that delivery could be on the Inter- or Intra-net), then "Online Learning" and finally e-learning, adopting the in vogue use of "e" during the .com boom.**Types of e- learning**

1. Synchronous training: means "at the same time," involves interaction of participants with an instructor via the Web in real time.

a. Virtual classroom: Virtual classroom duplicates the features of a real classroom online. Participants interact with each other and instructor‟s online, instant messaging, chat, audio and video conferencing etc.

2. Asynchronous training: which means "not at the same time," allows the participant to complete the WBT at his own pace, without live interaction with the instructor.

a. Embedded learning: Embedded learning is information that is accessible on a self-help basis, 24/7. It can be delivered to the place of work, or to mobile learners. Electronic performance support system (EPSS) is a type of embedded learning. The advantage is that embedded learning offers learners the information they need whenever they need it.

b. Courses: The clear advantage of a self-paced course is convenience. Participants can get the training they need at any time. This can include just in-time training where a participant gets exactly the training he or she needs to perform a task.

3. Discussion groups: A discussion group is a gathering of conversations that occur over time. They are also called message boards, bulletin boards and discussion forums. Discussion groups can be used to support a group of participants taking the same class or can be used to support participants performing related tasks. A discussion group is a very competent way to supply expert answers to a large group people. A single answer to a common question can help many.

4. Blended learning: Most companies prefer to use a mix of both synchronous and asynchronous e-learning methods according to their requirement.

Current state of E-learning in India:

Although the foundation of education is still reading, writing, and today‟s students need broader education. Contemporary classroom, hence, needs to deliver live instruction, video content delivery, student to- student interactions via video conferencing, remote test administration, up-to-date materials, self-learning etc. Digital India campaign is likely to benefit education by bringing many of these and other important elements together. Even as the previous government tried to bridge the

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digital divide, Modi‟s government masterstroke offers a lot of positivity for the Indian education market which is estimated to be worth USD

1.96 billion in 2021-22 against USD 247 million in 2014-15(reference .kpmg). With nearly half the population of India below the age of 25 and increasing penetration of Internet and mobile devices in this demography which is expected to reach 250 million soon, rivalling the US, India‟s potential as a huge market for e-learning is enormous. Indian corporate sector having held on tech world such as Intel, Qualcomm and Tata are also making moves in this direction. Intel recently launched „Digital Skills for India‟ initiative under which it introduced Digital Skills Training Application that is comprised of modules on Digital Literacy, Financial Inclusion, Healthcare and Cleanliness in five Indian languages. Qualcomm has launched Play „n‟ Learn program for school children ages 5-8. It is providing 3G tablets under the Qualcomm wireless Reach initiative. Similarly, Samsung recently started on a Smart Learning initiative to provide interactive study materials to students through television. Likewise, Tata, Reliance and BSNL are among the prominent Indian names that are going big on this sector. While Tata is expanding its school education solution, „Classedg‟, Reliance has picked up over 38.5 per cent stake in digital education company, Extra marks Education Private Limited, through its subsidiary, Infotel Broadband Services Limited. Government owned enterprise BSNL has tied up with Grey cell 18 MediaPrivate Limited, to launch its online education service „Topper Education‟. Other noteworthy names are byju‟s, unacademy, udemy etc providing online courses for relative studies in this segment include the likes of Data Wind, Merit nation, and Class teacher. Even some of the e- commerce players have expressed their willingness in this segment. Needless to say, if the e- learning/education market takes root in the country, it will definitely improve the education scenario which desperately needs a shakeup. Even the government is in strong supporter of e- learning and the Department of Electronics and Information Technology (Deity) has been actively developing tools and a technology to promote it, what we need is more devices and an ecosystem.

Digital India (DI) programme is a GoI initiative to electronically integrate the government departments and the people of India. This move aims at ensuring that government services are made available to citizens electronically. It also includes a massive plan to connect rural areas with high-speed internet networks. Digital India has three core components. These include: Digital infrastructure, Digital service delivery and Digital literacy. The project was officially launched on July 01, 2015 and is slated for completion by 2019. The scheme will be monitored and controlled by the Digital India Advisory group which will be chaired by the Ministry of Communications and IT. It will be an inter ministerial initiative where all ministries and departments shall offer their own services to

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the public Healthcare, Education, Judicial services etc.

Increasing internet footprint will also help to create the right ecosystem which can be easy achieved through Gi-Fi technology as it provide high speed data transfer, low power consumption, high security, low cost and High level of frequency re- use enabled. It can be used to meet communication needs of multiple customers within a small geographic region can be satisfied thus making it useful to rural India where still there are issues of power supply, private telecom company are reluctant to provide competitive services.

Challenges:

1. Lack of Infrastructure and hardware facilities which hamper reliability of e learning.
2. Lack of policies, strategies, schemes, monitoring and control that ensure cross-sectoral and multi stakeholder involvement.
3. Lack of awareness about E-learning material usage and services offered.
4. Lack of citizen (user) focus in G2C2G initiatives. i.e. services which listen and change as per people‟s expectations. Products with a focus would develop a sense of "ownership" in local rural governance.
5. Problem in finding willing skilled manpower to training illiterate rural areas of India.
6. No computer based courses/skills taught to students in primary schools to increase their knowledge about ICT importance in rural development Lack of skills in trainer or kiosk operators.
7. Community based participation (which fully understands and delivers the user needs) is not encouraged.
8. Content development is not relevant and participatory.
9. Services delivered to rural areas are not available using local language and this will affect their long term sustenance due to low interest in their usage.
10. Capabilities are not adequately transferred to end user. This prevents them from using the applications independently.

CONCLUSION

Development of any society depends on its access to information and the same is applicable to rural India too. E learning can work wonders in this direction and help the socially marginalized community to attain their entitlements. Launch of Digital India Programme is a welcome step in this direction. It is anticipated that with dedicated leadership, willpower and control and an integrated framework comprising of the government, technology industry and society, E-learning interventions in the rural areas will undoubtedly pave way towards sustainable growth.

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