## An Empirical study on impact of E-learning in India

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ABSTRACT: Education is the basic need of every human being. Each and every human being must take education so that he will be a better knowledge able person and it would shape him into a better person that society wants. As the days passed the Modern Education has taken a new shape with the integration of E-Learning along with Classroom lecturing. E-Learning has brought a new way of studying, where it increases the comfort and creativeness of education. E-learning works using internet, Internet has brought a huge revolutionary changes in each and every field which includes Education sector. Internet provides access to knowledge and also helps to deliver materials, handouts, related resources and lecturing which is termed as E-Learning. The change made in E-Learning resulted in bringing a concept 'Online Exam', which was used worldwide. The impact of E-Learning was mainly focused and got more light because of Covid-19 pandemic, even though E-Learning was there before pandemic but it got more exposure after the effects of Covid-19 pandemic. Due to pandemic a change was brought in Education sector which will play a major role in advanced development of Education sector and it might go into next level in future period. E-Learning has provided an opportunity to expand their education style by using Internet and other major resources available in E-Learning. This study summarizes the impact of E-Learning on Education and also provides exposure to minimize the drawbacks of E-Learning.

**Keywords** :- E-Learning, E-Exams, Electronic Education

#### I. INTRODUCTION:-

E-Learning is the method of educating people with the help of internet and through use of E-Learning solutions without any physical presence or face to face interaction in any Classroom. E-Learning uses software and hardware components to deliver the lecturing conducted by the lecturers. Education technology companies come forward to help in to deliver effective lecturing to the students who subscribe it. E-Learning is a method of

teaching which was brought as an alternative to the normal or traditional learning which is classroom learning. E-Learning just combines education and technology to create a powerful impact in education sector. E-Learning delivers the lecturing in faster mode than classroom lecturing because it uses tools like E-Learning apps, Visuals, Internet, etc. so that it would help in delivering the lecturing faster. In the recent trend, E-Learning has taken a wide spread throughout India in faster pace in order to improve education sector and give a boost to stopped education in India due to Covid-19. Until today the education system was more into classroom teachings with group of students and teachers with face to face interactions but it is taking change towards E-Learning. With this new approach in Education system, learners will be able to individual lecturing and also in mass. The scope of E-Learning provides lecturer to concentrate on individual student so that it will help in assessing of that student and also helps in developing that individual so that it will increase knowledge of that individual. E-Learning has a major advantage where it helps in time management and making concept in attractive way. The problem in E-Learning lies in Effective of understanding of that concept by students and also to deliver the concept in most understandable manner, the next major problem lies in using the technology in best possible manner to deliver the concepts. If the technology has not been effectively then E-Learning has no impact on students because of lack of understandability, this is where classroom lecturing takes upper hand over E-Learning. The problems faced in E-Learning must be minimized in order to deliver lecturing effectively.

Covid-19 pandemic hit very badly and stopped the whole education system from functioning, So the education sector had to come with a technique to cope this pandemic and the concept was E-Learning where every institution was asked to adopt to this technology so that the process of educating people doesn't stop. This pandemic provided a great opportunity to institution to adopt the new technology especially

in India, it played a major role and developed education system. In whole India this made everyone access knowledge from any place to their ease.

#### II. LITERATURE REVIEW:-

This literature review is based on views of:-

- a. Clark and Mayer, their research "E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning."
- b. Arkorful and Abaidoo, their research "The role of e-learning, advantages and disadvantages of its adoption in higher education."
- A. Clark and Mayer defined e-learning as "instructions delivered through digital devices with the intent of supporting learning."
- They said in their research papers that
- The design of e-learning courses should be based on a cognitive theory of how people learn.
- b. On scientifically valid research studies.
- B. Arkorful and Abaidoo defined e-learning as "using information and communication technologies to for enabling access to online teaching and learning resources."

### Their research says:-

- E-learning includes the use of digital tools and equipment for teaching and learning. It makes use of e-learning platforms/solutions to enable learners study anytime and anywhere of the world with stable or good network. It includes training, delivery of knowledge and feedback. It motivates students to interact with each other, exchange and respect different point of views. It eases communication and improves the relationships that sustain learning.

From their research we can know that elearning has wide advantage and also has its own problems which need to be fixed up. Though elearning has problems but it's a major thing that is needed for the betterment of education sector. They also say that e-learning is platform used for communication of needed concepts and delivering it in the most effective way and with lot of creativeness.

## III. PRE-COVID AND POST-COVID IN EDUCATION SECTOR:-

During pre-covid, only face to face classes used to happen in the classrooms. The lecturers and students meet at place known as 'School or college' building to deliver their lecturing. The students used to grasp the lecturing in schools or college. Due to pandemic, it has brought classrooms closed. It has change classroom into

virtual studio where it started providing lecturers, within short period of time with almost no preparation students and lecturers had to prepare for this new normal, where class used to happen in classroom it started to happen in Zoom, Google Meet, etc.

The main contribution given by Covid-19 pandemic was it involved parents in virtual classroom, where they could monitor their son/daughter's progress very easily. Parents could also monitor how teachers effectively delivered the lecturing. E-Learning was also present before Covid-19 impact but it was that widely recognized and wasn't that widely used by students, lecturers and universities.

Classroom lecturing meant sitting beside our friends, listening classes without any distances maintained, going on trip and picnics, Moving together hand on shoulders, playing, sharing food and everything. It can also be called as learning together and from each other.

After covid impact it has brought 1.5m distance between friends as per the regulations, along with compulsory wearing of masks and face shield, which is quite irritable but necessary for our survival. Use of sanitary drops and sanitization to classroom has become necessary. It has also brought the situation where without Covid-19 Negative report neither student for lecturer will be allowed to enter college primes or to deliver lecturing. If the above says about face to face classroom, Covid 19 also brought Virtual classroom/E-Learning into the picture where friends are separated and made sit in their respective homes and listen to the class using the E-Learning platform and through use of Internet.

## IV. ADVANTAGES AND DIS-ADVANTAGES OF E-LEARNING:-

#### Advantages:

- 1. Faster delivery of lecturing:- E-Learning's main advantage is it delivers lecturing more faster. It uses online platform to deliver concepts sooner.
- **2. Reduction in cost:-** E-Learning is cost effective compared to the normal classroom lecturing. The reduction in time consumption is the main reason in cost reduction.
- 3. Any time any lecturing: With the use of E-Learning class can be taken at any time. It also provides a way to take any number of classes and on any concept.
- **4. Personalized learning:-** E-Learning enables individual to select what he wants and what he wants to learn.

Dis-Advantages:-

- 1. Lack of Knowledge:- E-Learning has to be made using computers and internet, there must be knowledge knowing about it to operate it. If there is no knowledge how to use it then it is of
- **2. Connectivity issues:-** There must be stable connection between sender and receiver, if there is error in network connection then E-Learning doesn't even reach to the receiver.
- 3. Lacks in face to face contact:- There is less face to face interactions because E-Learning mostly happens in one way rather than classroom like two way communication.
- **4. Lack of effectiveness:-** E-Learning lacks effectiveness because it doesn't have restriction like there is in normal classrooms. The receiver might not be in concentration to receive the knowledge.

## V. IMPACT OF E-LEARNING IN EDUCATION SECTOR ON TEACHERS:-

The study has provided a detailed analysis on how E-Learning has impacted on teachers. E-Learning was brought like an overnight change due to Covid-19 even though E-Learning was present way before pandemic. It was a new concept where there was huge lack of knowledge about operating this software. The software wasn't that developed at initial stage. The main problem for teachers was to make students to understand the concepts that are supposed to be important. Students weren't able to understand and teachers weren't able to convince students. Teachers weren't able to make two way communication like it was done in normal classrooms, students used the situation and started attending E-Learning classes was just for sake of attendance and this a huge major blow in E-Learning. Teachers were not trained about these new normal classes, because of sudden changes in Education sector. Teachers had to finish their lecturing in soon but they couldn't do that because of lack of understandability by students. Teachers couldn't conduct exams or tests to know the effectiveness of E-Learning classes.

## VI. CENTRAL GOVERNMENT INITIATIVES ON E-LEARNING:-

E-Learning was already present before Covid-19 impact but that was not widely used throughout India. On 9<sup>th</sup> July 2017, a initiative was started by president of India which was known as "SWAYAM". It was brought to inspire younger generation to study more. 'SWAYAM' abbreviates for 'Study Webs of Active-Learning for Young

Aspiring Minds'. This initiative was introduced by Ministry of Education and Government of India to boost digital India in education sector. Under this initiative it has facilitated to provide free education to each and every one from high school and up to advanced education in almost all categories including soft skill enhancements. It connects lecturers and students under a platform using Microsoft and allows to take the classes. As per the data of SWAYAM, there are 203 institutions partnered and 2748 courses for students to take upon and learn from it.

## VII. E-LEARNING APPLICATIONS/SOLUTIONS:-

There are many companies who provide their platform for E-Learning. There are top player in the market who has best platform compared to others. Here are few of them:-

- A. Google Classrooms/ Google meet:- Google meet and Google classroom are completely different software but both allows to take classes, Google classroom are completely designated to take classes. Google classroom directly allows taking class and sharing notes directly.
- **B.** Kahoot:- This software is a game based learning where the concepts are being taught though use of game to enhance fun with learning. This allows more interactive sessions because of its uniqueness.
- C. Zoom for education:- Zoom shares the safe features like Google meet, this also web based conferencing app where classes are conducted with multiple students being present. It allows scheduling of class, present class and many more.
- D. Photomath:- This was an award winning E-Learning platform. This app is basically for mathematics classes where it has resources where it helps in teaching and learning mathematics easily.

#### VIII. EDUTECH COMPANIES:-

EduTech or Education and Technology is a technology made for improvement of education using internet, software like virtual classroom, live class, recorded class to increase creativity and innovation in education.

Some of the company in EduTech sector :-

A. BYJU'S:- The most common company in India. It provides classes from 4 to CAT, IAS and many more. They provide live lectures, recorded class, personalized mentor and learning.

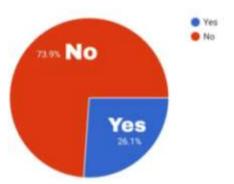


- **B. BRAINLY:-** Brainly is a different platform where people ask questions and persons from another end come to solve that question/sum. It helps to check whether the solved question is right or wrong.
- C. CLASSPLUS:- This helps especially coaching class to come forward to join with them. They have features like smart attendance, students report, online videos, online tests and many more
- **D. CUEMATH:-** This EduTech company focuses on improvement of math classes. They have gamified learning and has changed the way of learning and teaching. It has 'learn by doing' approach where it uses games to solve the questions to make it understand.

## IX. E-LEARNING RESEARCH BASED ON SURVEY:-

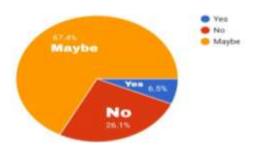
Under this content, we are going to know what people think about E-Learning based upon survey conducted to students who avail E-Learning. It shows how E-Learning has impact on students and also says about its usage and drawbacks.

## Ability to understand the concepts taught in online class?



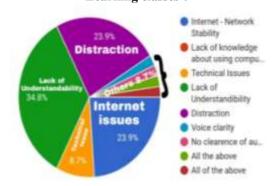
In this study we can know that there is huge lack in understanding the concepts in E-Learning, where No (73.9%) and yes (26.1%).

#### Do you recommend E-Learning to others?



In terms of recommending E-Learning to others also fails because Maybe stands at 67.4%, No at 26.1% and Yes at 6.5%, without recommendation there would be lack of usage by others and there would be difficulty in grasping more towards E-Learning.

What are the issues faced while attending E-Learning classes ?



There are lot of issues faced by students which has caused a huge drawback to E-Learning, Internet issues (23.9%), Technical issues (8.7%), Lack of understandability (34.8%), Distraction (23.9%) and others (8.7%). Without fixing these issues there would be no use of E-Learning because it doesn't allow class to go smooth and there would lack of consistency. There are many other problems which are effecting the effectiveness of E-Learning.

#### How to overcome problems of E-Learning

There are many drawbacks with regard to E-Learning. E-learning includes online class and also Recorded class and many more. The problem lies in both methods of E-Learning where the initiative must be taken to solve the problems. Some of the measures to be taken to solve the problems faced in E-Learning are following:-

- Make everyone understand the concept by making people regularly listen to class.
- There are many technical issues that are formed while E-Learning class are going on, it must be resolved with help of technical team.
- Sufficient time must be taken to make everyone understand the concept and not hurry up to finish the lessons.
- Mix and Match approach can be used where personalized learning can be provided based upon students efficiency.
- Proper training must be provided to teachers about how to use E-Learning apps to effectively teach.



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- There must be more interaction between teachers and students because one way communication doesn't have any use.
- There must be visuals and videos added along with class related to the concepts.
- There must be option to download the classes so that students can view it any time so that it doesn't effect their studies in any way.
- Constant feedback must be taken from students to know about effectiveness of class.
- Assess the students about how to use software and also provide them opportunity to take some concepts as assignment to teach.
- Recorded sessions can eliminate internet stability issue in certain way, More features must be brought in like playback options, display notes, caption features, etc. and many more must be added.

### X. CONCLUSION

Education plays a vital role in society which defines a person to be a better social animal. It teaches everything to an individual to be a good person and also helps him maintaining a better social image. Education sector has taken a rapid change with the introduction of E-Learning integrated with normal learning. Most of the

schools, colleges and universities have adopted this change of E-Learning. This paper provides a detailed analysis based upon the research done about E-Learning, advantages and dis-advantages, impact of e-learning in education sector, how E-Learning has changed the perspective of education, impact of E-Learning on teachers, statistics based on research conducted and also how to overcome the problems which is faced through E-Learning. This E-Learning has brought changes perspective of teaching because this method of educating requires a lot of new skills and abilities for teachers so successfully conduct E-Learning classes. E-Learning has brought technology into education which is major development in education but is has lot of drawbacks too where it must be fixed soon in order to improve E-Learning. This paper provides also states the impact it has made and helped many in continuation of their education even though there was pandemic going on, If Covid-19 had not come the delay of classes might not have happened but the major change of E-Learning in education sector.



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