

## ANALYSIS OF FACTORS INFLUENCING DEMAND FOR E-LEARNING IN INDIA POST PANDEMIC

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### ABSTRACT

*Demand for various E-learning platforms have surged due to covid-19 and lockdown. People skeptical of using E-learning as a good source of knowledge enhancement were compelled to use E-learning and adapted to it. This is the most welcoming change for a country like India where easy access to affordable education was always the problem. That is why it becomes essential to understand whether lockdown is the only dominant factor leading to increased usage of E-learning or one of the other dominant factors.*

*This paper aims at locating different factors influencing demand for E-learning of Mumbai residents. The study is based on primary survey of 238 respondents of Mumbai district against well-structured questionnaire. The data was analyzed by using simple percentage analysis using Microsoft excel as well as Chi-Square test. It was found that not just lockdown, but awareness about existence of e-learning facility, opportunity for skill development, knowledge enhancement, additional certification, quality content as well as innovative way of teaching are the factors influencing demand for e-learning. Which means that even in post COVID era, E-learning will continue to thrive provided e-learning platforms deliver good quality content is an attractive way.*

**Keywords** – Online-learning, skill enhancement, adaptation, knowledge enhancement, pandemic.

### INTRODUCTION

The sudden outbreak of Covid-19 brought the entire world to stand still. Though pandemic disarranged the normal lifestyle of the people across the globe, the virtual world provided some solace. Education sector was not an exception here. Soon traditional set up of face-to-face classroom lectures were replaced by online lectures. Many institutions and schools were forced to make provision for virtual classrooms. Various stakeholder such as government and private organization provided training programs to the teachers, for making effective and optimum use of the applications and online platforms. E-learning now has become mainstream and people got adapted to it.

Leveraging the crisis as an opportunity, many of the education-based startups have started with many new online courses and also have provided with some free courses in the lockdown period. The educational start up Byju's has seen 200% increase in the number of students using its product in lockdown after offering free access to their service. Various other platforms such as Vedantu, Coursera, Harvard edx, Khan Academy, Vskills, Edukart, Doubt nut, Unacademy, etc. had gained popularity. The virtual platform is also used to provide many professional courses for skill development and knowledge enhancement of working professionals. Lockdown has certainly brought recession to many businesses in the country but

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it has brought boom for E- learning sector. For a country like India, it can be considered as extremely positive impact since it will improve access to education in the country by and large. The main concern here is that this boom in E-learning should not be a temporary phenomenon. It will be if only 'lockdown' is the driving force behind this boom. In that case, as lockdown ends, the E-learning will experience recession. However if lockdown is just one of many other factors affecting demand for E-learning, this new segment that facilitates education, skill and knowledge enhancement will continue to grow. Thus, finding out prominent factors affecting demand for E-learning is the main objective of this research.

## REVIEW OF LITERATURE

Previous research was reviewed that elaborated advantages of e-learning and also barriers to E- learning

- M.Vivekananda (2017) conducted a research in Hyderabad. The objective of the study was to understand the change in conventional learning and the new methodologies used for e-learning. The data was collected using secondary data. The study found that e-learning is a boon to the society and in coming future it will save lot of time and money and will overcome all the drawback of conventional learning and becomes a very powerful weapon for the intellectual growth.
- Manu Sood (2014) conducted a research in North India. The objective of the study was to understand the advanced development in the field of virtual education and the technologies being used. The data was collected using primary data as well as secondary data. Survey method was used and responses were collected by well-structured questionnaire. The study found that email and search engines are the popular tools used amongst the students and their perception towards using e-learning in addition to traditional learning is positive.
- Nur Nazleen Samsuri(2014) conducted research in Malaysia. The purpose of this study was to investigate the effectiveness of using E-learning among secondary school students. The data was collected using primary data as well as secondary data. Survey method was used and responses were collected by well-structured questionnaire. SPSS software was used to analyze the data. They found that E-learning is an influential mode and an integration of technologies in teaching and learning. It provides great flexibility but it is educator who has to effectively play their role in order of success.
- Valentina Arkorful(2014) conducted research in Ghana. The objective of the study was to investigate the effectiveness of using e-learning in teaching in tertiary institutions. The data was collected using primary data as well as secondary data. Survey and observation method was used. They understood the advantages and disadvantages of its adoption and implementation of e-learning in higher education.
- Ethel Reyes-Chua(2020) conducted research in Calabarzon. The objective of the study was to find out implementation of e-learning and determine the experience of faculty member using the e-learning platforms and identify whether the intervention was appropriate to each course and discovered the various types of free platforms online. The data was collected using primary data as well as secondary data. Survey method was used and analyzed using the descriptive and documentary analysis. They found that faculty member had good experiences in introducing the E-learning classroom as an immediate response to the country's enhanced quarantine situation. Although all the E-learning platforms used by the respondents were free of charge, still the

students have encountered problems like lack of resources, difficulty of Wi-Fi connection, etc. This paper tries to find whether the realization about usefulness of E-learning gets translated in increase in demand for E-learning platforms even after lock-down is lifted.

## RESEARCH DESIGN AND METHODS

Adoption of virtual tools of connecting people was very fast during the period of March to December 2020 which was due to compulsion imposed by lock down. People seem to have adapted to the new system since the lock down period seems to get extending. So virtual tools are used for talking, buying things, doing office work and also for education, skill and knowledge enhancement. E-learning has boomed and that can be considered as 'blessings in disguise' since access to education has improved a lot. However, it was essential to understand whether adoption of E-learning is just lock-down induced or people have adopted it due to some others factors. Questionnaire was structured and data of 238 respondents of Mumbai district was collected by using Random sampling method. Data was analyzed by using Chi-square test for understanding association between awareness and adoption of E-learning. Simple percentage analysis was used for understanding different reasons behind adoption of E-learning. The data was further analyzed by using simple percentage method in order to find out expectations of the respondents where quality of E-learning programme are considered.

## OBJECTIVES OF RESEARCH ARE AS FOLLOWS

1. To understand whether awareness of Existence of E-learning facility and adoption are related
2. To study reasons for which E-learning is adopted
3. To understand whether lock-down was the only factor that led to demand for E-learning facilities.
4. To understand expectations of users where quality of E-learning programme are considered

## ANALYTICAL TOOLS

Data was analyzed by using SPSS version 2.0 for finding association between awareness of advantages of E-learning and its adoption by using CHI-SQUARE TEST. After securing the 'P' value as '0.00' the data was further analyzed by using cross tabulation. In order to find various other factors for which E-learning was adopted, the findings were so evident that the analysis was done by using simple percentage method with the help of MS Excel.

One hypothesis is tested in this paper

H<sub>1</sub>:- There is an association between awareness and adoption of e-learning.

## RESULTS AND ANALYSIS

Table 1 describes demographic profile of respondents. Out of 238 respondents, 27 respondents belonged to age group less than 20 years, 164 (68.90%) respondents, from the age group of 20-29, 28 respondents from age group of 30-39 and 19 respondents belonged to 40 and above age group.

From the total responses collected by survey, 128 respondents were female i.e. 53.80% and 110 of them were male i.e. 42.20%.

On the basis of education Qualification, the majority of the respondents 110 (46.20) were graduates, 68 (28.60) were postgraduates, 15 (6.30%) had professional degree ,6 (2.50%) respondents were primary & 18 (7.60%) were secondary school students.

On basis of occupation, Maximum respondents, 151 (63.40%) were students, 52 (21.80%) were salary earners, 22 (9.20%) were professionals, 9 (3.178%) were businessmen, 1 respondent was retired person and 3 were home maker.

**Table 1: Demographic Profile of Respondents**

Class Interval	Respondents	% of Respondents
<b>Age Group</b>		
Less than 20	27	11.30%
20-29	164	68.90%
30-39	28	11.80%
40 and above	19	8.00%
<b>Gender</b>		
Female	128	53.80%
Male	110	42.20%
<b>Educational Qualification</b>		
Primary	6	2.50%
Secondary	18	7.60%
Under Graduate	21	8.80%
Graduate	110	46.20%
Post Graduate	68	28.60%
Professionals Courses	15	6.30%
<b>Occupation Status</b>		
Student	151	63.40%
Professional	22	9.20%
Salaried	52	21.80%
Homemaker/ Housewife	3	1.26%
Businessman	9	3.78%
Retired	1	0.42%

**Chart 1: Awareness about Benefits of E-learning**

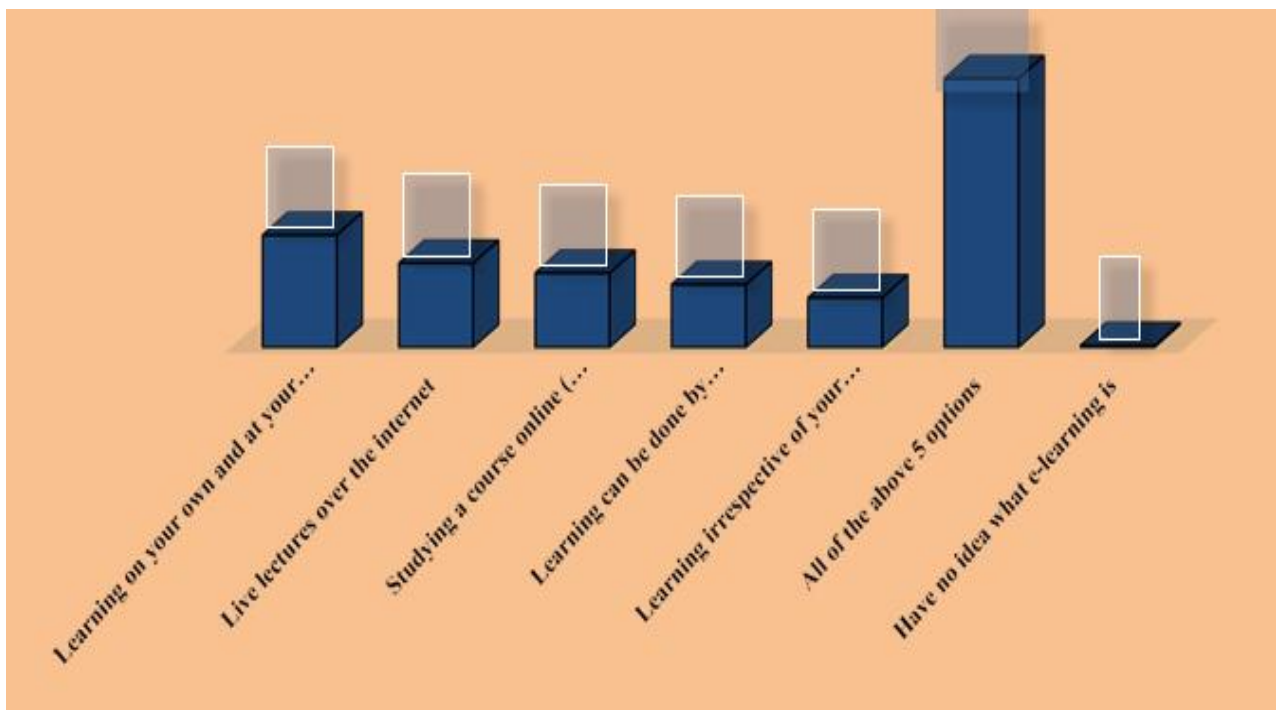
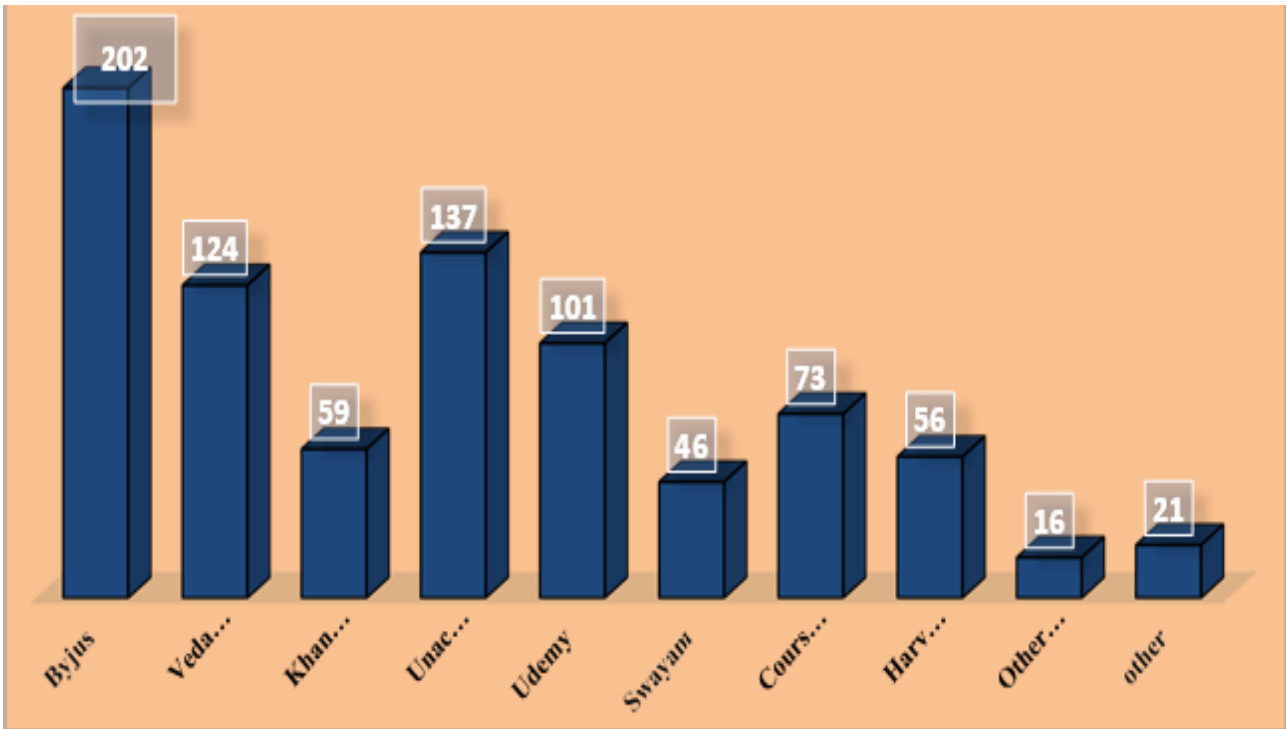


Chart 2



**Awareness about E-learning platforms available**

Chart 1 and 2 speak about general awareness of respondents about E-learning that is awareness of benefits of E-learning as well as awareness about different E-learning platforms

available. As shown in Chart 1, a large number of respondents 163 (68.50) were found to be aware of all five benefits given in the questionnaire. Chart 2 indicates that majority of respondents were aware of different E-learning options available to them.

*Chart 3: Actual usage of E-learning platform*

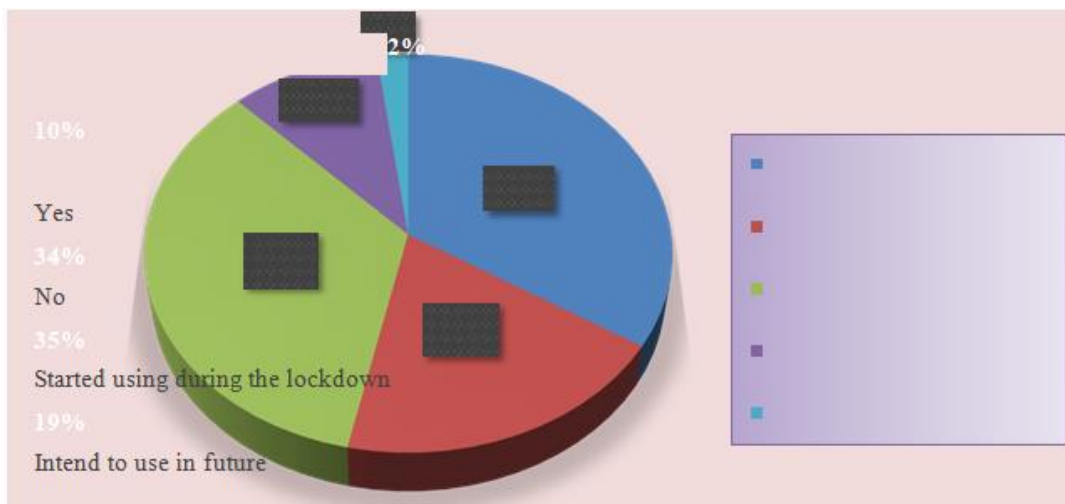


Chart 3 shows actual usage of online platform by respondents. Out of 238 respondents, 82 respondents (35 %) started using the e-learning platforms during the lockdown period, 81 (34 %) were users already, 24 respondents (10.10%) intend to use e-

learning platforms in future , 46 (19.30%) were non users but have not ruled out possibility of using it in future. There were very few respondents who said that they won't be using E-learning platform at all. It can be seen clearly in the data that lock-down was the reason for

adopting E-learning for only 34% respondents. However more than 29% people were not using the E-learning platform, may be because it was not necessary for them to use it. At the same they had shown intention of using it in future. These become potential users of E-learning platform who may not be aware of existence of the E-learning platform and now with better awareness they may start using it. This finding also indicated that awareness and actual usage of E-learning might be related. In order to find

whether there is any relationship between awareness and adoption of E-learning statistically we tested our hypothesis by using Chi-Square test.

**Null hypothesis:**

H<sub>0</sub>:- There is no association between awareness and adoption of e-learning.

**Alternative hypothesis:**

H<sub>1</sub>:- There is an association between awareness and adoption of e-learning.

**Table 2: Chi-Square Test Results**

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	249.442 <sup>a</sup>	10	.000
Likelihood Ratio	22.977	10	.011
N of Valid Cases	239		

a. 10 cells (55.6%) have expected count less than 5. The minimum expected count is .00.

As seen in the table 2 the ‘p’ value is 0.00 which is less than 0.05. which shows that there is an association between awareness and

adoption of e-learning. Hence, we reject the null hypotheses and accept the alternative hypothesis. To understand this association, cross tabulation data was studied as follows

**Table 3: Cross Tabulation of usage and awareness of E-learning platform**

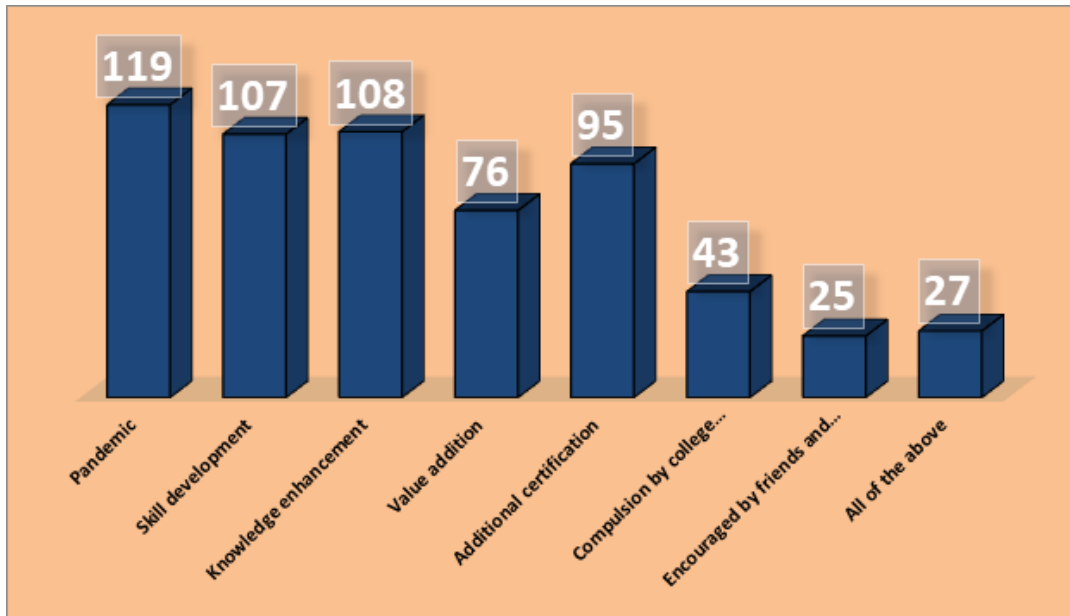
		Are you using the e-learning platform?						Total	
			Do not want to use	Intend to use in future	No	Started using during the lockdown	Yes		
Awareness	0	Count	0	4	7	10	32	22	75
		Expected Count	.3	1.6	7.5	14.4	25.7	25.4	75.0
	1	Count	0	1	17	36	50	59	163
		Expected Count	.7	3.4	16.4	31.4	55.9	55.2	163.0
	163	Count	1	0	0	0	0	0	1
		Expected Count	.0	.0	.1	.2	.3	.3	1.0
Total		Count	1	5	24	46	82	81	239
		Expected Count	1.0	5.0	24.0	46.0	82.0	81.0	239.0

As observed in the table, the expected count of respondents who were aware and adopting e-learning is 55.2 and the actual count (59) is higher. Further, it can also be observed that 16.4 is expected count of respondents who said they intend to use E-learning in future and who were aware of E-learning. However, the actual count is more, that is 17. On the other hand, aware respondents who declined to use

E-learning, expected count is 3.4 but actual count is just 1.

So the analysis clearly indicated that better awareness regarding E-learning platform and its advantages certainly affects demand for E-learning. In order to find whether there are some other factors affecting demand for E-learning, a specific question was asked to respondents about stating reasons for which they adopted E-learning. Chart 4 shows the results.

**Chart 4: Reasons for using E-learning platform**



As shown in the chart, along with pandemic, opportunity for ‘skill development’, ‘knowledge enhancement’, ‘additional certification’ were the prominent reasons for adopting E-learning platform. This was about various factors considered by users while deciding whether to make use of E-learning platform or not. From the view point of fast

growth of E-learning in ‘new normal’, it was essential to understand the ‘quality related expectations of users’ where online courses are considered. The respondents were asked to select various aspects of online courses that they considered as positive for which they were ready to spend their valuable time and sometimes, money.

**Chart 5: Opinion about positive aspects of e-learning platform**

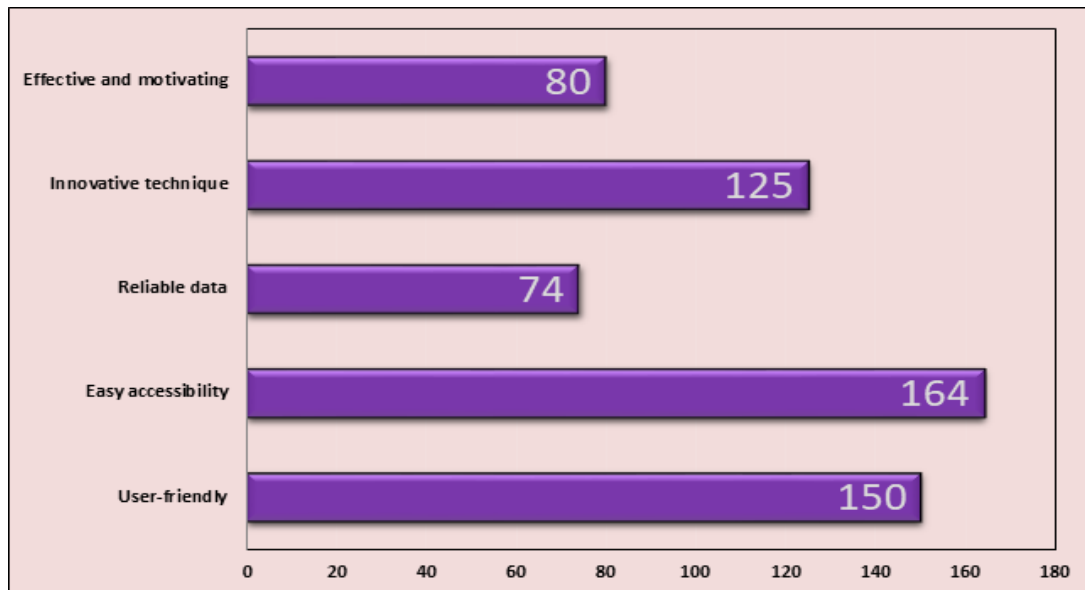


Chart 5 clearly states expectations of users where online learning is concerned. Easy accessibility, user friendly methods, innovative way of instructions and effective way of instructions are the prominent factors considered

by users. This analysis certainly provides guidelines to all companies that have E-learning related products. Better and deeper analysis of user’s expectations will be future scope of the study.

## CONCLUSION

The data analysis clearly indicated that though lockdown seem to had made people adopt E-learning as a new tool of getting educated and trained, compulsion was not the only driving force. Better awareness about existence of E-learning, has made people adopt it. E-learning is not adopted only because schools and offices have made its usage mandatory but it is being used by people for knowledge and skill enhancement and to secure additional certification for attractive CV, for getting better job or admission to better course in future. On the basis of these findings, it can be concluded that lock down has become catalyst for growth of E-learning and not just a temporary reason for its fast adoption. Better awareness that was created during lockdown, will ensure continuous growth in its adoption. E-learning will ensure more inclusive growth of education as a service.

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