Evaluation of Covid on Education System/Sector with specific reference to online based teaching and learning

Dr. Vijaya Karthik S V

Software Engineer, Warsaw, Poland.

Abstract: This research paper entitled Evaluation of Covid on Education system/sector with specific reference to online based teaching and learning needs to be focused on tutors as well as learners to satisfy the objectives of the study. At the pandemic period and after it the situation made the education sector into trouble. This investigation starts the evaluation process on online based teaching and learning starting from 2003 and ends with the current phase of year. Also, the relevant software that is assisted for online based teaching and learning will be pointed out for better understanding purposes of the study. A population of 300 individuals, a combination of teaching faculties and students from various educational institutions including school and college across India is contributed. Apart from these, a sample size of 90 that is relevant to the investigation be affixed for this investigation. Finally, this study targeted the competent level of the individuals (teachers and students) involved in online based teaching and learning in Covid tenure. Also, significant online academic activities should be studied.

Keywords: Covid-19, e-learning, teaching, learning, technology, pandemic, virtual learning and academic.

Introduction

In the investigation of evaluating Covid on the education system that is based on virtual platforms, the investigator has to concentrate into the education system or sector that is trendy both in before and after Covid pandemic. Through the declaration of Covid-19 as a contagion on 30th January by the World Health Organization (WHO), the outburst has an incredible impact on many and every global system. The education system has not been resistant from the impact of COVID-19, as it has exaggerated all aspects in the system education from the pre-school to the university and has also triggered cancellation or postponement of many academic projects [1]. To fill the gaps caused by Covid in the education sector, online based teaching and learning play a vital role, and with this context of evaluation of Covid on education system, the investigator in this research has to thoroughly analyze the nature of education system/sector before and after Covid. Before the pandemic scenario, online teaching and learning in education is only undertaken or implemented only if it is necessary and online based teaching and learning has traditionally remained observed as an alternate pathway. In the meantime these types of teaching and learning are particularly well suited to adult learners who are engaged in the curriculum. In essence, the online based teaching and learning takes place over a virtual platform through the foremost support of the internet. This type of learning is often referred to as e-learning and it is a partial

kind of distance learning technique, an umbrella term. In this domain, any type of learning takes place and it is not considered only as a traditional classroom. Some different kinds of online based teaching and learning platforms are Computer Assisted Instruction (CAI), Synchronous Online Learning, Adaptive E-Learning, Linear E-Learning, Computer Managed Learning (CML), Asynchronous Online Learning, Fixed E-Learning, Interactive E-Learning, Collaborative Online Learning and Individual Online Learning. In these, most of the online based teaching and learning platforms can take place over the mandatory assistance over the internet. Some of the key findings in the year 2003, slightly less two million learners perceived their education through online medium. It was about 20.6 million in the year 2011 and it tends to decline in the year 2016, so that the number of online teaching pupils is 19 million [2, 3]. Then in the year 2019, WHO confirmed it as a pandemic. This situation especially challenges the system of education throughout the realm and forced the educators to shift teaching and learning conditions into online mode of teaching and learning at night.   These circumstances make the learners and educationalist realize that circumstances scheduling is a critical need for the academic institutions [4]. 2020 will be the biggest online education year. At this juncture 90% of learners in developed countries are receiving their academic education through online classes. After these positions academic institutions will be indebted either to teach their entire classes through online, to maintain the interpretation of

ongoing academic process, from the learners at home. In this tenure, the investigator tends to evaluate Covid on the educational sector that is based on online teaching and learning. However in the educational system the possibility of breaking up the regular teaching learning stream to online mode may not be possible, since some subjects may be correlated with practical oriented. This investigation paves a way to regulate the educational system for the new normal [5]. Finally a context based on the online based teaching learning is established below to brush-up the concept of teaching-learning, online management of teaching and learning and its evaluation.

Perspective Concern on Education System

Generally online based teaching and learning is a form of education mainly where learners use their personal computers, laptops, mobile through internet. Frequently online graduation, course program, certificate courses etc some of which are conducted virtually provided online learning portal through appropriate host. As per the report by Google and KPMG India, the online education system in India in the year 2017 is with a normal of 1.6 million users. It is predicted to develop around 9.6 million users by the year by the end of 2021 [7]. Moreover, previously before Covid -19 there has been intensifying study of how virtual ed-tech is redefining and dipping concepts of virtual teaching and learning. Digital India and Skill India are the inventiveness based on management (government) sectors that are launched to spread online based teaching and learning (digital literacy). The supportive materials for online based teaching and learning for the students are e-Basta (digital forms of school books), e-Education is the (Every schools are provided and connected with broadband and free WiFi), development of MOOCs (Massive Virtual Open Course), SWAYAM (MOOCs based online teaching and learning from ninth standard to till post-graduation level), Nand Ghar (Digital tools as teaching aids) and India Skills Online (knowledge portal for skill training). Also a pictorial representation indicates to the learners those their education system is affected with the pandemic situation.
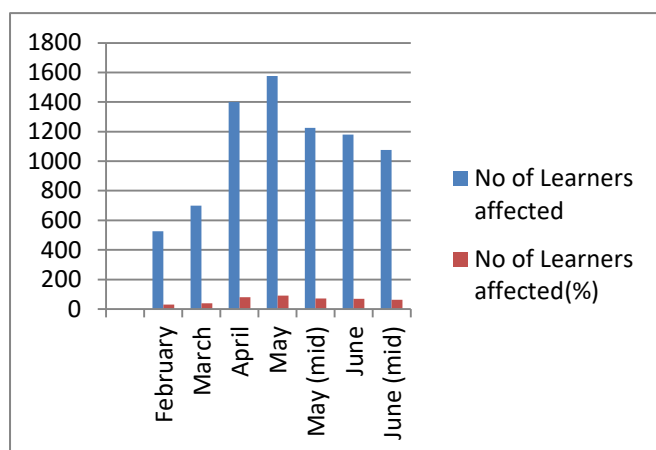
Figure: 1 Pictorial representation of learners affected with their education during Covid-19 [10]

The above pictorial represents the (education system), how the teaching learning conditions of students suffered in the period of pandemic situation, and this information can be termed as a basic knowledge of this current investigation.

Related Studies

Muthuprasad et al (2021) reported that the preponderance of the respondents (70%) are ready for online session to cope up with the program (curriculum) during the pandemic period. Also by the study undertaken, most of the learners prefer to utilize smart phones for their online activities. Per Engzella et al (2021) stressed in their study "Learning Loss due to school closure during the Covid-19 pandemic" to the suspension of face to face regular instructions in schools during the pandemic has led to severe consequences in students learning. The study findings entail that the learners mode little or resulted with no progress while learning through virtual platforms, especially the educational institutions with weaker infrastructure. Marko Teras et al., (2020) reported that in order to remain education organization, the organization have had to become accustomed to the online teaching and learning condition. Shailendra Palvia et al (2018) reported that "on overseeing online based teaching and learning (e-education) is receiving traction in the major part of the humankind". So, that virtual education is on the pathway to become conventional by the year 2025, and this was reported by the authors before the Covid pandemic.

Objectives of the study

1. Provide trouble-free, collective accesses to curriculum and syllabus for all learners.

2. To provide more superior online tools for the education medium (school, colleges and universities) to enhance virtual learning that will congregate the student's community and their changing needs.

3. To enhance and expand the online technological support to satisfy the current educational needs and multi dimensional expectation of the learners.

4. To improve the online learning based communication activities for individuals associated with virtual learning.

5. To provide consistent interaction, best-in-class support, by managing and communicating effectively to satisfy the student's expectations through online based teaching and learning.

Scope of the study

1. To enhance the (superiority) quality of online based teaching and learning process at pandemic time

2. Meet the learning requirement of students in the domain of online based (education) teaching and learning

3. To improve the user-accessibility, efficiency, online interaction and time flexibility in the learning process.

4. To achieve upward mobility in the domain of online based teaching and learning processes.

Study Constraints

Sampling Techniques

Intended for the current investigation, cluster sampling techniques are adopted by the investigator to cover the maximum domain of education system resembling school and collegiate education in the

Covid scenario. Students at school level and college level students and teaching faculties can contribute to the study. The targeted population size is approximately closer to the number 300. For teaching, faculties at both levels can be surveyed for collecting data about online based teaching and learning techniques. The total sample size is about 90; consist of both teaching faculties and students. The samples are contributed from various educational institutions across India to explore effectiveness on online based teaching and learning in the tenure of Covid pandemic.

Methodology

In favor of data collection from the samples in this current investigation, the investigator comes across various methodological choices for data accuracy in the periodical nature. The techniques may be an online survey method, interview and focus group discussions for collecting the data. Mostly for the data adequacy and the relevancy of the data, the method of collecting data be fine-tuned that is appropriated for the undertaken samples

Hypotheses

(H_1) There exists a significant difference in the mean gain scores of competent level of instructors and learners on online based teaching and learning.

(H_2) There exists significant effectiveness in online academic activities based on curriculum on Covid situation.

Consequences

The objective is to compare the mean gain scores of competent levels of instructors and learners on online based teaching and learning. The data were analyzed with the help of independent samples t- test and results are charted in table 1.

(H_1) There exists a significant difference in the mean gain scores of competent level of instructors and learners on online based teaching and learning.

Table 1: Mean Gain Score Analysis of Competent Level

Variable	Group	Mean Gain	SD	Calculated t-value
Competent Level	Instructors	13.73	1.82	30.16**
	Learners	0.43	1.60	

Note: ** Significant at 0.01 level

In Table 1 the acquired 't' value 30.16 is elevated than the table assessment and it is significant at 0.01 level. It infers that there is a significant difference in the mean gain scores of competent level of instructors and learners on online based teaching and learning. Further, the mean value scores of competent level of the instructors and learners are (13.73) and (0.43) respectively. This mean gain score raise in the instructors evinced the effectiveness of online based teaching and learning over the traditional teaching method to enhance competent level among learners.

Thus the hypothesis "There exists a significant difference in the mean gain scores of competent level of instructors and learners on online based teaching and learning" is accepted.

Opinionnaire Regarding Online based teaching and learning

Besides the management phase, an opinionnaire was given to the learners to get the opinion regarding online based teaching and learning that they have assisted by the investigator. The opinionnaire consists of ten statements, including five positive and five negative statements. Since the samples are at school and college level, the pioneer was designed with three point scale, and the points be 'agree', 'undecided' and 'disagree'. The code numerals are 3, 2 and 1 were allotted to refer to 'agree', 'undecided' and 'disagree' respectively as nominal scale. Behind counting the frequencies the investigation be arrived at using Chi-Square technique. The results are displayed in table 2.

Table 2: Chi-Square Value of Opinionnaire Regarding Online based teaching and learning

S. No	Statements	F_e	Agree	Undecided	Disagree	Chi-Square value
			F_0			
1.	Willing to study by process through online mode.	10	27	2	1	16.662**
2.	Online based teaching promotes curiosity in learning.	10	22	6	2	9.65**
3.	Span of attention is enhanced by learning through Online.	10	25	5	0	15.312**
4.	While compared to traditional methods, learning online creates more interest.	10	26	2	2	13.65**

5.	Learning through Online promotes self learning.	10	28	1	1	19.35**
6.	Willing to learn occasionally by Virtual.	9.86	3	7	20	22.812**
7.	While learning online, it is difficult to understand the concepts.	9.86	0	7	23	35.15**
8.	It is tiresome (tedious) to learn through by method of Online.	9.86	7	5	18	11.712**
9.	Stress/ Tension are experienced while learning through this method.	9.86	2	3	25	35**
10.	This method activates learners' thinking process and skill to a considerable extent.	9.86	18	8	4	7.85*

** Significant at 0.01 level,   * Significant at 0.05 level

(H_2)There exists significant effectiveness in online academic activities based on curriculum on Covid situation.

By scrutinizing the table, it is deduced that the chi-square value of nine statements were significant at 0.01 level and the remaining one is significant at 0.05 level. It indicates that the learners are in favor of education through online academic activities based on curriculum on Covid situation. The Chi-square value of testimonial 1 is 16.662 and is significant at 0.01 level. It indicates to facilitate the learners were in good turn to learn by virtual method. The Chi-square value of statement 2 is 9.65 and is significant at 0.01 level. This focuses that the adopted online based teaching method would increase the curiosity in learning among learners. The Chi-square value of statement 3 is 15.312 and is significant at 0.01 level. It indicates that online based teaching methods increased the concentration of students in learning. The Chi-square value of statement 4 is 13.65 and is significant at 0.01 level. Students show more interest in learning subjects through this online based method than the traditional technique. The Chi-square value of declaration 5 is 19.35 and is significant at 0.01 level. Accordingly, assisting this method in learning promotes self-learning among learners. The Chi-square value of statement 6 is 22.812 and is significant at 0.01 level. It point to that only a few learners agreed regarding occasional learning through this method, so that most of the learners showed favor in learning through online based teaching and learning. The Chi-square value of statement 7 is 35.15 and is significant at 0.01 level. It indicates that the learners felt no obscurity in understanding the subject through this method. The Chi-square value of statement 8 is 11.712 and is significant at 0.01 level. It indicates that the learners didn't find it tiresome to learn through this system. The Chi-square value of statement 9 is 35 and is significant at 0.01 level. It confirms that the learners did not experience tension or stress during learning throughout this technique. The Chi-square rating of statement 10 is 7.85 and is significant at 0.05 level. It signifies that this technique activates learners' thinking process and creates learners as a skill oriented person.

Consequently, on the source of the experiential frequencies, it can be noted that the learners responded favorably towards learning throughout online based learning. On the whole, the opinion of learners is in favor of online based learning. It is understood that from the scrutiny of opinion, learning by this virtual method becomes more motivating, and a live process online. Also it reveals that this online method enhanced the effectiveness in online academic activities based on curriculum on Covid situation especially at school and college level.

Thus the hypothesis "There exists significant effectiveness in online academic activities based on curriculum on Covid situation" is accepted.

Conclusion

As the academicians depart into the recovery phase of education sector on Covid-19 it is critical to reflect on the role of teaching and learning system. Online teaching and learning has helped to restore the system of education, but the outlook is very uncertain. The application of online technology in education makes teaching and learning very effective and efficient in the part of students and teachers respectively. This technology ensures the pupils to develop specificity in knowledge, skills, and attitudes and permits them to contribute an assortment in online learning. Perhaps online teaching and learning is more effective, the groundwork for this online teaching technology by the teacher is very essential and it needs a lot of effort before implementing. If it is in the satisfactory manner, without any doubt the resultant online session played by the teacher is more effective. As a conclusion by the resulting value of the opinion collected from the students the value shows that the learners are in favor of teaching and learning through online academic activities based on curriculum on Covid situation. It indicates that the students were in better involvement when learn through virtual method. This focuses that the adopted online based teaching method would increase the effectiveness and curiosity in education.

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