



---

## **Student's satisfaction on E-learning system in India–A case study of Telangana state**

**Payyavula Sreenivasa Rao**

Acharya Nagarjuna University, Guntur, Andhra Pradesh, India

---

### **Abstract**

Electronic learning system refers to utilization of electronic resources in traditional teaching to make it more dynamic and simple. However, covid 19 forced Indian education system shift from traditional to digital without well preparation. Therefore, present study focused on the student's satisfaction on e-learning education system adopted in the Telangana State during Covid 19 period. The sample size of the study is 320 schools students selected through simple random technique. The study found that, due to available of televisions, computers and smart phones many students expressed satisfaction with e-learning system, in contrast one fourth students expressed dissatisfaction case of voice clarity, doubt clarification and methods of teaching due to not available of proper equipments and training to teachers etc.

**Keywords:** digital education, e-learning, satisfaction of students, digital education in Telangana

---

### **Introduction**

Electronic learning system refers to utilization of electronic resources in traditional teaching to make it more dynamic and simple. The use of computers and the internet forms the major component of E-learning. E-learning enables large number of students or learners to learn skills, knowledge and quality education at convenient time from experts. However, in earlier due to absence of human element e-learning system was not widely used, but in today's education system human element is participating and leaning entire system which makes it widely acceptable. However, with the rapid progress in technology and the advancement in learning systems, it is now embraced by the masses. The introduction of computers was the basis of revolution and with the passage of time, as we get hooked to smart phones, tablets, etc. which play significant role. Books are gradually getting replaced by electronic educational materials like optical discs or pen drives. The availability and accessibility of internet is another major driver of e-education system.

E-learning is a best mean not only for education sector, but also for corporate sector, for conducting training programs by MNCs for professionals across the globe and employees are able to acquire important skills while sitting in a board room. It witnessed from research studies that schools using E-learning technologies are a step ahead of schools which still have traditional approach towards learning. No doubt, it is equally important to take forward the concept of non-electronic teaching with the help of books and lectures, but the importance and effectiveness of technology-based learning cannot be taken lightly or ignored completely. It is believed that the human brain can easily remember and relate to what is seen and heard via moving pictures or videos. It has also been found that visuals, apart from holding the attention of the student, are also retained by the brain for longer periods. Various sectors, including agriculture, medicine, education, services, business, and government setups are adapting to the concept of E-learning which helps in the progress of a nation. The world pandemic disease is further pushing the use of e-learning in education sector in India. Therefore, present study focused on the satisfaction of students on e-learning system in India, particularly in Telangana State during pandemic period.

### **Review of Literature**

Mahwish Malik (2021) <sup>[1]</sup> opined that factors which are playing influential role towards student web-based learning satisfaction. The student and instructor attitude towards technology, their computer efficacy, and instructor response, friendly interface of the online learning environment and proper facilitation of technical matters are the factors that influence student satisfaction towards online education. Administration is suggested to consider these factors for successful virtual education implementation.

Ram Gopal *et al* (2021) <sup>[2]</sup> study focused on the identification of influencing factors student's satisfaction and examined the relationship between affecting factors of and student's performance in e-learning system. The sample size consists of 544 students studying the BBA and MBA classes in Indian universities. The study applied structural equation model. The study found four factors i.e. instructor quality, design of the course, prompt feedback and student's expectations. The study also found positive relationship between these factors, students' satisfaction and students' performance.

Damijane Kerzic *et al* (2021) <sup>[3]</sup> made cross country and continental analysis on students satisfaction on e-learning system during lock down period. The study sample size of the study is 10092 students from 10 countries belong to four continents. The study revealed that, students satisfaction is majority depends on quality of e-

learning system which comprises of service quality, teacher active role and overall quality of system. The study revealed consistent output across countries, continents, gender, study fields and level of study.

T A Prasetya *et al* (2020) <sup>[4]</sup> emphasized on the end user computing satisfaction of students in e-learning system in Indonesia. The study measured the satisfaction in six variables such as content, accuracy, format, ease of use, and timeliness. The study applied descriptive and inferential statistics and revealed high satisfaction of students in all six indicators of the study with mean score of above 4.0 in all indicators. Therefore, the study concludes high impact of selected variables on student's satisfaction.

Sadia Jabeen *et al* (2014) <sup>[5]</sup> explored the satisfaction of 240 students on e-learning system in virtual university of Pakistan. The study applied descriptive statistics, regression and one-way t-test sample. The study found that, e-learning is most powerful mode than conventional educational system. The study observed high satisfaction of students on e-learning owing to modern teaching standards and good interactive pattern between students and teachers which made e-learning dynamic education system.

**Need of the Present Study:** The initiation of modern reforms in education system is inevitable in the country like India where traditional education system plays significant role from gross root level. However, the successful adoption of e- education system in India is exposed to different challenges such as lack of well trained teachers, lack of adequate e-devices, poor infrastructure and location in remote areas. To address these issues through application of technology based education system is essential in India. However, poor digital infrastructure is a major constraint for effective implementation of digital education systems in India. Unfortunately, covid 19 forced Indian education system shift from traditional to digital without well preparation. Therefore, present study focused on the student's satisfaction on e-learning education system adopted in the Telangana State during Covid 19 period.

### Objectives of the study

- Present Study is aimed to measure the satisfaction of school students on e-learning system implemented in Telangana State during Covid-19 period.

**Research Methodology:** Present study is purely based on the primary data collected from the 320 students had been studied in government schools of Telangana State. The sample size is selected through stratified random technique. The selected students participated in online classes for 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> classes during lock down period and post lock down period in Telangana State. The primary data is collected through well structured questionnaire prepared on the on satisfaction of students in e-learning systems in India. The collected is analyzed through descriptive statistics and ANOVA. The study also calculated reliability test.

### Hypothesis

Null Hypothesis: There is no significant difference in between and within groups of students in satisfaction on e-learning system.

**Table 1**

Demographic Characteristics of The Students								
Gender			Region			Class		
	N	(%)		N	(%)		N	(%)
Boys	185	57.80	Urban	100	31.25	8 <sup>th</sup>	65	20.30
Girls	65	42.20	Semi-Urban	143	44.68	9 <sup>th</sup>	88	27.5
			Rural	77	24.06	10 <sup>th</sup>	167	52.18
Total	320	100	Total	320	100	Total	320	100

### Alternative Hypothesis

There is significant difference in between and within groups of students in satisfaction on e-learning system.

**Demographic Profile of Sample Size:** The study observed that, in total sample size of 320 students, 57.80 percent represent by boys while 30 percent represent by girls. In regional wise participation, 44.68 percent of students participated from semi-urban, followed by 31.25 percent from urban, 24.06 percent from rural Finally, in total sample size, 52.18 percent of students were studying 10<sup>th</sup> class, 27.5 percent were studying 9<sup>th</sup> class and 20.30 percent were studying 8<sup>th</sup> class.

### Data Analysis

**Table 2:** Students Satisfaction in e-learning system in Telangana State

Statements	Highly satisfied	Satisfied	Neutral	Dissatisfied	Highly Dissatisfied	Total
Are you satisfied with content presented in e-course	142 (44.38)	61 (19.06)	35 (10.94)	39 (12.19)	43 (13.44)	320 (100)

Are your satisfied with Teacher support in e-learning	121 (37.81)	73 (22.81)	62 (19.38)	41 (12.81)	23 (7.19)	320 (100)
Are your satisfied with interaction between you and your teacher	110 (34.38)	58 (18.13)	56 (17.50)	53 (16.56)	43 (13.44)	320 (100)
Are you satisfied with teaching methods used in e-learning	65 (20.31)	53 (16.56)	125 (39.06)	43 (13.44)	34 (10.63)	320 (100)
Are you satisfied with voice clarity in e-learning	46 (14.38)	53 (16.56)	143 (44.69)	53 (16.56)	25 (7.81)	320 (100)
Are you satisfied with performance assessment and revision of classes in e-learning	156 (48.75)	53 (16.56)	43 (13.44)	40 (12.50)	28 (8.75)	320 (100)
Are you satisfied with classes time table in e-learning	126 (39.38)	79 (24.69)	52 (16.25)	39 (12.19)	24 (7.50)	320 (100)
Are you satisfied with doubt clarification in e-learning	133 (41.56)	65 (20.31)	59 (18.44)	25 (7.81)	38 (11.88)	320 (100)
In overall, are you satisfied with e-learning system as contributed to development	129 (40.31)	43 (13.44)	66 (20.63)	43 (13.44)	39 (12.19)	320 (100)

Source: Field Study

Table 3: Descriptive Statistics of the Data

Statements	I	II	III	IV	V	VI	VII	VIII	IX
Mean	3.550	3.7100	3.420	3.180	2.9812	3.850	4.250	4.220	3.540
Standard Error	.16476	.12894	.145074	.125029	.11035	.13587	.12884	.13136	.14524
Median	4	4	4	3	3	4	4	4	4
Mode	5	5	5	3	3	5	5	5	5
Standard Deviation	1.6476	1.28939	1.45074	1.25029	1.10353	1.35866	1.28840	1.31356	1.45241
Sample Variance	2.715	1.663	2.105	1.563	1.218	1.846	27.967	28.234	2.109
Skewness	-.685	-.622	-.364	-.096	.034	-.783.9.	9.079	8.962	-.464
Kurtosis	-1.206	-.767	-1.252	-.788	-.391	-.794	87.944	86.447	-1.168

Source: Field Study

### Data Interpretation

Table no 01 exhibit the responses of students regarding their satisfaction on electronic education. The study revealed that, 44.38 percent of students highly satisfied and 19.06 percent is satisfied with content presented in e-course, in contrast, 12.19 percent dissatisfied and 13.44 percent are highly dissatisfied with content, while 10.94 percent took neutral status regarding satisfaction with content. In overall, the study observed mean value of 3.550 which indicates that majority of respondents satisfied with content in e-course. This is mainly due to framing of syllabus as continuation to earlier classes of students. Similarly, Standard Deviation of the statement is 1.6476 which indicates insignificant deviation responses among students. Therefore, the study witnessed that, 37.81 percent of students strongly satisfied and 22.81 percent is satisfied with teachers support in e-learning, in contrast, 12.81 percent dissatisfied and 7.19 percent are highly dissatisfied with teacher support due to problem in communication, while 19.38 percent took neutral status regarding teacher support. In overall, the study observed mean value of 3.7100 which indicates that majority of respondents are satisfied to the statement. Similarly, Standard Deviation of the statement is 1.28939 which indicates is insignificant deviation in students responses. The study investigated that, 34.38 percent of students highly satisfied and 18.13 percent is satisfied with student interaction with teacher, in contrast, 16.56 percent dissatisfied and 13.44 percent is highly dissatisfied with student and teacher interaction, while 17.50 percent took neutral to the statement. In overall, the study observed mean value of 3.420 which indicates that majority of respondents neutral to the statement. Similarly, Standard Deviation of the statement is 1.45074 which indicates insignificant responses in students. In the similar line, the study observed that, 20.31 percent of students highly satisfied and 16.56 percent is satisfied with teaching methods of e-learning, in contrast, 16.56 percent dissatisfied and 13.44 percent is highly dissatisfied with teaching methods of e-learning, while 17.50 percent took neutral status regarding statement. In overall, the study observed mean value of 3.180 which indicates that majority of respondents satisfied with teaching methods. Similarly, Standard Deviation of the statement is 1.25029 which indicates insignificant deviations in responses. The study revealed that, 14.38 percent of students highly satisfied and 16.56 percent is satisfied with voice clarity in e-learning, in contrast, 16.56 percent dissatisfied and 7.81 percent is high dissatisfied, while 44.69 percent took neutral status regarding statement. In overall, the study observed mean value 2.9812 which indicates that majority of respondents are neutral to the statement. The study revealed that, 48.75 percent of students highly satisfied and 16.56 percent is satisfied with assessment and revision of classes,

in contrast, 12.50 percent dissatisfied and 8.75 percent is high dissatisfied, while 13.44 percent took neutral status regarding statement. In overall, the study observed mean value of 3.850 which indicates that majority of respondents are satisfied e-learning assessment and revision classes. Similarly, Standard Deviation of the statement is 1.846 which indicates insignificant deviations in responses.

In the similar line, the study observed that, 39.38 percent of students highly satisfied and 24.69 percent is satisfied with time table in e-learning, in contrast, 12.19 percent dissatisfied and 7.50 percent is highly dissatisfied with time table due to their personal reason, while 16.25 percent took neutral status regarding statement. In overall, the study observed mean value of 4.250 which indicates that majority of respondents highly satisfied with time convenience in e-learning. Similarly, Standard Deviation of the statement is 1.28840 which indicates insignificant deviations in responses. The study revealed that, 41.56 percent of students highly satisfied and 11.88 percent is satisfied with doubt clarification in e-learning, in contrast, 7.81 percent dissatisfied and 11.88 percent is high dissatisfied attributable to communication problem and physical interaction, while 18.44 percent took neutral status regarding statement. In overall, the study observed mean value 4.220 which indicates that majority of respondents are highly satisfied to the statement. Standard Deviation of the statement is 1.1356 which indicates insignificant deviations in responses. The study revealed that, 40.31 percent of students highly satisfied and 13.44 percent is satisfied with entire e-learning system and felt that it contributes for their development, in contrast, 13.44 percent dissatisfied and 12.19 percent is high dissatisfied, while 20.63 percent took neutral status regarding statement. In overall, the study observed mean value of 3.540 which indicates that majority of respondents are satisfied with overall e-learning system adopted by Telangana State. Similarly, Standard Deviation of the statement is 1.45241 which indicates insignificant deviations in responses.

### Reliability Test

**Table 4**

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.751	.945	9

Cronbach's alpha technique is used to assess the reliability, or internal consistency, of a set of scale or test items. The results of the test will be in range from ( $\alpha$ ) 0 to 1. If  $\alpha = 0$ , it indicates independency of all scale items one with another where  $\alpha = 1$  indicates entire dependency of all scale items and high covariance. Therefore, increasing the value indicates high reliability. In general, suggestible Cronbach alpha reliability coefficient level is 0.70. In the present study reliability test results is .751 which is higher than standard acceptable level of 0.70, this indicates high reliability and consistency of data and fit of ANOVA.

### ANOVA Results

**Table 5**

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig
Between students		2304.382	99	23.277		
Within Students	Between Items	130.529	8	16.316	2.829	.004
	Residual	4568.138	792	5.768		
	Total	4698.667	800	5.873		
Total		7003.049	899	7.790		
Grand Mean = 3.64889						

The analysis reveals that, in this case the Sig value is 0.004 which is less than 0.05 so we reject the null Hypothesis and accept alternative Hypothesis and conclude that "There is significant difference in between and within groups of students in satisfaction on e-learning system.

### Findings and suggestions

- The study observed that, in overall 63.44 percent i.e. one third of the students agreed that they are satisfied with content presented in e-learning. However, on the other side, few students expressed difficulty in understanding the content of e-learning.
- The study also found that, in overall 60.62 percent students satisfied and 19.38 percent students are neutral on teachers support in e-learning system. In contrast, 20 percent of students expressed dissatisfaction with teachers support. Therefore, the study suggests need of more teachers support in e-learning.
- The study witnessed that, around 52.51 percent of students satisfied with interaction of teachers with them where 30 percent expressed dissatisfaction in teacher's interaction.
- The study investigated that, 39.06 percent of students took neutral status regarding satisfaction on e-teaching methods, while 37 percent expresses satisfaction and 25 percent expresses dissatisfaction. The study also

observed that, 44.63 percent of students are neutral regarding voice clarity in e-teaching where 31 percent expressed satisfaction and 24.37 percent expressed dissatisfaction. Similarly, majority of students i.e. 65.31 percent is satisfied with assessment and revision of classes in e-learning, where as 21.25 percent expressed dissatisfaction. Similarly, in majority of students expresses good satisfaction with time convenience, doubt clarification. In overall 44 percent expressed satisfaction in entire e-learning system and 25.60 percent expresses dissatisfaction and 20.63 percent took neutral status. The hypothesis results supported alternative hypothesis that, there is significant difference in between and within groups of students in satisfaction on e-learning system adopted by Telangana government during covid period.

### Conclusion

The study concludes that, the covid 19 situation forced the nation towards electronic education in India at mass spread in the country without proper pre planning and adequate infrastructure. However, government of India and other States including Telangana took many steps towards adoption of electronic education system. However, due to available of televisions, computers and smart phones many students expressed satisfaction with e-learning system, in contrast one fourth students expressed dissatisfaction case of voice clarity, doubt clarification and methods of teaching due to not available of proper equipments and training to teachers etc. Therefore, present study suggests policy makers to develop well digital infrastructure before shift to digital education in the State.

### References

1. Mahwish W. Malik factor effecting learner's satisfaction towards e-learning: a conceptual framework, OIDA International Journal of Sustainable Development,2021:2(3):77-82.
2. Gopal R, Singh V, Aggarwal A. Impact of online classes on the satisfaction and performance of students during the pandemic period of COVID 19. *Educ Inf Technol*,2021:26:6923-6947. <https://doi.org/10.1007/s10639-021-10523-1>.
3. Kerz'ič D, Alex JK, Pamela Balbontín Alvarado R, Becerra DdS, Cheraghi M, Dobrowolska B *et al.* Academic student satisfaction and perceived performance in the e-learning environment during the COVID-19 pandemic: Evidence across ten countries. *PLoS ONE*,2021:16(10):e0258807. <https://doi.org/10.1371/journal.pone.0258807>
4. Prasetya TA, Harjanto CT, Setiyawan A. Analysis of student satisfaction of e-learning using the end-user computing satisfaction method during the Covid-19 pandemic, *Journal of Physics: Conference Series*, IOP Publishing, 2020. doi:10.1088/1742-6596/1700/1/012012
5. Jabeen, Sadia, Din, Aisha, Sadiq, Muhammad. Students' Satisfaction from E-Learning System: A Case Study of Virtual University of Pakistan. *International Journal of E-Adoption*,2014:6:1-13. 10.4018/ijea.201407010.