

FACTORS AFFECTING THE ATTITUDE OF STUDENTS' FROM MUSIC STREAM TOWARDS E-LEARNING

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Abstract

Background: - Electronic learning is becoming a popular method of carrying out the teaching-learning process during the pandemic. E-learning is the process of acquiring knowledge and skills through the use of technological tools such as computer and internet-based course materials by using online platforms like google meet, zoom meeting and others. This research work has been identified the factors affecting the student's attitude towards e-learning.

Research Methodology: The objective of the study is to know the factors affecting the students' attitude towards e-learning in higher education. In this regard, Croanbach's Alpha test and Principle Component Analysis (PCA) have been applied to analyze the collected data.

Findings & Conclusion: It has been found that there are three factors affecting the attitude of students from music stream towards e-learning and these are learner behaviors, educators' characteristics and technical skills.

Keywords: E-Leaning, Higher Education, Attitude, Music Stream, Students, COVID-19 Pandemic, PCA.

INTRODUCTION

Education act as a basic pillar in the growth and development of a nation. It is the basic driver which helps in developing the mind of people. The development in the mind results in innovation and creativity, which ultimately results in the overall growth of individuals and a country as well. The spread of the novel coronavirus (Covid-19) in December 2019 created havoc the world over and negatively affected all the sectors of the economy including the education sector, especially in India. The COVID-19 has its negative impact on the education sector due to this pandemic lockdown and various restrictions have been imposed by the Government of India. The announcement of lockdown and imposition of restrictions resulted in the closure of all educational institutions such as pre-primary schools, primary schools, middle schools, high schools, colleges, and universities all over the country. The delivery of education becomes difficult for all educators. Now, what to do to teach the students, it was the question at that time, when lockdown has been declared and restrictions imposed. Everyone was in trauma whether educator or learner that how they may complete their study? Because of pandemic classroom teaching or the physical interaction between tutor and student was not possible.

Thus, the only way to provide education to the learner is the online mode i.e. interaction through an online or electronic medium such as social media platform e.g. whatsapp, Instagram, Facebook, Twitter, Telegram and video communication applications e.g. Google meet, Zoom meeting, YouTube, Google Classroom and Livestreaming and others. In this drastic time of the pandemic, the online or electronic platform acts as a life-saving drug for both educators and learners. The electronic medium has its own pros and cons. It is not possible for every educationalist and student to have familiarity with the e-platform of transferring information. Himachal Pradesh is a hilly state and because of its geographical diversity and difference in the infrastructural arrangement, it becomes difficult for both the teachers and students to cope with the difficulties faced by them such as internet problem, lack of ability to afford the costly electronic gadgets needed to join the electronic platform. These complexities create hurdles in the path of tutors and learners to move ahead to complete their objective of completing their courses by using an electronic medium. So, it becomes important to study those factors which affect the attitude of learners towards e-learning.

E-LEARNING

It is the process of acquiring knowledge and skills through the use of technological tools such as computer and internet-based course materials, as well as local and wide-area networks. The most common platforms used for e-learning are whatsapp, Twitter, telegram and video communication applications e.g. Google meet, Zoom meeting, YouTube,

Google Classroom and Live streaming in India. The term e-learning was introduced on 1955 in India when it was called as Internet-based training, web-based training then online learning (Yadav & Tiwari, 2016).

LITERATURE REVIEW

This section of the research study deals with the review of previous studies already had done by various researchers.

Pozgaj and Knezevic (2007) in their paper, *“E-Learning Survey of Students’ Opinions”* concluded that e-learning will soon have to be used everywhere. The implementation of e-learning system as a substitute or supplement to traditional teaching is becoming a reality. **Imran (2012)** in the research, *“Trends and Issues of E-Learning in LIS-Education in India: A Pragmatic Perspective”* suggested that e-learning has created new dimensions in education both within and beyond the curriculum and is still looking at further opportunities of becoming more practical. The researcher also recommended that e-learning will soon substitute classroom learning in India. **Sood and Singh (2014)** in their study, *“E-Learning: Usage among Indian Students”* revealed that e-learning as a virtual learning environment depends heavily upon the internet. The developed countries have long been supporting online learning through e-learning has a bright future ahead. The developed countries especially India has also of late started to reap the benefits of e-learning. **Gaikwad and Randhir (2016)** in their research paper, *“E-Learning in India: Wheel of Change”* found that in underdeveloped and developing countries, e-learning raises the level of education, literacy and economic development. The e-learning plays an important role in educational development as a wheel of growth in education sector. The researchers further observed that if India and Malaysia act as joint venture together workout on this issue for development, it will be beneficial for education sector. **Lone (2017)** in the research article, *“Impact of Online Education in India”* revealed that human experience of online education is about to change. The technology is touching every aspect of society and changing it dramatically. The concept of online education is one of the most important and indispensable part of the society that has also been tapped by new innovations and discoveries. The researcher further suggested that it is an effective tool for development of educational sector in India. **Hoq (2020)** in the study, *“E-Learning during the Period of Pandemic (COVID-19) in the Kingdom of Saudi Arabia: An Empirical Study”* showed that teachers are very positive about e-learning and also the quality of e-learning may improve if proper support have been provided to instructors by the authority and management. **Ja’ashan (2020)** in the research article, *“The Challenges and Prospects of using E-Learning and EFL Students in Bisha University”* revealed that there are no significant differences between EFL students (males and females) of e-learning activities. The students aware of the benefits of using e-learning and the e-learning system can adapt to the aims of improving communication and enriching students’ learning experiences. **Pareek and Soni (2020)** in the study, *“A Comprehensive Study on Covid-19 Pandemic: An Impact on School Education in India”* disclosed that online classes are the best solution in situations like covi-19 pandemic. **Aina and Ogegbo (2021)** in their research, *“Teaching and Assessment through Online Platforms during the COVID-19 Pandemic: Benefits and Challenges”* found that lecturers were able to manage the teaching and assessment processes during the COVID-19 school restrictions, using a combination of platforms such as Blackboard-collaborate, Whatsapp, Kahoot and Google Classroom. The researchers further revealed that online assessment is highly susceptible to test or examination malpractices. **Alhumsi et al. (2021)** in their study, *“The Effect of E-Learning Sessions on the Development of Reading Comprehension: A Case of EFL Students’ Perceptions at Saudi Electronic University”* revealed that EFL university students had positive perceptions of the sue of online sessions to practice the reading comprehension skill. E-learning helped these students to be more motivated and created an atmosphere conducive to independent learning. **Bast (2021)** in the research, *“Perception of Online Learning among Students from India Set against the Pandemic”* found that receptiveness towards online learning was significantly higher for students from urban areas compared with rural areas. **Joshi and Dewangan (2021)** in their paper, *“Impact and Development of Online Education (E-Learning) in India”* found that different sectors of economy have changed including the education sector. The education system in India changed from Guru-Sishya Parampara to class room teaching, then teaching with the help of projectors/LED and currently its online class teaching through E-Learning portals or Web Based E-Learning. The e-learning system has emerged as a powerful contender for new-education system. In spite of diversity in culture, language and population e-learning system has gained huge popularity in affordability and purchasing power of Indians. The basic cause for the growth in e-learning system is drastic change and innovations in information technology. **Khan (2021)** in the review paper, *“Covid-19’s Impact on Higher Education: A Rapid Review of Early*

Reactive Literature” revealed that the educators must focus on improving students’ involvement in both aspects i.e. online and offline during the pandemic and post-pandemic as well.

RESEARCH GAP

There are several studies conducted on e-learning and online study in India, some of them are implemented in the education sectors but there is no study on the factors affecting the students’ attitude towards e-learning of higher education in Himachal Pradesh during the COVID-19 pandemic. It is required to study the impact of pandemic on higher education and the attitude of the students of Himachal Pradesh towards e-learning. Therefore, this research work was conducted on “FACTORS AFFECTING THE ATTITUDE OF STUDENTS’ FROM MUSIC STREAM TOWARDS E-LEARNING” in Himachal Pradesh during the COVID-19 pandemic.

RESEARCH METHODOLOGY

The research work has been conducted in a systematic manner which is required in research design. This study is quantitative in nature. The research methodology has been given as under: -

STATEMENT OF THE PROBLEM

The present study investigated the factors which have their influence on the attitude of students towards e-learning in higher education. The problem is entitled “FACTORS AFFECTING THE ATTITUDE OF STUDENTS’ FROM MUSIC STREAM TOWARDS E-LEARNING”.

DELIMITATION OF THE STUDY

The study focused on students’ attitudes towards e-learning in Himachal Pradesh. It is delimited to students of higher education who are considered undergraduate (UG), post graduate (PG), M. Phil and Ph.D. students of music stream in Himachal Pradesh. The study has been not covered the students of school, professional and technical education.

OBJECTIVE OF THE STUDY

- To identify the factors affecting the attitude of music students towards e-learning in higher education.

HYPOTHESIS OF THE STUDY

The hypothesis used in the study to check the existence of significant correlation among the variables. It is a basic assumption required for factor analysis. The hypothesis has been framed under as: -

H₀: - The variables are uncorrelated in the population.

H₁: - The variables are correlated in the population.

SOURCE OF DATA

The study is based on a primary source of data. The field survey was done during the “E-Workshop on Research Methodology: A Basic Approach, from 27 Jan. to 09 Feb. 2022 held at department of Music (Instrumental) Govt. Utkrisht college Dhaliara, Kangra in association with Pratibha Spandan Charitable Society, Shimla (H.P). The targeted population of the study is students of higher education in Himachal Pradesh. The primary data was collected through Google form (online) which consisted of seventeen questions related to different dimensions of e-learning. The five-point Likert scale has been employed in the questionnaire for measuring responses of seventeen variables which is ranging from 1 to 5 with 1 representing “Strongly Disagree”, 2 for “Disagree” 3 for “Neutral” 4 for “Agree” and 5 ranked for “Strongly Agree”.

SAMPLING TECHNIQUES

The empirical results of the study are based on the primary data collected through a sample survey of 400 respondents from music stream students’ of higher education in Himachal Pradesh. Convenience and Purposive sampling techniques have been adopted to draw samples for the purpose of the study.

RELIABILITY TEST

Reliability means internal consistency in the items of the scale. Cronbach’s Alpha test has been applied for checking the reliability of the scale. If the calculated value of Cronbach’s Alpha is 0.060 or more, then the scale is said to be reliable.

FACTOR ANALYSIS

In this study factor analysis has been applied to identify the factors which have influenced students' attitudes towards e-learning in higher education.

ANALYSIS AND INTERPRETATION OF DATA

The primary data has been analyzed with the help of SPSS and Principal Component Analysis (PCA) technique applied to identify factors affecting the students' attitude towards e-learning in higher education. The interpretation of the data has been given as under: -

DEMOGRAPHIC PROFILE OF RESPONDENTS

Table 1 presented the background information of the respondents in which the majority of respondents are female i.e. 61.8 percent and 38.3 percent are male. 72 percent of respondents' age is between 21 to 25 years and 6.7 percent are belonging from above 30 years. The maximum number of respondents are postgraduate (57%) which is followed by undergraduate (37%), Ph. D (3.5%) and M. Phil (2.5%) respectively. 94.5 percent of respondents have electronic gadgets whereas 5.5 percent of respondents say no. The table shows that 76.6 percent of respondents have a mobile phone which is followed by desktop computer (12%), other (6.7%) and laptop (4.6%) respectively. 52.8 percent of respondents have internet access at home, 40.3 percent of respondents say limited and 7 percent say there is no internet access at home. Reasons for limited internet access at home due to weak signal (38.7%), higher tariff chargers (23.3%) and 38% percent respondents have both reasons.

Table 1: Demographic Profile of Respondents

Dimension		Frequency	Valid Percentage	Cumulative Percentage
Gender	Female	247	61.8	61.8
	Male	153	38.3	100
	Total	400	100	-----
Age	16-20	45	11.3	11.3
	21-25	288	72	83.3
	26-30	40	10	93.3
	Above 30	27	6.7	100
	Total	400	100	-----
Education	Under Graduate	148	37	37
	Post Graduate	228	57	94
	M.Phil.	10	2.5	96.5
	Ph.D.	14	3.5	100
	Total	400	100	-----
Electronic Gadgets	Yes	378	94.5	94.5
	No	22	5.5	100
	Total	400	100	-----
Types of Electronic Gadgets	Mobile Phone	301	76.6	76.6
	Laptop	18	4.6	81.2
	Desktop Computer	48	12	93.2
	Others	27	6.7	100
	Total	400	100	-----
Internet Access at Home	Yes	211	52.8	52.8
	No	28	7	59.8
	Limited	161	40.3	100
	Total	400		-----
Reason or cause of limited Internet Access at your Home	Very Costly	70	23.3	23.3
	Due to weak signal	116	38.7	62
	Both	114	38	100
	Total	300		-----

Source: Data Collected through Questionnaire.

RELIABILITY TEST

Table-2 shows the result of reliability statistics. The calculated value of Cronbach’s Alpha is 0.920, which is higher than the value recommended implies that the scale is reliable.

Table 2: Reliability Statistics

Cronbach's Alpha	No. of Items
.920	17

FACTORS AFFECTING STUDENTS’ ATTITUDE TOWARDS E-LEARNING IN HIGHER EDUCATION

In this section, factor analysis has been applied to identify the factor which has influenced students’ attitudes towards e-learning in Higher Education. The analysis has been presented under: -

KMO and Bartlett's Test: - Table 3 depicts that KMO statistics are computed as .915 which is fall in the acceptance region (between 0.5 to 1.0) of the factor analysis model and indicates the appropriateness of factor analysis. Further, Bartlett’s test of sphericity which test the null hypothesis that the variable is uncorrelated in the population rejects the null hypothesis at a 1 percent level of significance. Bartlett’s test of sphericity shows that there exists a significant correlation among the variables.

Table 3: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.915
Bartlett's Test of Sphericity	Approx. Chi-Square	4320.610
	df	136
	Sig.	.000

Communalities: - Table 4 depicts the initial and extracted communalities. The communalities explain the amount of variance a variable share with all other variables taken for study. It is evident from the table that the initial communalities value is equal to 1 for the entire variable.

Table 4: Communalities

Statements	Initial	Extraction
I am familiar at using the electronic gadgets such as computer/laptop/tablet/mobile phone	1.000	.691
I know how to communicate electronically	1.000	.690
There is no difference between E-Learning and Class room teaching	1.000	.701
E-Learning is more effective and motivating than that offline learning	1.000	.788
E-Learning provides more contents to complete course as compared to class room learning	1.000	.646
Discussion is more effective with classmates and other students through online mode than that of offline mode	1.000	.680
Team work and sense of belongingness is more effective while using online mode of learning as compared to offline mode of learning	1.000	.769
Interaction with educators and students is more in e-learning medium than that of offline medium	1.000	.755
Face-to-face interaction with educators is important in learning	1.000	.336
Time management is more effective in online learning in comparison to offline learning	1.000	.532
Study management is more effective in online mode instead of offline mode	1.000	.624
The assignments, presentations and home work can easily and timely be completed by me during e-learning than that of offline-learning	1.000	.558
My educator is familiar and knowledgeable in using computer technologies	1.000	.637
My educators provide every support, suggestions and help to me while learning through online mode	1.000	.768

I am satisfied with the services provided by my educators through online learning	1.000	.746
E-Learning is a supplement to the traditional form of teaching	1.000	.531
I am accepting online-learning as a new form of learning	1.000	.588

Extraction Method: Principal Component Analysis.

EIGEN VALUE

Table 5 presents the initial Eigen value, extraction sums of squared loading and rotation sums of squared loading. Total variance table identify the quantity of factors and this calculated by eigenvalue which is greater than 1 (Kaiser, 1974). The table 5, reveals that the first three factors have eigenvalue is more than one and other have less than one which are insignificant factors. The variance of first attribute is $7.589/17 \times 100 = 44.639$. Similarly, the variance of 2nd attributes and 3rd attributes is $2.377/17 \times 100$ and $6.321(1.075/17 \times 100)$ respectively. Its cumulative variance of three factors is 64.94 percent.

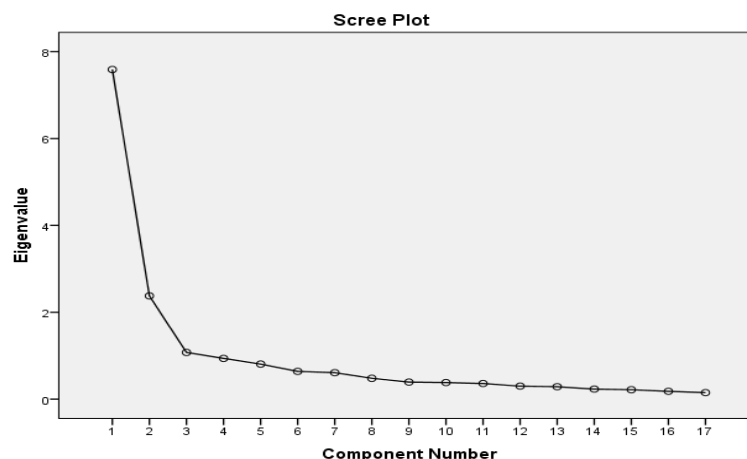
Table 5: Total Variance Explained

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.589	44.639	44.639	7.589	44.639	44.639	5.999	35.288	35.288
2	2.377	13.980	58.619	2.377	13.980	58.619	3.172	18.661	53.950
3	1.075	6.321	64.940	1.075	6.321	64.940	1.868	10.991	64.940
4	.937	5.512	70.453						
5	.806	4.743	75.196						
6	.638	3.756	78.952						
7	.608	3.575	82.527						
8	.479	2.815	85.342						
9	.392	2.306	87.648						
10	.381	2.240	89.889						
11	.359	2.114	92.003						
12	.299	1.756	93.759						
13	.286	1.682	95.441						
14	.231	1.359	96.800						
15	.216	1.272	98.071						
16	.180	1.056	99.127						
17	.148	.873	100.000						

Extraction Method: Principal Component Analysis.

Scree Plot: A graphical presentation of Eigenvalue which shows that three factors having Eigenvalue are more than one

Figure 1



Component Matrix: - Table 6 shows the component matrix results. Factor extraction helps in extracting the combination of variables that explain the greatest amount of variance. So, the table depicts that three factors are extracted. It explained highly correlation between variables.

Table 6: Component Matrix^a

Statements	Component		
	1	2	3
E-Learning is more effective and motivating than that offline learning	.821	-.330	.067
Interaction with educators and students is more in e-learning medium than that of offline medium	.818	-.289	.048
Team work and sense of belongingness is more effective while using online mode of learning as compared to offline mode of learning	.799	-.362	.015
E-Learning provides more contents to complete course as compared to class room learning	.770	-.215	.082
There is no difference between E-Learning and Class room teaching	.768	-.322	.084
Study management is more effective in online mode instead of offline mode	.754	-.189	.140
Discussion is more effective with classmates and other students through online mode than that of offline mode	.741	-.360	-.022
The assignments, presentations and home work can easily and timely be completed by me during e-learning than that of offline-learning	.740	.067	.073
I am accepting online-learning as a new form of learning	.726	.191	-.156
Time management is more effective in online learning in comparison to offline learning	.690	-.065	.229
E-Learning is a supplement to the traditional form of teaching	.666	.231	-.186
I am satisfied with the services provided by my educators through online learning	.649	.402	-.405
My educators provide every support, suggestions and help to me while learning through online mode	.582	.546	-.363
My educator is familiar and knowledgeable in using computer technologies	.565	.503	-.254
I know how to communicate electronically	.285	.607	.490
I am familiar at using the electronic gadgets such as computer/laptop/tablet/mobile phone	.253	.573	.546
Face-to-face interaction with educators is important in learning	.296	.480	.137
Extraction Method: Principal Component Analysis.			

a. 3 components extracted.

ROTATED COMPONENT MATRIX

It reveals the number of factors that can be retained. It is evident from the table there are three factors whose Eigenvalues are more than one. It is very difficult to understand which variables are grouped together under these three factors. It led to the use of varimax rotation for carrying out a factor analysis on the refined data. Factor loadings indicate the strength of the relationship between the particular factors and variables. In the component matrix, a particular variable may show higher loadings for many factors, it is making difficult to determine the variable under anyone given factor. This problem is solved by rotating the matrix that helps in assigning the variables with greater loadings to one factor. Table 7 presents the result of the rotated component matrix. It presented three factors are extracted through factor analysis i.e. the first factor comprises of the variable such as E-Learning is more effective and motivating than that offline learning, Teamwork and sense of belongingness is more effective while using online mode of learning as compared to offline mode of learning, Interaction with educators and students is more in e-learning medium than that of an offline medium, There is no difference between E-Learning and Classroom teaching, Discussion is more effective with classmates and other students through online mode than that of offline mode, E-Learning provides more contents to complete the course as compared to classroom learning, Study management is more effective in online mode instead of offline mode, Time management is more effective in online learning in comparison to offline learning, The assignments, presentations and homework can easily and timely completed by me during e-learning than that of offline-learning. These variables are named *learner behaviors*. The second factor consists of variables like my educators provides every support, suggestions and help to me while learning through online mode, I am satisfied with the services provided by my educators through online learning, my educator is familiar and

knowledgeable in using computer technologies, E-Learning is a supplement to the traditional form of teaching, I am accepting online-learning as a new form of learning. It could be named as *Educators characteristics*. The third factor is *technical skills* which included variables such as I am familiar with using electronic gadgets, I know how to communicate electronically, Face-to-face interaction with educators is important in learning.

Table 7: Rotated Component Matrix^a

Statement	Component		
	1	2	3
E-Learning is more effective and motivating than that offline learning	.869	.180	.002
Team work and sense of belongingness is more effective while using online mode of learning as compared to offline mode of learning	.856	.182	-.061
Interaction with educators and students is more in e-learning medium than that of offline medium	.842	.214	.014
There is no difference between E-Learning and Class room teaching	.824	.146	.010
Discussion is more effective with classmates and other students through online mode than that of offline mode	.799	.178	-.098
E-Learning provides more contents to complete course as compared to class room learning	.772	.211	.077
Study management is more effective in online mode instead of offline mode	.757	.180	.134
Time management is more effective in online learning in comparison to offline learning	.659	.164	.266
The assignments, presentations and home work can easily and timely be completed by me during e-learning than that of offline-learning	.603	.365	.245
My educators provide every support, suggestions and help to me while learning through online mode	.140	.843	.196
I am satisfied with the services provided by my educators through online learning	.260	.819	.087
My educator is familiar and knowledgeable in using computer technologies	.170	.740	.247
E-Learning is a supplement to the traditional form of teaching	.405	.589	.143
I am accepting online-learning as a new form of learning	.481	.577	.152
I am familiar at using the electronic gadgets such as computer/laptop/tablet/mobile phone	.038	.112	.823
I know how to communicate electronically	.036	.184	.809
Face-to-face interaction with educators is important in learning	.036	.341	.467
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.			

a. Rotation converged in 5 iterations.

DISCUSSION AND CONCLUSIONS OF THE STUDY

The study was conducted as a part of “E-Workshop on Research Methodology: A Basic Approach, from 27 Jan. to 09 Feb. 2022 held at department of Music (Instrumental) Govt. Utkrisht college Dhaliara, Kangra in association with Pratibha Spandan Shimla (Himachal Pradesh). The data was collected by using Google form (online) from the students of higher education of Himachal Pradesh. The purpose of the study is to know the factors affecting the students’ attitude towards e-learning in Himachal Pradesh. In this regard, the study has been found that there are three factors affecting the higher education students’ attitude towards e-learning such as learner behaviors, educators’ characteristics and technical skills.

POLICY IMPLICATIONS OF STUDY

The present study helps to know the factors affecting the attitude of students towards e-learning. The findings of the study help the educators and learners to cope with the difficulties faced by both during the lockdown due to the covid-19 pandemic. The outcomes of the study provide the factors which affect the attitudes of the students towards e-learning. Taking into consideration these factors may consider by the authority for frame the appropriate strategies towards e-learning or online classes.

LIMITATIONS OF THE STUDY

This study has some limitations such as: -

- This study was focused on students of higher education in Himachal Pradesh only.
- Data was collected through Google form (Online mode) there was no face-to-face interaction with respondents.

FURTHER SCOPE FOR STUDY

This study has investigated three factors affecting students' attitudes towards e-learning in higher education in Himachal Pradesh. It is required to examine more factors that have an influence on e-learning in Himachal Pradesh. It is also required to study the impact of COVID-19 on professionals, technical and school education.

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