

Impact of E-Learning Among Higher Education Students of Mat Workers in Tirunelveli District

Dr. J. Arockia subitha¹, dr. K. Mekala sharmini²

¹Assistant Professor of Economics, T.D.M.N.S. College, T.Kallikulam-627113

Affiliated to Manonmaniam Sundaranar University,
Abishekapatti, Tirunelveli, Tamil Nadu, India

² Head & Assistant Professor of Commerce, T.D.M.N.S. College, T.Kallikulam-627113

Affiliated to Manonmaniam Sundaranar University,
Abishekapatti, Tirunelveli, Tamil Nadu, India

Abstract: The study focuses on the impact of e-learning by the students from Pathamadai region in Tirunelveli district of Tamil Nadu. These students belong to the mat weaving community whose economical condition is very low. The students' perception regarding the impact of e-learning and their skills are analysed by this study. The students often face many barriers in e-learning as it's been a new concept in our Indian scenario. These barriers in e-learning are not experienced in face-to-face classroom learning. The online situation also creates difficulties and challenges for most of the teaching faculties as they need to carry out the routine documentation works.

Keywords: E-learning, Higher education, Mat weaving.

Introduction

The Covid 19 pandemic has made enormous changes in the teaching-learning process in higher education institutions and has affected the interaction between teachers and students. As an effect of the pandemic, educational institutions are handling all the academic activities through online platforms. Governments of countries worldwide have taken various measures to guarantee the continuousness of the educational process through online and virtual learning. This paradigm shift has generated changes in the students' perception in academic performance. The students from mat weaving community in Tirunelveli district of Tamil Nadu in India are suffering as they are not able to afford and adopt the new E-learning methodology. These students are from economically low background families those are already suffering from non-business activities post pandemic.

Objectives of the Study

The objectives of the present study are

- To examine the impact of e-learning of the students from family of mat weaving industry in Tirunelveli district.
- To determine the opportunities and challenges faced in e-learning in higher education.

Review of Literature

Urdu & Weggen (2000) related that online learning constitutes just one part of E-learning and describes learning via internet, intranet and extranet. They added that levels of sophistication of online learning vary. It can extend from a basic online learning program that includes text and graphics of the course, exercises, testing, and record keeping, such as test scores and bookmarks to a sophisticated online learning program.

Carnevale (2001) examined that the delivery mode we know for a fact does not impact the learning. It's the design of the instruction that impacts the learning, and also what the students bring to the instructional situation.

Dede (2008) stated that knowledge acquisition is a mental activity consisting of internal coding and structuring by the learner. Digital media, including VR-based learning can strengthen cognitivist learning design

Schunk (2012) found that an understanding of the existing learning paradigms is essential for performing an analysis of the current state of VR applications in higher education. Thus, we introduce the main ideas behind the existing learning paradigms. Literature distinguishes between behaviorism, cognitivism, and constructivism.

The number of students forced to stay at home owing to the shutdown of their educational institution at all levels. Many drastic changes in the education system were seen at the higher education level, such as the switch to online lectures/tutorials, closed libraries, changed communication channels for teacher's and administrative support, new assessment methods, different workloads and performance levels, and so on (Marinoni et al., 2020). (Kapasias et al., 2020).

Many pupils have lost enthusiasm and fervour for academics as a result of protracted vacations from school and college (Crawford et al., 2020).

COVID-19's rapid development on such a vast scale has inspired students of all ages. It has previously been stated that the disease's ongoing spread, travel restrictions, and the closure of educational institutions across the country had a significant impact on students' education, social lives, and mental health (Gonzalez et al., 2020)

Another key reason for this is that students in rural regions are less interested in higher education since they are mostly active in farming. Attending online classes necessitates an effective android phone, time off from farming occupations, lengthy hours of internet, and a serene environment for each student in a family (Cook, 2009).

Many students were unable to continue their studies even after receiving their own Android phones since they were not acclimated to or educated to utilise education programmes and search engines (Saha, Barman, & Chouhan, 2020)

Concepts Used in the Study

Academic Performance

The accomplishment met by the students from mat weaving in their Higher education in Universities, University colleges and Affiliated colleges.

Mat Weaver

A person who weaves mat at a handloom. In Tirunelveli district, three types of weavers are found, they are

- **Master weaver:** Owner of the mat handloom
- **Entrepreneur weaver:** One who organizes the handlooms and also weaves the mats.
- **Wage weaver:** One who weaves mats at others handloom on payment of work.

Methodology

The present study falls under the descriptive survey method. Simple random sampling method is followed in the study.

Population and Sample

150 questionnaires were distributed to the students of higher education belonging to mat weaving community in Tirunelveli district. 115 completed questionnaire was returned and used for the study.

Procedure of Data Collection

For the present study primary data is connected with the objectives are collected from the students of higher education belonging to mat weaving community by the researchers personally. Secondary data is collected from

previous literature, books and journals. Statistical Techniques Uses Tabulation of data, percentage, and Friedman test is used in the study.

Analysis and Interpretation of Data

Analysis of the study is carried out as follows

Socio-Demographic Profile of Students

Table 1 Frequency Distribution of Age of Respondents

Sl. No.	Gender	Frequency	Percent
1	Male	38	33.0
2	Female	77	67.0
3	Total	115	100.00

Source: Primary data

From the table 1 it is evident that 33.0 per cent of the students are male and 67.0 are female students participated in the study.

Table 2 Frequency Distribution of Age of Respondents

Sl. No.	Age	Frequency	Percent
1	18 - 21 years	82	71.3
2	21- 24 years	27	23.5
3	24 years and above	6	5.2
4	Total	115	100.00

Source: Primary data

It is clear from the table 2 that Students belonging to 18 - 21 years age group is 71.3 per cent, 21- 24 years is 23.5 per cent and 24 years and above age group is 5.2 per cent.

Table 3 Frequency Distribution of Location of Respondents

Sl. No.	Location	Frequency	Percent
1	Rural	88	76.5
2	Urban	27	23.5
3	Total	115	100.00

Source: Primary data

It is evident from the study that 76.5 per cent of the students are from rural areas of Tirunelveli district and 23.5 of them are from urban area location.

Table 4 Frequency Distribution of Degree of Respondents

Sl. No.	Degree	Frequency	Percent
1	Bachelor	99	86
2	Master	16	14
3	Total	115	100.00

Source: Primary data

It is examined from the table 4 that 86 per cent of the students are studying Bachelor degree and 14 percent are studying Master degree in higher education institutions.

Table 5 Frequency Distribution of Type of Institution of Respondents

Sl. No.	Type of Institution	Frequency	Percent
1	University	16	14
2	University College	52	45
3	Affiliated College	47	41
4	Total	115	100.00

Source: Primary data

It is observed from the table 5 that 14 per cent of the students are studying higher education in University , 45 per cent in University College, and 41 per cent in Affiliated Colleges.

Hypothesis I

Null Hypothesis: There is no significant difference between Mean Ranks towards impact of e-learning of students in Higher education during Pandemic

Table 6 Friedman test for significant difference between Mean Ranks towards impact of e-learning of students in Higher education during Pandemic

Sl. No.	Impact of e-learning of students in Higher Education during Pandemic	Mean Rank	Chi Square Value	P Value
1	Broad sources of learning	4.23	243.473	0.000**
2	Makes students engaged in learning	3.94		
3	Interactive learning is reduced	3.00		
4	Wide knowledge on various digital platforms for learning	2.80		
5	Students feel confused in the beginning stage	5.05		

6	Lack of reality in performance	4.84		
7	Knowledge gathering is reduced compared to traditional learning	4.14		

Source: Statistically analyzed data

Note: ** Denotes significance at 1 % level

Based on mean rank, 'Students feel confused in the beginning stage' (5.05) is the best factor behind impact of e-learning of students in Higher Education during Pandemic, followed by 'Lack of reality in performance' (4.84), Broad sources of learning (4.23), Knowledge gathering is reduced compared to traditional learning (4.14), 'Makes students engaged in learning' (2.80).

P value is less than 0.01. Therefore, the null hypothesis is rejected. Hence it is concluded that there is significant difference between mean ranks towards impact of e-learning of students in Higher Education during Pandemic.

Hypothesis II

Null Hypothesis: There is no significant difference between Male and Female with respect to Impact of e-learning of students in Higher Education during Pandemic

Table 7 Student t test for significant difference between Male and Female with respect to Impact of e-learning of students in Higher Education during Pandemic

Sl. No.	Impact of e-learning of students in Higher Education during Pandemic	Gender	Mean	SD	t value	P value
1	Broad sources of learning	Male	12.52	1.687	1.955	0.051
		Female	12.16	2.045		
2	Makes students engaged in learning	Male	12.01	1.539	0.985	0.067
		Female	11.98	2.462		
3	Interactive learning is reduced	Male	11.57	2.657	0.023	0.981
		Female	11.57	2.505		
4	Wide knowledge on various digital platforms for learning	Male	12.09	1.939	1.054	0.293
		Female	11.86	2.396		
5	Students feel confused in the beginning stage	Male	12.09	1.842	0.496	0.620
		Female	12.01	1.656		
6	Lack of reality in performance	Male	12.42	2.174	1.779	0.076
		Female	12.08	1.906		
7	Knowledge gathering is	Male	12.46	2.189	1.793	0.081

	reduced compared to traditional learning	to Female	12.09	1.911		
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Source: Statistically analyzed data

The above table 7 indicates that focus on Increased cost of production by Male mat weavers has mean of 12.52 with standard deviation 1.687 and focus on Increased cost of production by Female mat weavers has mean of 12.16 with standard deviation 2.045. Focus on Inadequate power supply by Male mat weavers has mean of 11.57 with standard deviation 2.657 and focus on Inadequate power supply by Female mat weavers has mean of 11.57 with standard deviation 2.505. Focus on Competition from power loom mat weaving industries by Male mat weavers has mean of 12.09 with standard deviation 1.939 and focus on Competition from power loom mat weaving industries by Female mat weavers has mean of 11.86 with standard deviation 2.396.

Focus on Confined work place by Male mat weavers has mean of 12.09 with standard deviation 1.842 and focus on Confined work place by Female mat weavers has mean of 12.01 with standard deviation 1.656. Focus on Insufficient skilled workers by Male mat weavers has mean of 12.42 with standard deviation 2.174 and focus on Insufficient skilled workers by Female mat weavers has mean of 12.08 with standard deviation 1.906. Focus on High cost of latest machineries and devices by Male mat weavers has mean of 12.46 with standard deviation 2.189 and focus on High cost of latest machineries and devices by Female mat weavers has mean of 12.09 with standard deviation 1.911.

Based on Mean score of Impact of technology, male mat weavers has better focus than female mat weavers. Since P value is less than 0.01, the null hypothesis is rejected at 1 per cent level of significance. Hence there is significant difference between male and female mat weavers with respect to Impact of e-learning of students in Higher Education during Pandemic.

HYPOTHESIS III

Null Hypothesis: There is no significant difference between Male and Female students with respect to Impact of e-learning of students in Higher Education during Pandemic

Table 8 Student t test for significant difference between Male and Female students with respect to Impact of e-learning of students in Higher Education during Pandemic

Sl. No.	Particulars	Gender	Mean	SD	t value	P value
1	Impact of e-learning of students in Higher Education during Pandemic	Male	18.46	2.882	4.694	0.000**
		Female	17.11	3.125		

Note: ** Denotes significance at 1 % level

Source: Statistically analyzed data

The above table 8 indicates that Impact of e-learning of students in Higher Education during Pandemic of Male students has mean of 18.46 with standard deviation 2.882 and Impact of e-learning of students in Higher Education during Pandemic of female students has mean of 17.11 with standard deviation 3.125.

Based on Mean score of Impact of e-learning of students in Higher Education during Pandemic, male students have better focus than female students.

Since P value is less than 0.01, the null hypothesis is rejected at 1 per cent level of significance. Hence there is significant difference between male and female students with respect to Impact of e-learning of students in Higher Education during Pandemic.

Hypothesis IV

Null Hypothesis: There is no significant difference between Type of Institution with respect to Impact of e-learning of students in Higher Education during Pandemic

Table 9 ANOVA for significant difference between Type of Institution with respect to Impact of e-learning of students in Higher Education during Pandemic

Sl. No.	Particulars	Type of Institution			F value	P value
		University	University College	Affiliated College		
1	Impact of e-learning of students in Higher Education during Pandemic	27.00	37.75	57.30	67.546	0.000**

Source: Statistically analyzed data

Note: ** Denotes significance at 1 % level

The table 9 shows that Impact of e-learning of students in Higher Education during Pandemic with Type of Institution as University has mean of 27.00, University College has mean of 37.75 and Affiliated College has mean of 57.30.

Mean score of Impact of e-learning of students in Higher Education during Pandemic with Type of Institution as Affiliated College is better than University and University College.

Since P value is less than 0.01, the null hypothesis is rejected at 1 per cent level of significance. Hence there is significant difference between Type of Institution with respect to Impact of e-learning of students in Higher Education during Pandemic.

Findings and Discussions

It is evident from the study that female student show more interest in online learning even in this pandemic period. Students belonging to the age group of 18 to 21 are higher in representation. More number of students are from the rural areas of location in Tirunelveli district. Student studying bachelor's degree are higher in representation in the study. Also, the students studying in universities is more in frequency in the study.

The confusions students face in the beginning stage of E- learning has to be overcome by the educational institutions. The online classes may be made lively so that the students show more interest in their studies. Knowledge gathering may be induced through E-learning and make them engaged in their studies. Because of the current outbreak, online classes have become an alternative to normal classrooms. Smartphones, laptops, the internet, and technological services must be viewed as a necessity rather than a luxury. The current investigation painted a picture of a distant rural place where pupils prefer physical classes over virtual schools. The major causes were the students' lack of access to smartphones, inadequate internet connectivity, and a lack of facilities for accessing online data, among other things. The same survey also indicated that because the majority of the students come from mat weaving households, they must make mats instead of taking online lessons.

Conclusion

The researchers observe that the study offers a perspective in the impact of e-learning of the students in higher education. The quality and effect of the educational system needs an improvement and that creates a positive perception in the minds of the students about online learning. This investigation also discovers that reduced face-to-face connection between instructor and students, the absence of peers, network issues, and a new class structure induce aggravation, dissatisfaction, and anxiety among the students investigated. There was a significant drop in the presence of students in online courses recorded here. Some features, such as social presence throughout the online course, requesting personal information from students, stimulating interactive exchange amongst students, and facilitating video communications, may assist to boost their interest and approach in virtual classrooms.

References

- [1] Carnevale, C. (2001), What Matters in Judging Distance Teaching? Not How Much It's Like a Classroom Course. *The Chronicle of Higher Education*.
- [2] Dede, C. (2008), Theoretical perspectives influencing the use of information technology in teaching and learning. In J. Voogt, & G. Knezek (Eds.), *International handbook of information technology in primary and secondary education*. pp. 43–62.
- [3] Schunk, D. H. (2012). *Learning theories an educational perspective*. Pearson.
- [4] Urdan, T. A., & Weggen C. C. (2000), *Corporate e-learning: Exploring a new frontier*.
- [5] Marinoni, G., Land, H. V., & Jensen, T. (2020), The impact of Covid-19 on higher education around the world.
- [6] Kapasia, N., Paul, P., Roy, A., Saha, J., Zaveri, A., Mallick, R. & Chouhan, P. (2020), Impact of lockdown on learning status of undergraduate and postgraduate students during COVID-19 pandemic in West Bengal, India. *Children and Youth Services Review*, p.116.
- [7] Crawford, J., Henderson, K. B., Rudolph, J., Malkawi, B., Glowatz, M., Burton, R. & Lam, S. (2020), COVID-19: 20 countries' higher education intra-period digital pedagogy responses. *Journal of Applied Learning & Teaching*, Vol. 3(1), pp.1- 20.
- [8] Gonzalez, T., Rubia, M. A., Hincz, K. P., Comas-Lopez, M., Subirats, L., & Fort, S., (2020), Influence of COVID-19 confinement on students' performance in higher education. *PLoS ONE*, Vol.15(10).
- [9] Cook, D. A. (2009), The failure of e-learning research to inform educational practice and what we can do about it. *Medical Teacher*, Vol.31(2), pp. 158–162.
- [10] Saha, J., Barman, B., & Chouhan, P. (2020), Lockdown for COVID-19 and its impact on community mobility in India: An analysis of the COVID-19 Community Mobility Reports, 2020. *Children and Youth Services Review*, p. 116.