



# LEARNER PREFERENCE FOR DIFFERENT MODES OF LEARNING

<sup>[1]</sup>Dr. Ranjith Somasundaran Chakkambath

<sup>[1]</sup> Asst. Professor, AMITY Global Business School Kochi

<sup>[1]</sup>rschakkambath@kch.amity.ed

**Abstract**— *E-learning is the latest buzz word since the spread of Information Technology (IT). In a Country like India, a lot of jobs are being generated through IT. E-learning has contributed to this learning curve of the candidates. The students are still more familiar with the traditional mode of teaching which offline mode. Some have accepted both. The reach of online mode of learning needs to be assessed. This paper tries to find the learning preference of students in Kerala. Also certain factors that contribute to the preference of online learning has also been identified. Covid-19 has impacted the education sector in a big way. As we look into the future, the relevance of online learning has increased but the offline mode which was the traditional mode of learning and teaching, has not lost its place among this Information Technology era.*

**Index Terms**— E-learning, Attitude, Modes of education, ANOVA, Face-to-face learning.

## I. INTRODUCTION

Modern development in Information Technology and related area have promoted the domain of online learning. The Indian Education system has been traditional from the Vedic ages. The students gained knowledge from the face-to-face interaction with the teacher residing in his home. We still follow this system with the students now have the option to commute from home to their respective Educational Institutes/Universities to gain their knowledge and degrees.

E-learning has been booming during this period of Covid-19 with World famous organization even providing Doctoral Scholars to defend their Thesis online. This paper has investigated the student preference of offline (traditional) and online learning. But whether pure online mode of education is really a preference by choice is one of the major aims of research in this paper.

According to research reports released in 2020 our country has a population with high literacy in English. This allows easier marketing of educational products of high quality. The study showed that, the level of online penetration in India had reached into the higher side. Further growth would be expected in coming months of 2020 also as Covid-19 has led to lockdown circumstances in the Country and different parts of the World.

There was a huge demand supply requirement of schools, colleges, universities and in the vocational

training centres which is growing every year in this Country even before Covid-19. Online education may be an alternative to share knowledge to even the remotest location

of the Country. The new Central Government policy to promote higher educational institutions in the country to deliver courses online under the University Grants Commission (Online Courses) Regulations, 2018 is a positive direction to boost this knowledge sharing.

But the big question is does our student community really support online mode only? Do they prefer other modes of learning also? If they prefer online, then what are factors the might be interested in?

Online mode of education also offers people from any age group or gender to be part of the system. But does it interest only a particular group? This paper tries to identify this aspect also. The paper also investigates the gender wise preference of students to different modes of learning (offline, online and both).

## II. LITERATURE REVIEW

According to Berteau (2009), some experts suggested that online learning is a way of teaching in which multiple integration of technology are sought while some were of the opinion that it is substitute of distance education, which is facilitated by the application of internet considered as an effective way of rapid communications [1].

Nichols (2003: 01) stated that online learning is a set of integration of different types of technologies solely for the purpose of promoting education. Online learning is a being a broad term, which provides complete description of various types of online learning adopting the modern Information and Communication Technologies (ICT) [2].

Certain studies hinted that students' attitudes are also affected via the excellence and easiness of using course of online learning, usability of online learning, and students' level and skills in usage of computer (Aixia, 2011:264-268)[2]. Their computer experiences, which

consists apparent self use, gratification and effectiveness and application of online learning play a dominant role (Liaw, 2011:28-32)[3].

Patricia Berteau's had made an interesting milestone of connection correlation of technical competences and students' approach towards online learning. Attitude of students were impacted by time allotted to computer use, showing computer exposure. Attitude variations were found between students who got hired and those who are had no occupation [1].

Neelam Dhamija tried to investigate the undergraduate students' approach towards the academic impact of online learning. An attitude scale was designed as a part of this research. Differences in attitude between different stream students were observed. The findings exposed that students showed interest to E-learning in their responses. There were no differences in attitude based on their stream of study. Though, significant variations were noted among students with respect to gender and rural and urban residence [4].

Contradictory to these findings, no differences were found between residents of rural and urban area among students . Also a similar output among both gender of students in a study carried out by Avant (2016) on undergraduate students of Aligarh Muslim University was concluded. A similar scale from previous study was used to investigate the attitude of learners towards online learning. Many students favoured online learning while rural girls showed less favourable attitude compared to urban girl students [5]

Studies conducted by Shachar M., & Neumann, Y., (2010) from 1996 to 2009 period, showed that Distance education learners outperformed traditional face-to-face teaching [6]. Studies by Neuhauser, C. (2002), also showed that there was no significant association between online and face-to-face learning [7].

A study done by Wong, L., & Fong, M. (2014), showed that there were no significant differences between face-to-face or online learning options and preference for online learning technology between male and female students studying first-year accounting [9].

Research by Samir Thakkar (2017) in relation to engineering students from Rajkot, Gujarat highly positive incline of diploma engineering students towards E-learning. Also this attitude is not affected by variations in gender, locality or social category of students [10].

Similar studies done in Peshawar by Obaid Ullah (2018), showed that though the students were not familiar with online learning system, they showed interest to try it to gain more exposure.

### III. OBJECTIVES

The objectives the study are given below:

- To study the attitude of student community to different modes of education
- To compare gender wise preference to E-learning
- To identify the different major factors in favour of online learning.

### IV. RESEARCH METHODOLOGY

The study was of descriptive type based on primary data collected through survey. Questionnaire was used to collect data from the students in Kerala. 7 point Likert scale were used in the questionnaire. IBM SPSS ver 23 was used to generate the output based on data collected. Secondary data

was collected to study the parameters that will have the completion of this research.

#### a. SAMPLE SIZE

Convenience Sampling was used for the study. The sample size included 200 students from different parts of Kerala. 162 respondents gave their feedback.

#### b. DATA COLLECTION METHOD

Questionnaire was used to collect primary data. Google forms were used as a platform to distribute the questions to the respondents located in different parts of Kerala.

#### c. HYPOTHESIS:

The following hypothesis were tested as part of this research:

H0 There is no association between gender and preference for different modes of education

H1 There is association between gender and preference for different modes of education.

H02: there is no association between different age groups and preference for modes of education.

H12 : there is association between different age groups and preference for modes of education.

### V. DATA ANALYSIS AND INTERPRETATION

Questionnaire was to used to collect data from the respondents. From sample size of 200, only 162 respondents had given their feedback. SPSS statistical package was used to do the analysis. A Cronbach's Alpha value of .680 was arrived as part of Reliability test. According to research paper by Keith (2017), Cronbach's alpha of this range can be considered to be satisfactory[12]. Keith had done in his research paper, a comparison of various value ranges of Cronbach's Alpha to support the same [12]. So the analysis was done based on this assumption. Cross tabs were tabulated to compare the gender versus preference for different modes of education (online, offline and both). Another Crosstab was used to check the education background of the respondents versus their preference for different modes of education.

Independent t Test was applied to check whether were was any association between gender and preference for different modes of Education. One way ANOVA was used to test the association between different age groups and preference for modes of education. Factor analysis was used to identify and group the constructs related to preference for online learning.

Gender	FREQUENCY	PERCENTAGE
Male	65	40.1
Female	97	59.9
Total	162	100

Table 1 Gender of Respondents

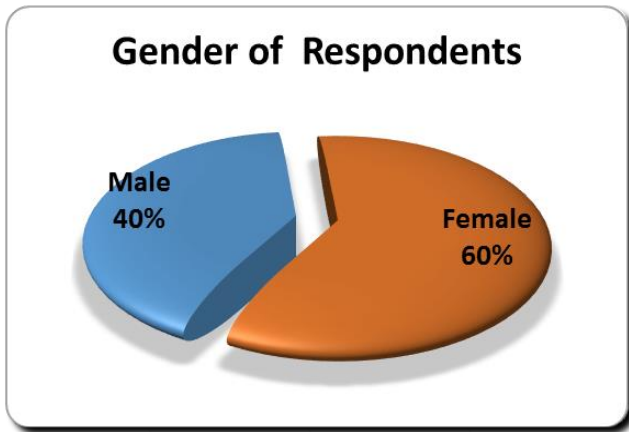


Fig 1. Pie Chart- Gender split

The above statistics showed the major part of the respondents were females who showed interest to give their feedback regarding this study. 59% of the respondents were from this group and the rest were males respondents.

AGE GROUP	FREQUENCY	PERCENTAGE
18-25	135	83.3
26-35	14	8.6
36-45	2	1.2
Above 55	2	1.2
Below 18	7	4.3
Total	162	100

Table 2 : Age Categories

83.3% of the respondents were from the younger age group 18-25. Next was from 26-35 years of age with 8.6%.

EDUCATION	FREQUENCY	PERCENTAGE
High School	12	7.4
Plus Two	8	4.9
Graduates	60	37
Post Graduates	82	50.6
Total	162	100

Table 3 : Education qualification of Respondents

50.6% of the respondents were Postgraduates while 37% were graduates. The rest was split between high school and +2 students.

Table 4: Education\* Modes of Education Cross Tabulation

Education	Modes of Education (Online, offline, both online and offline)	Total	Percentage%

	Offline	Online	Both Online and Offline		
High School Count	8	2	2	12	7.41
Plus 2 Count	4	2	2	8	4.94
Graduates Count	26	7	27	60	37.04
Post-Graduates	40	2	40	82	50.62
<b>Total</b>	78	13	71	162	100.00
<b>Percentage%</b>	48.15	8.02	43.83		

From the above Cross tabs, Postgraduates showed more interest in both online and offline combined or offline mode alone. Graduates also showed a similar ration of both online and offline combined mode compared to offline only mode. The interesting fact was that only less number showed affinity to only online mode.

Table 5: Gender\* Modes of Education

Gender	Modes of Education (Online, offline, both online and offline)			Total	Percentage%
	Offline	Online	Both Online and Offline		
Male	32	6	27	65	40.12
Female	46	7	44	97	59.88
<b>Total</b>	78	13	71		100.00
<b>Percentage %</b>	48.15	8.02	43.83		

This Crosstab gave the output showing more affinity of females towards offline mode only compared to their male counterparts. When comparing preference for both online and offline mode, this percentage is just near the offline mode preference when we observed the female group.

### Independent T Test Based On Gender Vs Preference For Online Learning

Table 6: Group Statistics

Gender* Mode of education[ online, offline , Both online and offline]	N	Mean	Std. Deviation	Std. Error Mean
Male	65	1.92	.957	.119
Female	97	1.98	.968	.098

The Mean is slightly higher (1.98) for the females when it comes to preference to different modes of education.

Table 8 : Mode of education[ online, offline , Both online and offline] Vs Age

Age Group	Frequency	Mean	Std. Deviation
18-25	135	2.01	0.977
26-35	14	1.93	0.917
36-45	2	1.5	0.707
46-55	2	1	0
above 55	2	1	0
below 18	7	1.57	0.787
Total	162	1.96	0.961

The output showed higher mean (2.01) for the age group of 18-25 years when we consider preference for modes of education. The next group which had a nearby score of mean was 26-35 years with 1.93.

Table 9: ANOVA

Mode of education[ online, offline , Both online and offline]

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.584	5	1.117	1.217	.303
Within Groups	143.113	156	.917		
Total	148.698	161			

The One-way ANOVA showed an F value of 1.217 and Sig=.303, which is greater than .05. So the result is statistically insignificant. Hence we accept the null hypothesis.

### FACTOR ANALYSIS

Table 10: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.728
Bartlett's Test of Sphericity	Approx. Chi-Square
	437.240
	df
	15
	Sig.
	.000

From Table 10, since Kaiser-Meyer-Olkin is greater than .5, the factor analysis is adequately run. Since p value is less than .05, the factor done is acceptable.

Table 11 Rotated Component Matrix<sup>a</sup>

Online education is an effective way of learning because :	Component	
	1	2
It helps in developing learner's skill	.877	

Mode Of Education[ Online, Offline , Both Online And Offline]	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Confidence Interval of the Difference	
								Lower	Upper
Equal Variances assumed	.223	.637	-.365	160	.716	-.056	.154	-.361	.249
Equal variances not assumed			-.365	138.455	.715	-.056	.154	-.361	.248

Table 7: Independent t test

The result of the Independent t-test showed, .637 (p greater than .05) which is statistically insignificant. So we accept the null hypothesis.

### ONE-WAY ANOVA- Modes of educations vs Age of respondents

Offers an interactive mode of education	.873	.105
Ease of access of information related to the course	.857	
Students may have the opportunity to connect what they learn with practical work	.835	
Students can learn at their own place		.876
It enables learning at anytime	.136	.858

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

## VI. FINDINGS

The study showed that females have more affinity to both online and offline modes of education. The online mode of education preference for this group is low. They also prefer offline mode at par with a combination of online and offline modes of education.

The Study also shed that postgraduates were more interested to express their mode of learning as offline and online combination. Also certain groups also preferred on offline. Pure online classes were not well taken by many groups including school students.

Independent t Test was able to check the association of gender with modes of education and resulted in no such association statistically. Higher mean was found for Females showed their interest in pursuing knowledge.

One way ANOVA has proved that the age of the learners had no association with the modes of education. Highest mean was fund for the age group between 18 -25 years which suggest their greater interest to learn and get more knowledge for future job prospects for promotion.

As a part of Factor analysis, two key factors related to online learning preference was grouped under the names:” Nuturing Learning” and “Flexibility of Learning”. These factors were connected to a set of constructs used in the survey that generated to arrive at this assumption.

## VII. CONCLUSION

The study focused on the influence of different modes of education among the students who range from high school to Post Graduates. The statistical tests done were suggesting that there was no gender wise association with the preference for different modes of education. Age was not a contributing factor to choice of mode of education. The present millennia will see a rise in the use these online learning platforms. The major factors were grouped related to online learning preference. Although Covid-19 has made online learning the only option till a period of time when students can have the liberty to move back to traditional offline mode of learning, the affinity to offline mode will continue to be an all-time favorite among this learners community. As the future is looking towards Online mode of education to contribute

more, the students perspective regarding how to make it more useful for them would be the key in any such projects.

## REFERENCES

- Bertea, P. (2009). Measuring students attitude towards e-learning A case study. Proceedings of the 5th standing conference on e-learning and software for development held in Bucharest from 09-10 April 2009 Bucharist Romania 1-8
- Aixia, D., & Wang, D. (2011). Factors influencing learner attitudes toward online learning and development of online learning environment based on the integrated online learning platform. *International Journal of e-Education, e-Business, e-Management and online learning*, 1(3), 264-268.
- Liaw, S.S and Huang, H.M. (2011). A study of investigating learners attitudes toward e-learning, 5th International Conference on Distance Learning and Education, IPCSIT vol.12, IACSIT Press, Singapore.
- Dhamij, Neelam (2014). Attitude Of Undergraduate Students Towards the use Of e-Learning MIER Journal of Educational Studies, Trends & Practices , Vol. 4, No. 1 pp. 123-135
- Varshney, Anant Kumar. "Attitude of Rural and Urban Undergraduate Students of Aligarh Muslim University towards Computer." *EDUCARE* 8.1 (2016): 97-104.
- Shachar M., & Neumann, Y., (2010). Twenty years of research on the academic performance differences between traditional and distance learning: Summative meta-analysis and trend examination. *MERLOT Journal of Online Learning and Teaching*, 6 (2), 318-334.
- Charlotte Neuhauser (2002) Learning Style and Effectiveness of Online and Face-to-Face Instruction, *American Journal of Distance Education*, 16:2, 99-113.
- Wong, L., & Fong, M. (2014). Student attitudes to traditional and online methods of delivery. *Journal of Information Technology Education: Research*, 13, 1-13.
- Obaid Ullah et al (2017) Students’ Attitude towards Online Learning at Tertiary Level, *PUTAJ – Humanities and Social Sciences*, Vol.25, No.1-2 (Special Issue-Media Matters).
- Samir Thakkar, Hiren Joshi, Students(2017), Attitude towards E-learning *International Journal of Advance Engineering and Research Development (IJAERD)* Volume 4, Issue 11.
- [www.ibef.org](http://www.ibef.org)
- Keith S. Taber(2017) , The Use of Cronbach’s Alpha When Developing and Reporting Research Instruments in Science Education, *Res Sci Educ* DOI 10.1007/s11165-016-9602-2 , Springer.

