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Online Higher Education in India – Challenges & Opportunities

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Abstract: *The increment of economic affairs of any country is determined by their education system and by the intensity of them, education is nation's strength. An educated nation is always counted as developed one. Indian education system is the 3rd largest system after U.S. and China. We have an Independent education system which is enhancing day by day and also there are certain challenges and opportunity that make our system more viable. Literature review is constructed upon websites and research papers. This study is based on quantitative research design which allows us to do a systematic analysis of variables or find the association between them, study tests certain hypothesis based of the objective of study. Study is based on 5 point Likert questionnaire for testing hypothesis; used Google Forms for data collection with sample size 60 students of Rudrapur and Grater Noida in Uttar Pradesh & has used stratified sampling techniques to test various constructs via Hypothesis examining impact of Online courses on Higher Education in India .*

Keywords: *Higher education, e- learning, challenges and opportunities.*

I. INTRODUCTION

Higher education refers to the education in colleges and universities. higher education means integrated development of personality which should be imparted through head, hand and heart. It is all about post-graduation, PhD, law etc.

A. Challenges Of Higher Education

The first issue that higher education in India is facing is decreasing teaching quality. Teachers are not well trained and qualified for the job they are assigned to. Some colleges recruit young graduates as professors who have no experience or knowledge. So this is a big problem. Financing is also an issue with higher education in India. Indian people are already spending very much amount on higher studies; however everyday new courses are coming up to the market with high price strategy. The quality of higher education has to be improved rather than more finance the colleges should start providing the courses at a low cost because many of the students wants to opt those courses which are of high costs but because of financial problem they step back. Also one of the major problems is quota system. Quota system is not good for the quality of higher education. Talent and merit is more important than your identity. Talented students should get a chance to study in good campus. India has some of the finest minds to teach and learn. But most of the Indian education system is focused on theory. Classroom knowledge needs to be little more interactive. However, quota system is still a challenge. Poor infrastructure is another challenge to the higher education system of India particularly the institutes run by the public sector suffer from poor physical facilities and infrastructure.

There are large number of colleges which are functioning on second or third floor of the building on ground or first floor there exists photocopy shops. India has some of the finest minds to teach and learn. But most of the Indian education system is focused on theory. Classroom knowledge needs to be little more interactive.

B. Opportunities Of Higher Education

Indian higher education system is growing very fast irrespective of various challenges but there is no reason that these Challenges cannot be overcome. With the help of new-age learning tools, it is easy for country like India to overcome these problems and bring a new strategy in the country's higher education sector. With such a country with huge population properly educated, the possibilities are endless. If knowledge is imparted using advanced digital teaching and learning tools, and society is made aware of where we are currently lagging behind, our country can easily emerge as one of the most developed nations in the world. The need to enhance the employability of graduates is presenting entry points for collaboration in enterprise education and entrepreneurship, links with industry, research skills and the wide range of transferable skills, including English. Better communications are required because most of the jobs required fluent communication.

II. LITERATURE REVIEW

The Study on Online education in India done by KPMG and Google in May 2017 shows the online education market in India currently stands at USD 247 million and it estimate to witness 8x growth over next five years to reach the USD 1.98 billion mark in 2021. This study did not factor impact of Covid 19 on education. Shu-Sheng Liaw, in the research study on effectiveness of e-learning investigates the reason for dissatisfaction of some of the e-learning students. The research surveys 424 university students for their feedback on effectiveness of e-learning for them. The government of India is for the first time allowing universities to offer fully online degrees -- a change that could reshape education delivery in the country while blowing open the door to a previously limited market for U.S.-based online education services companies.

<https://www.insidehighered.com/news/2020/02/17/indian-government-opens-market-online-higher-education>

A. Objective of Study

The aim of the study is to examine the implementation of education system in India, especially higher education system. It examines those circumstances that are becoming a road block in the path of effective education system. During the study we have collected two samples of students, from Rudrapur and Greater Noida in Uttar Pradesh. Study aims to identify if there these two groups have same opinion about various factors of education system or they have different views? Study also want to analysis the various recent trends and opportunities that will help Indian education system to make the system more effective and efficient for the student's growth and country as well. Major objectives tested are

- 1) To analyze contrasting challenges, scholar and teachers are facing due to Online education mode
- 2) Determine whether there is association between the two variables i.e. Online Education Mode and Higher Education or not.
- 3) Examine various Challenges and opportunities due to Online Education Mode on Indian Higher Education.

III. RESEARCH METHODOLOGY

A. Research Design- Quantitative Research Design

Study applies quantitative research design. It allows us to do the systematic scientific investigation of phenomena i.e. relationships or different constructs. The objective is to develop mathematical models that will use statistical techniques, theories and or hypothesis pertaining to natural phenomena.

B. Statistical tool – T-test

A T- test is a way to find out if survey or experiment results are significant using 2 groups. In other words, they help you to figure out if you need to reject the null hypothesis or accept the alternate hypothesis. Basically, you're testing two groups to see whether they are associated or not.

C. Scope of the Study

The study statistically tests various Null and Alternative Hypothesis on various constructs of Online Education impact on Higher Education using 2 sample independent t test.

D. Limitation of the Study

Study uses only 60 sample size thus it cannot predict the whole population with these less number of sample size we need large number of response for better prediction of data for population. Random stratified sampling technique is used

E. Sample

Study has used two independent samples who are students of Rudrapur and Grater Noida districts in Uttar Pradesh studying in various streams. Study has collected response of 60 people in which 30 are from Rudrapur and 30 from Grater Noida by using Stratified sampling technique for sampling and 5 point Likert scale for Questionnaire design & scale.

F. Questionnaire Design

A total of 10 questions were designed to test Constructs related to Online Education impact on Higher Education using 5 points Likert Scale . Students were randomly selected from 2 districts and they were Graduates /Post Graduates, Male/Female and were from all streams Arts, Commerce, Science, Engineering and Management.

The response was obtained on Google Forms and Item Analysis was carried out on all questions to calculate the Discriminant Index on Likert Scale .All Questions DI score was between 0.3 to 0.8, thereby implying that the questions were neither too easy nor too difficult

G. Hypotheses of Study

Study has tested 15 Constructs on Impact of Null and Alternative Hypothesis

- 1) *Ho1*- There is no significance difference in view point about effectiveness of e- learning over traditional education system between two groups undertaking various courses.
- 2) *Ha1*- There is significance difference in view about effectiveness of e- learning over traditional education system between two groups undertaking various courses.
- 3) *Ho2*- There is no significance difference in view point about effectiveness of e- learning over traditional education system between females of both the groups.
- 4) *Ha2*- There is significance difference in view point about effectiveness of e- learning over traditional education system between females of both the groups.
- 5) *Ho3*- There is no significance difference in view point about effectiveness of e- learning over traditional education system between males of both the groups.
- 6) *Ha3*- There is significance difference in view point about effectiveness of e- learning over traditional education system between males of both the groups.
- 7) *Ho4*- There is no significance difference in view point about Students bias between two undertaking various courses.
- 8) *Ha4*- There is significance difference in view point about Students bias between two undertaking various courses.
- 9) *Ho5*- There is no significance difference in view point about Students bias between Females of both the groups.
- 10) *Ha5*- There is significance difference in view point about Students bias between Females of both the groups.
- 11) *Ho6*- There is no significance difference in view point about Students bias between males of both the groups.
- 12) *Ha6*- There is no significance difference in view point about Students bias between males of both the groups.
- 13) *Ho7*- There is no significance difference in view point about role of technology playing an important role in higher education between two groups undertaking various courses.
- 14) *Ha7*- There is significance difference in view point about role of technology playing an important in higher education between two groups undertaking various courses.
- 15) *Ho8*- There is no significance difference in view point about role of technology playing an important in higher education between females of both the groups.
- 16) *Ha8*- There is significance difference in view point about role of technology playing an important in higher education between females of both the groups.
- 17) *Ho9*- There is no significance difference in view point about role of technology playing an important in higher education between Males of both the groups.
- 18) *Ha9*- There is significance difference in view point about role of technology playing an important in higher education between Males of both the groups.
- 19) *Ho10*- There is no significance difference in view point about online courses and infrastructure problems of two groups undertaking various courses.
- 20) *Ha10*- There is significance difference in view point about online courses and infrastructure problems two groups undertaking various courses.
- 21) *Ho11*- There is no significance difference in view point about online courses and infrastructure problems between Females of both the groups.
- 22) *Ha11*- There is significance difference in view point about online courses and infrastructure problems between Females of both the groups.
- 23) *Ho12*- There is no significance difference in view point about online courses and infrastructure problems between Males of both the groups.
- 24) *Ha12*- There is significance difference in view point about online courses and infrastructure problems between Males of both the groups.
- 25) *Ho13*- There is no significance difference in view point about inefficient pedagogy and content between two undertaking various courses.

- 26) *Ha13*- There is significance difference in view point about inefficient pedagogy and content between two undertaking various courses.
- 27) *Ho14*- There is no significance difference in view point about inefficient pedagogy and content between Females of both the groups.
- 28) *Ha14*- There is significance difference in view point about inefficient pedagogy and content between Females of both the groups.
- 29) *Ho15*- There is no significance difference in view point about inefficient pedagogy and content between Males of both the groups.
- 30) *Ha15*- There is no significance difference in view point about inefficient pedagogy and content between Males of both the groups.

IV. DATA ANALYSIS AND INTERPRETATION

- 1) *Hn1*- We refuse to accepted the null hypothesis because P value is less than .05 which show that there is significance difference between the both sample about effectiveness of e- learning.

t-Test: Two-Sample Assuming Unequal Variances		
	<i>E- LEARNING</i>	<i>E-LEARNING</i>
Mean	3.2	3.833333333
Variance	0.613793103	1.212643678
Observations	30	30
Hypothesized Mean Difference	0	
df	52	
t Stat	-2.566791848	
P(T<=t) one-tail	0.006591109	
t Critical one-tail	1.674689154	
P(T<=t) two-tail	0.013182218	
t Critical two-tail	2.006646805	

- 2) *Hn2*- Null hypothesis is rejected, there is significance difference in view point about effectiveness of e- learning over traditional education system between females of both the groups.

t-Test: Two-Sample Assuming Unequal Variances		
	<i>Variable 1</i>	<i>Variable 2</i>
Mean	2.75	3.80952381
Variance	0.847222222	1.486904762
Observations	10	21
Hypothesized Mean Difference	0	
df	23	
t Stat	-2.686627951	
P(T<=t) one-tail	0.006586156	
t Critical one-tail	1.713871528	
P(T<=t) two-tail	0.013172311	
t Critical two-tail	2.06865761	

3) *H03*- We accepted the null hypotheses, there is no significance difference in view point about effectiveness of e- learning over traditional education system between males of both the groups.

t-Test: Two-Sample Assuming Unequal Variances		
	<i>E- LEARNING</i>	<i>E-LEARNING</i>
Mean	3.425	3.888888889
Variance	0.375657895	0.673611111
Observations	20	9
Hypothesized Mean Difference	0	
df	12	
t Stat	-1.516036881	
P(T<=t) one-tail	0.077700575	
t Critical one-tail	1.782287556	
P(T<=t) two-tail	0.155401149	
t Critical two-tail	2.17881283	

4) *H04*- Null is accepted, there is no significance difference in view point about Students bias between two groups undertaking various courses.

t-Test: Two-Sample Assuming Unequal Variances		
	<i>DISCRIMINATION</i>	<i>DISCRIMINATION</i>
Mean	2.15	2.183333333
Variance	0.571551724	0.542816092
Observations	30	30
Hypothesized Mean Difference	0	
df	58	
t Stat	-0.172951802	
P(T<=t) one-tail	0.431645732	
t Critical one-tail	1.671552762	
P(T<=t) two-tail	0.863291464	
t Critical two-tail	2.001717484	

5) H_05 - Null is accepted, there is no significance difference in view point about Students bias between Females of both the groups.

t-Test: Two-Sample Assuming Unequal Variances		
FEMALE		
	Variable 1	Variable 2
Mean	2.45	2.119047619
Variance	1.247222222	0.497619048
Observations	10	21
Hypothesized Mean Difference	0	
df	13	
t Stat	0.859056414	
P(T<=t) one-tail	0.202935801	
t Critical one-tail	1.770933396	
P(T<=t) two-tail	0.405871602	
t Critical two-tail	2.160368656	

6) H_06 - Null is accepted, there is no significance difference in view point about Students bias between males of both the groups.

t-Test: Two-Sample Assuming Unequal Variances		
MALE		
	DISCRIMINATION	E-LEARNING
Mean	2	3.888888889
Variance	0.210526316	0.673611111
Observations	20	9
Hypothesized Mean Difference	0	
df	10	
t Stat	-6.464704785	
P(T<=t) one-tail	3.60578E-05	
t Critical one-tail	1.812461123	
P(T<=t) two-tail	7.21156E-05	
t Critical two-tail	2.228138852	

- 7) *Ho7*- Null is accepted, there is no significance difference in view point about role of technology playing an important in higher education between two undertaking various courses.

t-Test: Two-Sample Assuming Unequal Variances		
	TECHNOLOGY	TECHNOLOGY
Mean	4.2	3.966666667
Variance	0.562068966	0.688505747
Observations	30	30
Hypothesized Mean Difference	0	
df	57	
t Stat	1.142832523	
P(T<=t) one-tail	0.128942851	
t Critical one-tail	1.672028888	
P(T<=t) two-tail	0.257885702	
t Critical two-tail	2.002465459	

- 8) *Ho8*- We refuse to reject the null hypothesis, there is no significance difference in view point about role of technology playing an important in higher education between females of both the groups.

t-Test: Two-Sample Assuming Unequal Variances		
FEMALE		
	Variable 1	Variable 2
Mean	4	4.023809524
Variance	1.111111111	0.736904762
Observations	10	21
Hypothesized Mean Difference	0	
df	15	
t Stat	-0.06226935	
P(T<=t) one-tail	0.475585253	
t Critical one-tail	1.753050356	
P(T<=t) two-tail	0.951170507	
t Critical two-tail	2.131449546	

- 9) *Ho9*- Null is accepted, there is no significance difference in view point about role of technology playing an important in higher education between Males of both the groups.

t-Test: Two-Sample Assuming Unequal Variances		
MALE		
	TECHNOLOGY	TECHNOLOGY
Mean	4.3	3.833333333
Variance	0.3	0.625
Observations	20	9
Hypothesized Mean Difference	0	
df	12	
t Stat	1.605910137	
P(T<=t) one-tail	0.067135971	
t Critical one-tail	1.782287556	
P(T<=t) two-tail	0.134271941	
t Critical two-tail	2.17881283	

10) H_{010} - P value is greater than .05, therefore Null is accepted, there is no significant difference in view point about online courses and infrastructure problems two undertaking various courses.

t-Test: Two-Sample Assuming Unequal Variances		
Infrastructure		
	INFRASTRUCTURE FACILITIES	INFRA FAC
Mean	1.933333333	1.95
Variance	0.529885057	0.626724138
Observations	30	30
Hypothesized Mean Difference	0	
df	58	
t Stat	-0.084882088	
P(T<=t) one-tail	0.466323726	
t Critical one-tail	1.671552762	
P(T<=t) two-tail	0.932647453	
t Critical two-tail	2.001717484	

11) H_{011} - Null is accepted, there is no significant difference in view point about online courses and infrastructure problems between Females of both the groups.

t-Test: Two-Sample Assuming Unequal Variances		
FEMALE		
	Variable 1	Variable 2
Mean	2.05	1.833333333
Variance	1.025	0.458333333
Observations	10	21
Hypothesized Mean Difference	0	
df	13	
t Stat	0.614486258	
P(T<=t) one-tail	0.274749065	
t Critical one-tail	1.770933396	
P(T<=t) two-tail	0.549498129	
t Critical two-tail	2.160368656	

12) *Ho12*- Again Null is accepted, there is no significance difference in view point about online courses and infrastructure problems between Males of both the groups.

t-Test: Two-Sample Assuming Unequal Variances		
MALE		
	<i>INFRASTRUCTURE FACILITIES</i>	<i>INFRA FAC</i>
Mean	1.875	2.222222222
Variance	0.3125	1.006944444
Observations	20	9
Hypothesized Mean Difference	0	
df	10	
t Stat	-0.972387302	
P(T<=t) one-tail	0.176895439	
t Critical one-tail	1.812461123	
P(T<=t) two-tail	0.353790879	
t Critical two-tail	2.228138852	

13) *Ho13*- Null is accepted, there is no significance difference in view point about inefficient pedagogy and content between two undertaking various courses.

t-Test: Two-Sample Assuming Unequal Variances		
Infrastructure		
	<i>INFRASTRUCTURE FACILITIES</i>	<i>INFRA FAC</i>
Mean	1.933333333	1.95
Variance	0.529885057	0.626724138
Observations	30	30
Hypothesized Mean Difference	0	
df	58	
t Stat	-0.084882088	
P(T<=t) one-tail	0.466323726	
t Critical one-tail	1.671552762	
P(T<=t) two-tail	0.932647453	
t Critical two-tail	2.001717484	

14) *Ho14*-Null is accepted, there is no significance difference in view point about inefficient pedagogy and content between Females of both the groups.

t-Test: Two-Sample Assuming Unequal Variances		
FEMALE		
	Variable 1	Variable 2
Mean	2.05	1.833333333
Variance	1.025	0.458333333
Observations	10	21
Hypothesized Mean Difference	0	
df	13	
t Stat	0.614486258	
P(T<=t) one-tail	0.274749065	
t Critical one-tail	1.770933396	
P(T<=t) two-tail	0.549498129	
t Critical two-tail	2.160368656	

15) *Ho15*- We refuse to reject the Null hypothesis, there is no significance difference in view point about inefficient pedagogy and content between Males of both the groups.

t-Test: Two-Sample Assuming Unequal Variances		
MALE		
	INFRASTRUCTURE FACILITIES	INFRA FAC
Mean	1.875	2.222222222
Variance	0.3125	1.006944444
Observations	20	9
Hypothesized Mean Difference	0	
df	10	
t Stat	-0.972387302	
P(T<=t) one-tail	0.176895439	
t Critical one-tail	1.812461123	
P(T<=t) two-tail	0.353790879	
t Critical two-tail	2.228138852	

V. CONCLUSION

Study using Statistical Independent t tests on two independent samples chosen by stratified sampling technique from two districts in Uttar Pradesh on students with different streams, administered with Likert 5 point Questionnaire suggests a significance impact of online education on traditional higher education system in India.



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