



## **MEASURE THE PERFORMANCE OF BLENDED LEARNING OVER THE TRADITIONAL LEARNING WITH REFERENCE TO PUBLIC AND PRIVATE INSTITUTIONS**

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### **Abstract:**

The goal of the research is to measure the performance of blended learning over the traditional learning with reference to public and private institutions. The blended learning techniques are now more popular than the online learning. The study conducts a comparative analysis between blended learning and traditional learning based on various factors related to performance such as satisfaction level, quality learning, effective learning, flexibility, content customized, performance enhancement, level of interaction, motivation, no fear factor, quality of content and time management. The survey method was used in which a well-structured questionnaire was being designed and being tested using the Cronbach's alpha value. The Cronbach's alpha value was found to be appropriate which shows internal consistency with in the instrument. The hypothesis testing results confirms that there is significant difference between level of awareness and blended learning among the private and public schools or colleges. The other hypothesis suggests that there is difference in performance based on type of academic institutions.

**Keywords:** Blended Learning, Traditional Learning, Convenience Sampling

### **1. Introduction:**

The growth of the modern knowledge society necessitates the development of new educational strategies, curricula, and skill sets. To achieve these improvements, it would be insufficient to merely alter the subjects taught; substantial modifications to the way in which students are taught are needed. Even though these changes are necessary at every educational level, they are especially important in higher education. It is necessary to adapt the pedagogy so that knowledge sharing or learning is more learner-centric than instructor-centric, and instructors' responsibilities should be modified in that direction. Students need to be prepared for lifelong learning, which is a skill that the educational system should assist them develop, in order to properly participate in the knowledge society.

### **2. Related Work:**

The new learning environment should be a collaborative learning environment where traditional and digital approaches must be employed in combination, according to Andreev and Troyanova [1]. They made use of the environment as a source of educational resources and learning materials, which are both shared by two dynamic groups of individuals: students and teachers. This was their strategy for the e-learning environment's architectural design.

Regueras et al. [2] examined the effectiveness of competitive learning paired with collaborative learning in order to investigate the effects of e-learning on university students. To provide communication skills and flexibility in the competition, when necessary, a mobile - enabled tool for active learning was used. There are various components to the visualisation model presented by Masum and Ishizuka [3]. Users interact with the system through a user interface that supports character agents.



Thyagarajan and Nayak's [4] focus was on automatically choosing the finest learning resources from a variety of web apps or services and integrating them into the course. The plan is based on providing a flexible supply of services in order to achieve learning objectives. Kim et al. [5] recommended a process-driven strategy for structuring the content of e-learning. The navigation information and item sequencing for shareable material are specifically defined by a process-driven content organizing system.

To refer to blended learning as online learning is erroneous. Distance learning is used when students are geographically separated from the school where they are enrolled. They will also spend the most of their time away from their instructors and fellow students [5]. However, process-oriented e-learning platforms draw attention to a crucial aspect of blended learning. It offers adaptive teaching, which realises a channel of communication between a teacher and a learner (a learner-centered teaching style) [1].

### 3. Methodology:

Surveys are being undertaken in three small cities in south Rajasthan for this study project: Bhilwara, Chittorgarh, and Udaipur. A self-created questionnaire was being used for the survey. Initially tested on a limited sample, the questionnaire was deemed suitable for additional data gathering.

Sample technique: The data for this study were gathered using convenience and stratified sampling technique. The opinions of 120–120 college and CBSE school students from three cities were gathered.

**Table 1: Classification of Respondents Based on Gender**

Gender	No. of Respondents	Percentage Respondents
Male	360	50%
Female	360	50%
<b>Total</b>	<b>720</b>	<b>100%</b>

**Table 2: Classification based on Location of the Respondents**

Region	No. of Respondents	Percentage Respondents
Urban	360	50%
Rural	360	50%
<b>Total</b>	<b>720</b>	<b>100%</b>

In all sample size of 720 respondents was taken into consideration for the study project. Approximately 50% of responders were male and 50% were female. Students in secondary, senior secondary, and degree programmes from various schools and colleges in three districts of Rajasthan made up the respondents. In a similar manner, the respondents can be categorized according to where they located, with roughly 50% of each responder coming from a rural or urban area.

Objective:

- 1.) To measure the performance of blended learning over the traditional learning.
- 2.) To find the awareness level of students about blended learning environment among the public and private academic institutions.

Hypothesis Testing:

Based on the above-mentioned objectives following hypotheses were being framed and were being tested using the Chi-Square Test.

- H<sub>10</sub> : There is no significant difference between performance of blended learning based on type of institution (private or public).
- H<sub>11</sub> : There is significant difference between performance of blended learning based on type of institution (private or public).



- H<sub>20</sub> There is no significant difference between the awareness level of blended learning among the public institution and private institutions.
- H<sub>21</sub> There is significant difference between the awareness level of blended learning among the public and private academic institutions.

Statistical tools & techniques being used for the data analysis were frequency, measure of central tendency, measure of dispersion, percentage analysis, mean rating and hypothesis testing was done using the large sample test that is Chi-Square test.

#### 4. Results:

In order to compare the performance of blended learning over traditional learning various factors were being considered such as satisfaction level, quality learning, effective learning, flexibility, content customized, performance enhancement, level of interaction, motivation, no fear factor, quality of content and time management.

**Table 3: Comparing Blended Learning over Traditional Learning**

Basis of Comparison	Blended			Traditional		
	1 Low	2 Medium	3 High	1 Low	2 Medium	3 High
Satisfaction Level	112	78	530	230	200	300
Quality Learning	45	245	430	100	340	280
Effective Learning	100	120	500	260	60	400
Flexibility	78	21	621	520	80	120
Content Customized	90	290	340	300	190	230
Performance Enhancement	80	150	490	200	230	290
Level of Interaction	200	200	320	237	123	360
Motivation	135	178	407	170	100	450
No Fear Factor	70	48	602	392	178	150
Quality of Content	100	110	510	182	189	349
Time Management	50	250	420	430	100	190
<b>Total Score</b>	<b>1060</b>	<b>3380</b>	<b>15510</b>	<b>3021</b>	<b>3580</b>	<b>9357</b>

**Table 4: Descriptive Statistics Blended Learning**

Descriptive Analysis					
	N	Minimum	Maximum	Mean	Std. Deviation
Satisfaction Level	720	1.00	3.00	2.5528	.76611
Quality Learning	720	1.00	3.00	2.5347	.61181
Effective Learning	720	1.00	3.00	2.5556	.72486
Flexibility	720	1.00	3.00	2.7542	.63453
Content Customized	720	1.00	3.00	2.3472	.69088
Performance Enhancement in Exams	720	1.00	3.00	2.5694	.68414
Level of Interaction	720	1.00	3.00	2.1667	.83391
Motivation	720	1.00	3.00	2.3778	.78161
No Fear Factor	720	1.00000	3.00000	2.7388889	.62282848
Quality of Content	720	1.00	3.00	2.5694	.72366
Time Management	720	1.00	3.00	2.5139	.62389
Valid N (listwise)	720				

From the descriptive analysis it is very clear that majority of the performance measuring factors were having mean rating value greater than 2.5. The corresponding values of the measures is shown above in the table 4.

**Hypothesis Testing Results:**

- H<sub>10</sub> There is no significant difference between performance of blended learning based on type of institution (private or public).
- H<sub>11</sub> There is significant difference between performance of blended learning based on type of institution (private or public).

**Table 5: Sub- Hypothesis Testing Results for H1**

S. No.	Hypothesis	Test Applied	Results	Significant at 5%
1.	H <sub>0</sub> 1.1: There is no significant difference between performance measure satisfaction level and type of institute.	Chi-Square = 346.154,df = 2 and P-value = 0.00	Rejected	Significant
2.	H <sub>0</sub> 1.2: There is no significant difference between performance measure quality learning and type of institute.	Chi-Square = 606.977,df = 2 and P-value = 0.00	Rejected	Significant
3.	H <sub>0</sub> 1.3: There is no significant difference between performance measure effective learningand type of institute.	Chi-Square = 396.000,df = 2 and P-value = 0.00	Rejected	Significant
4.	H <sub>0</sub> 1.4: There is no significant difference between performance	Chi-Square = 143.478, df = 2 and P-value =	Rejected	Significant



	measure flexibility and type of institute.	0.00		
5.	H <sub>0</sub> 1.5: There is no significant difference between performance measure content customized and type of institute.	Chi-Square = 527.276, df = 2 and P-value = 0.00	Rejected	Significant
6.	H <sub>0</sub> 1.6: There is no significant difference between performance measure performance enhancement in exams and type of institute.	Chi-Square = 525.600, df = 2 and P-value = 0.00	Rejected	Significant
7.	H <sub>0</sub> 1.7: There is no significant difference between performance measure level of interaction and type of institute.	Chi-Square = 525.600, df = 2 and P-value = 0.00	Rejected	Significant
8.	H <sub>0</sub> 1.8: There is no significant difference between performance measure motivation and type of institute.	Chi-Square = 692.138, df = 2 and P-value = 0.00	Rejected	Significant
9.	H <sub>0</sub> 1.9: There is no significant difference between performance measure no fear factor and type of institute.	Chi-Square = 176.412, df = 2 and P-value = 0.00	Rejected	Significant
10.	H <sub>0</sub> 1.9: There is no significant difference between performance measure quality of content and type of institute.	Chi-Square = 370.588, df = 2 and P-value = 0.00	Rejected	Significant
11.	H <sub>0</sub> 1.10: There is no significant difference between performance measure time management and type of institute.	Chi-Square = 642.857, df = 2 and P-value = 0.00	Rejected	Significant

From the above table of hypotheses testing where all the sub hypotheses were found to be significant so it can be concluded that there is significant difference between performance of blended learning based on type of institution (private or public).

H<sub>20</sub> : There is no significant difference between the awareness level of blended learning among the public institution and private institutions.

H<sub>21</sub> : There is significant difference between the awareness level of blended learning among the public and private academic institutions.

**Table 6: Crosstabulation: Awareness & Type of Institutions**

Awareness of blended learning and Type of Educational Institute				
Count				
		Type of Educational Institute		Total
		Private	Public	
Awareness of blended learning	1.00	64	0	64
	2.00	68	0	68
	3.00	10	0	10
	4.00	78	0	78
	5.00	180	320	500
<b>Total</b>		<b>400</b>	<b>320</b>	<b>720</b>

**Table 7: Hypothesis Testing Results for H2**

Pearson Chi-Square Test Results			
	Calculated value	Degree of Freedom	P-Value (Sig.)
Chi-Square	253.440	4	.000
“Likelihood Ratio”	335.806	4	.000
Observations	720		

The hypothesis testing results show that the Chi-Square value is found to be 253.440, Likelihood Ratio is found to be 335.806 at 4 degrees of freedom with corresponding P-value of 0.000 which is quite less than the standard alpha value of 0.50. So, it can be concluded that the null hypothesis is rejected which confirms the alternate hypothesis as being accepted and it suggests that there is significant difference between awareness of blended learning and type of educational institute. The level of awareness is different in private and public schools and colleges.

### 5. Conclusion:

Finally, it can be concluded that majority of the performance measuring factors were having mean rating value greater than 2.5 which includes satisfaction level with value 2.5528, quality learning as 2.5347, effective learning with 2.5556, flexibility as 2.7542, performance enhancement in exams having value 2.5694, no fear factor with highest value 2.738889, quality of content value 2.5694 and time management having value 2.5139. The hypothesis testing results confirms that the level of awareness is different in private and public schools and colleges as the null hypothesis there is no significant difference between awareness of blended learning and type of educational institute was being rejected. Also, it can be concluded that there is significant difference between performance of blended learning based on type of institution (private or public).

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