

# A Study on Blended Learning Environment – Students Perspective

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## Abstract

*Blended learning is becoming important with online tools entering the teaching-learning process. Majority of the courses in higher education today are taught using information and communication technologies. These technologies help students to learn as well interact with their friends and teachers both on and off their classrooms. The present study is taken up to understand the perspective of the students at University of Technology and Applied Sciences, Ibra (UTAS, Ibra) on the blended learning practices used in the college. Online questionnaires are distributed, and responses are collected from 251 respondents belonging to different departments of the college using simple random sampling technique. The collected data is analysed using descriptive statistics and regression analysis using SPSS. The study revealed that use of online tools alongside face-to-face teaching improves quality of the teaching-learning process. The use of online learning platforms like Moodle helps students learn outside their classrooms too. Less technical problems and more information on Moodle enables students to work independently. The study emphasized on the role of blended learning in enhancing the effectiveness of the teaching-learning process.*

**Keywords:** Blended Learning, Education, Moodle, Online Learning, Technology, Traditional Learning, etc.

## Introduction

“Technology will not replace great teachers but technology in the hands of great teachers can be transformational”

-George Couros

Blended learning is a combination of physical classroom activities and learning activities supported by online technologies (Garrison and Kanuka, 2004). The advent of online learning made blended learning come into being (Senge, 1990). Blended learning can be better described as an integration of thoughtfully selected face-to-face and online approaches and technologies (Graham, 2006). This integration offers a bundle of benefits which includes program cost reductions, improved time efficiency, and locational convenience (Brown, 2003; Ho, Lu, & Thurmaier, 2006). Blended learning is becoming important in higher education today as the use of information and communication technologies has accelerated like never before. Combining face-to-face learning and various computer technologies is of great benefit to higher education (Phipps and Merisotis, 1999). Blended learning is flexible than traditional learning and it enables students to better achieve course objectives. Also, Blended Learning contributes to improved learning outcomes for students (Twigg, 2003).

## Scope of the study

The study is conducted at the University of Technology and Applied Sciences, Ibra (UTAS, Ibra). Responses are collected from the students of Information Technology, Engineering and Business Studies departments of the University.

## Objectives of the Study

1. To examine the perception of the students of UTAS, Ibra on the blended learning environment.
2. To study if online tools (Moodle) supplement the conventional face-to-face teaching.
3. To suggest measures for improvement wherever necessary.

## Review of Literature

Prohorets, E. and Plekhanova, M. (2015) studied whether using technology can enhance student's interaction and learning abilities. A wealth of literature is reviewed for the same. The results revealed that using technology in teaching can improve the learning competence of students.

Rahman, N.A.A., Hussein, N and Aluwi, A.H. (2015) conducted research to study the relation between personal and situational factors and student satisfaction in blended learning. Data was collected from 400 students using questionnaire. Correlation is used to check relations between variables. The study emphasized that blended learning could create a positive climate for learning and has a positive impact on student's performance.

Kazu, I.Y. and Demirkol, M. (2014) made a comparison of student performance between blended learning environment and traditional classroom environment by surveying a sample of 54 respondents in diyarbakir high school. The study used two groups of students of which one group of students are offered conventional learning and the other group had blended learning. The result revealed that students in blended environment showed better performance as compared to those in traditional learning environment.

Guzer, B. and Caner, H. (2014) conducted an extensive review of the studies carried out on blended learning and found that almost all the studies underlined the positive impact of blended learning on the quality of teaching-learning process.

Poon, J. (2013) conducted research to check the advantage that blended learning provides to students' learning experiences. The researcher conducted interviews for teachers and students' responses were collected using questionnaire. The study highlighted the flexibility that blended learning offers to the

teaching-learning process.

Naaj, M. A., Nachouki, M. and Ankit, A. (2012) conducted research to design an instrument to measure student satisfaction with blended learning. Also, to check if the opinion is different for different course and genders. A sample of 153 undergraduate students were surveyed using questionnaire. The study revealed that students are satisfied with using technology in teaching while at the same time the study underlined that male students are fond of blended learning more as compared to their female counterparts.

Adas, D. and Shmais, W. A. (2011) tried to explore students' perceptions towards blended learning environment in An-Najah National University. The research instruments are both questionnaire and interviews of a sample of 92 students. The results of the study revealed that reducing number of online tasks can gain better acceptance for blended learning while at the same time blended learning is certainly better than the traditional learning environment.

Akyuz, H.I. and Samsa, S. (2009) conducted research to study the influence of blended learning on course management and critical thinking ability of learners. The study disclosed that though blended learning is not successful in improving the critical thinking skills of the students in the short term, it is possible to accomplish the same in the long term.

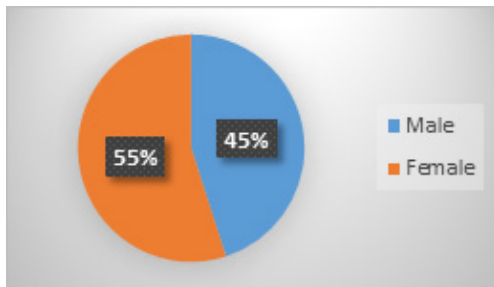
## Methodology

The study employed a standard questionnaire as the instrument to collect primary data. A sample of 251 respondents were chosen using simple random sampling technique from the engineering, I.T and business departments of the college. The data collected is presented by using tables and graphs and is analyzed using descriptive statistics and regression analysis using SPSS.

## Data Analysis

**Table 1: Gender of Respondents**

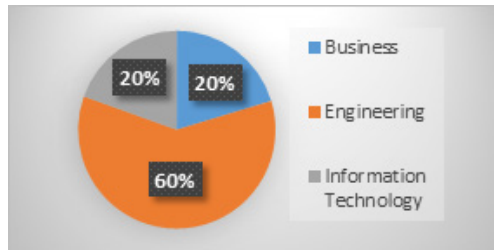
Gender	Frequency	Percent
Male	113	45.0
Female	138	55.0
Total	251	100.0



**Figure 1 Gender of Respondents**

**Table 2 Department of Respondents**

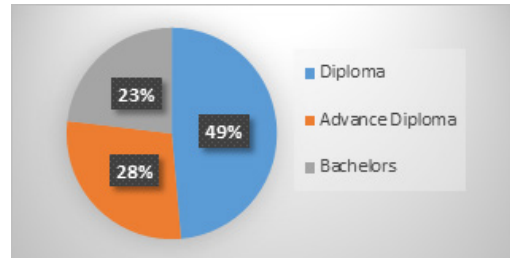
Department	Frequency	Percent
Business	51	20.3
Engineering	151	60.2
Information Technology	49	19.5



**Figure 2 Department of Respondents**

**Table 3 Academic Level of Respondents**

Level	Frequency	Percent
Diploma	122	48.6
Advance Diploma	71	28.3
Bachelors	58	23.1
Total	251	100.0



**Figure 3 Academic Level of Respondents**

### Interpretation

From Tables 1,2 & 3, it is evident that majority of the respondents are female students and there is maximum representation from engineering department as it's the biggest department in the university with more number of students comparatively. Also, majority of the respondents belong to the diploma level.

**Table 4: Mean Scores based on Gender of Respondents**

Gender		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
Male	Mean	3.26	3.62	3.73	3.70	3.50	3.41	3.37	3.18	3.38	3.41	3.41	3.63	3.36	3.34	3.61
	N	113	113	113	112	113	113	113	113	113	113	113	113	113	113	109
	Std. Deviation	1.797	1.397	1.323	1.361	1.350	1.320	1.390	1.495	1.441	1.399	1.556	1.403	1.415	1.480	1.347
Female	Mean	2.99	3.41	3.34	3.27	3.20	3.29	3.20	3.15	3.25	3.28	3.33	3.42	3.40	3.28	3.43
	N	138	138	138	138	138	138	138	138	138	138	138	138	138	138	125
	Std. Deviation	1.745	1.305	1.293	1.293	1.328	1.251	1.291	1.366	1.404	1.254	1.210	1.237	1.315	1.232	1.266
Total	Mean	3.11	3.50	3.52	3.46	3.33	3.34	3.28	3.16	3.31	3.33	3.37	3.51	3.38	3.31	3.52
	N	251	251	251	250	251	251	251	251	251	251	251	251	251	251	234
	Std. Deviation	1.770	1.349	1.319	1.338	1.344	1.281	1.336	1.423	1.420	1.320	1.374	1.316	1.358	1.347	1.304

Source: Primary Data

### Interpretation

The respondents reflected their opinions about 15 factors during the survey and based on the gender of the respondents the following conclusions are drawn.

- The respondents from both genders opined that the use of online tools would certainly improve the quality of teaching learning process, while enhancing the independent learning ability of the students.
- The respondents are of the opinion that online learning platforms like Moodle helps them keep pace with the advancements in teaching-learning process.
- Majority of the respondents believe that blended learning offers them an enjoyable learning experience.

**Table 5 Mean Scores based on Department of Respondents**

Level		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
Diploma	Mean	3.25	3.57	3.68	3.56	3.40	3.53	3.36	3.34	3.41	3.43	3.50	3.76	3.44	3.36	3.58
	N	122	122	122	121	122	122	122	122	122	122	122	122	122	122	116
	Std. Deviation	1.812	1.448	1.325	1.390	1.395	1.228	1.397	1.418	1.395	1.391	1.398	1.273	1.379	1.385	1.320
Advance Diploma	Mean	3.03	3.35	3.30	3.25	3.18	3.28	3.11	3.04	3.13	3.17	3.27	3.21	3.37	3.27	3.48
	N	71	71	71	71	71	71	71	71	71	71	71	71	71	71	66
	Std. Deviation	1.724	1.288	1.188	1.239	1.246	1.209	1.178	1.247	1.362	1.207	1.264	1.241	1.256	1.207	1.218
Bachelors	Mean	2.91	3.53	3.45	3.50	3.38	3.02	3.31	2.95	3.33	3.33	3.21	3.36	3.28	3.24	3.42
	N	58	58	58	58	58	58	58	58	58	58	58	58	58	58	52
	Std. Deviation	1.740	1.203	1.429	1.341	1.361	1.420	1.392	1.605	1.538	1.303	1.448	1.410	1.448	1.443	1.391
Total	Mean	3.11	3.50	3.52	3.46	3.33	3.34	3.28	3.16	3.31	3.33	3.37	3.51	3.38	3.31	3.52
	N	251	251	251	250	251	251	251	251	251	251	251	251	251	251	234
	Std. Deviation						1.281	1.336	1.423	1.420	1.320	1.374	1.316	1.358	1.347	1.304

**Source:** Primary Data

**Interpretation**

The respondents reflected their opinions about 15 factors during the survey and based on the department to which the respondents belong to the following conclusions are drawn.

- The students of Engineering and Information Technology are of the opinion that online tools enhance the quality of the teaching learning process.
- Majority of the respondents from all the departments opined that compared to face-to-face teaching, they are more satisfied with blended learning experience as well their understanding of the course improved with blended learning.
- The students of Information Technology department are satisfied with the accessibility and availability of required information on Moodle as compared to the students of other departments.

**Table 6 Mean Scores based on Academic Level of Respondents**

Level		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
Diploma	Mean	3.25	3.57	3.68	3.56	3.40	3.53	3.36	3.34	3.41	3.43	3.50	3.76	3.44	3.36	3.58
	N	122	122	122	121	122	122	122	122	122	122	122	122	122	122	116
	Std. Deviation	1.812	1.448	1.325	1.390	1.395	1.228	1.397	1.418	1.395	1.391	1.398	1.273	1.379	1.385	1.320
Advance Diploma	Mean	3.03	3.35	3.30	3.25	3.18	3.28	3.11	3.04	3.13	3.17	3.27	3.21	3.37	3.27	3.48
	N	71	71	71	71	71	71	71	71	71	71	71	71	71	71	66
	Std. Deviation	1.724	1.288	1.188	1.239	1.246	1.209	1.178	1.247	1.362	1.207	1.264	1.241	1.256	1.207	1.218
Bachelors	Mean	2.91	3.53	3.45	3.50	3.38	3.02	3.31	2.95	3.33	3.33	3.21	3.36	3.28	3.24	3.42
	N	58	58	58	58	58	58	58	58	58	58	58	58	58	58	52
	Std. Deviation	1.740	1.203	1.429	1.341	1.361	1.420	1.392	1.605	1.538	1.303	1.448	1.410	1.448	1.443	1.391
Total	Mean	3.11	3.50	3.52	3.46	3.33	3.34	3.28	3.16	3.31	3.33	3.37	3.51	3.38	3.31	3.52
	N	251	251	251	250	251	251	251	251	251	251	251	251	251	251	234
	Std. Deviation						1.281	1.336	1.423	1.420	1.320	1.374	1.316	1.358	1.347	1.304

**Source:** Primary Data

### Interpretation

The respondents reflected their opinions about 15 factors during the survey and based on the academic level of the respondents the following conclusions are drawn.

- The students of diploma and bachelor levels opined that the use of online tools enhances the quality of the teaching learning process and are highly satisfied with blended learning experience as compared to face-to-face teaching. Also, they felt that their understanding of the courses improved with blended learning. The students of all levels expressed that classroom teaching along with online tools makes the learning experience more enjoyable.

**Table 7.1 Moodle and Effectiveness of Classroom Teaching**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.599a	.359	.357	1.080

**a. Predictors: (Constant), Q6**

**Table 7.2 Moodle and Effectiveness of Classroom Teaching**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	162.917	1	162.917	139.662	.001b
	Residual	290.461	249	1.167		
	Total	453.378	250			

**a. Dependent Variable: Q14**

**Table 7.3 Moodle and Effectiveness of Classroom Teaching Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.201	.191		6.296	.001
	Q6	.630	.053	.599	11.818	.001

**a. Dependent Variable: Q14**

**b. Predictors: (Constant), Q6**

The findings from the above table show that, the R square value got 0.359 which indicates (35.9 %) of the variances in the effectiveness of classroom teaching are explained by the variance in use of Moodle. The second part of the results includes an analysis of variance (ANOVA) that tests whether the effectiveness of classroom teaching is significantly better by using the online tools like Moodle. The F ratio shows the ratio of the effectiveness of classroom teaching that results from the use of Moodle that named (Regression) in the table relative to the inaccuracy that still exists in the model that named (Residual) in the table. This table is again broken into two sections: one for each model. If the improvement due to fitting the regression model is greater than the inaccuracy in the model, then the value of F will be greater than 1. For the primer model, the F ratio is 139.662, which is ( $p < .05$ ).

The unstandardized coefficients B column gives us the coefficients of the independent variables in the regression equation including all the predictor variables. Independent variable appears as statistically significant predictors of effectiveness of classroom teaching (Sig. = .001). Moodle (B=.630,

$t = 6.296$ , Beta= .599,  $p = .001$ ), hence this shows that the Moodle has a significant effect on effectiveness of classroom teaching.

Thus, regression equation will be  $Y = .630X + 1.201$

It can be concluded that there is a significant relationship between use of Moodle and effectiveness of classroom teaching.

### Conclusion & Discussion

The study revealed that, a fine blend of online teaching and the conventional face-to-face teaching enhances the effectiveness of the teaching-learning process. Online learning platforms / tools like Moodle supplement the conventional face to face teaching and has a significant impact on enhancing the teaching effectiveness. Blended learning environment offers students an enjoyable learning experience as well improves their understanding of the course contents. Also, blended learning enhances the students independent learning abilities alongside their digital learning capabilities. Blended learning provides flexibility in the learning environment for both students and teachers (Bliuc, 2007). Blended learning environment offer experiences that are unique



and plays a vital role in promoting learning (Oliver and Trigwell, 2005). Blended learning happens to be a mode of teaching that addresses the time, place, and situational issues, while at the same time enables high quality interactions between teachers and students (Kanuka, Brooks, & Saranchuck, 2009). However, a shift from conventional teaching-learning to blended-learning requires adjustment for both teachers and students (Swenson & Redmond, 2009). The results of the research revealed that Blended Learning enhances interaction between learner and teacher, between co-learners, between learners and the content, and between learners and course interface (Hewitt, 2003; Medina, 2009; Moore, 1989; Sutton, 2001; Wagner, 1997). This throws light on the need for today's educators to use blended learning as a pedagogical tool for increasing the student engagement as well for improving the quality of the teaching-learning process. Thus, blended learning should be thoughtfully used with an eye towards enriching student learning. The study concludes by emphasizing on the fact that Blended Learning brings about a fundamental shift in instructional strategy" (Watson, 2008) and its flexibility brings in a combination of the best features of classroom teaching and online instruction to personalise learning, promote thoughtful reflection, and customize the teaching-learning process across a diverse group of learners.

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