INVESTIGATING STUDENTS' PERSPECTIVES ON BLENDED LEARNING ENVIRONMENTS

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Abstract

Blended learning has gained significance as online tools integrate into the educational landscape. A predominant number of higher education courses now incorporate information and communication technologies. These technologies facilitate student learning and interaction with peers and instructors, both within and beyond the traditional classroom setting. This study aims to explore students' perspectives on blended learning practices implemented at the university. Online questionnaires were distributed, and responses were collected from 251 participants across various departments, employing a simple random sampling technique. The collected data underwent analysis using descriptive statistics and regression analysis through SPSS.

The findings indicate that the integration of online tools alongside face-to-face teaching enhances the quality of the teaching-learning process. Utilizing online learning platforms, such as Moodle, enables students to extend their learning beyond the confines of traditional classrooms. The study underscores the role of blended learning in augmenting the effectiveness of the teaching-learning process, with fewer technical issues and increased independence in student work facilitated by platforms like Moodle.

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

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Introduction

"Technology will not replace great teachers but technology in the hands of great teachers can be transformational"
-George Couros

Blended learning, as defined by Garrison and Kanuka (2004), is a fusion of physical classroom activities and learning supported by online technologies. Its inception can be traced to the rise of online learning (Senge, 1990), and it involves a thoughtful integration of carefully selected face-to-face and online approaches and technologies (Graham, 2006). This integration yields several advantages, including cost reductions, enhanced time efficiency, and increased locational convenience (Brown, 2003; Ho, Lu, & Thurmaier, 2006).

The significance of blended learning in higher education has grown exponentially with the accelerated adoption of information and communication technologies. The amalgamation of face-to-face instruction with various computer technologies proves to be highly beneficial for higher education (Phipps and Merisotis, 1999). Blended learning, offering greater flexibility than traditional learning, enables students to more effectively achieve course objectives. Additionally, it contributes to improved learning outcomes for students (Twigg, 2003).

Scope of the study

The study is conducted at the University. 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 conventional face-to-face teaching.
3. Suggestions 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) researched to study the relation between personal and situational factors and student satisfaction in blended learning. Data was collected from 400 students using a 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 a blended learning environment and a 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 was offered conventional learning and the other group had blended learning. The result revealed that students in a blended environment showed better performance as compared to those in traditional learning environment.

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

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

Table 2: Academic Level of Respondents

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

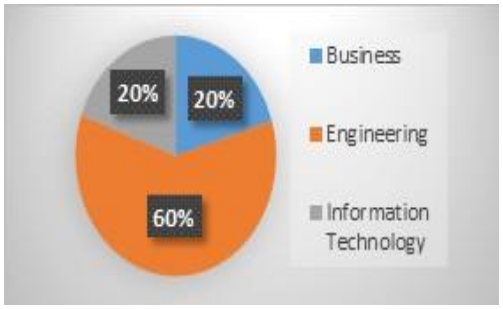

Figure 2 Department of Respondents

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

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 is the biggest department in the university with more number of students comparatively. Also, majority of the respondents belong to the diploma level.

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 about15 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 the enjoyable learning experience.

Table5 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.

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.

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
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	N	71	71	71	71	71	71	71	71	71	71	71	71	71	71	66
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	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

Table7.2 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

Table7.3 Moodle and Effectiveness of Classroom Teaching Coefficients

Model		UnstandardizedCoefficients		StandardizedCoefficients	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 tables how 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 primmer 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 andTrigwell,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 personalize learning, promote thoughtful reflection, and customize the teaching-learning process across a diverse group of learners.

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