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Level of Satisfaction using Moodle as an E-Learning Tool for Students in B-School

By Ms. Rittika Motilal

Abstract- This study is to find the level of satisfaction using Moodle as an E-Learning Tool for Students in B-School. As Moodle being free open source software there are many institutes using Moodle as their e-learning platform to run and execute their courses, to interact with students and faculty members. Moodle is being used for conducting on-line test, feedback submission, assignment submission, class schedule & to upload course notes. Since most of the B-Schools have started adapting to this e-learning Platform to run their courses, it is must to know whether the end users are satisfied with it. And if they are satisfied, to what extent. A in depth analysis about the Level of satisfaction of Moodle as an ELearning Tool for Students is being carried out looking at the various issues of management schools.

Keywords: moodle, e-learning, level of satisfaction, students.

GJCST-B Classification: K.3.1, J.1



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Keywords: moodle, e-learning, level of satisfaction, students.

I. INTRODUCTION

As digital technologies dominate everywhere in the world. It is time for the organizations to pick up from the new technologies and make use of it to execute their tasks. In that line the educational institutes have already started implementing E-learning platform in their premises. Commercial softwares are very expensive for any organizations to implement it as their platform. Among the best e-learning Platform Moodle stands the first preference for the educational institutes as it is a free open source software.

The name Moodle is an acronym for Modular Object Oriented Dynamic Learning and Environment and it is known as a Learning Management System (LMS) or a Virtual Learning Environment (VLE). It is a Free web application that educators can use to create effective online courses and evaluate through online. One of the main advantage of Moodle is that it is an open source software and it is very user friendly.

Since most of the educational institutes have already started getting adapted to Moodle, we wanted to find out whether the end users are happy with this environment. So, this research mainly focuses on the satisfaction level of the end users to use Moodle as the e-learning Platform.

II. LITERATURE REVIEW

Rahul Shrivastava, Yogendra Kumar Jain, and Ajay Kumar Sachan (2013) found that e-Learning is the future of learning and found that how learning can be as interactive and interesting as possible to the users by

using MOODLE. They identified that e-Learning will grow rapidly in any organization be it corporate world or any educational organization.

Ana Paula Lopes(2011) found that The Moodle is a wonderful e-learning platform used throughout the world. Through which we can communicate and transmit information. The great success of this platform is that it is an open source system for distant courses. They found that such platform deserves special attention. The only thing we need little technical knowledge and computers with Internet connection.

Holtham, Clive and Rich, Martin and Norris, Leona (2012) found that Moodle is a successful implementation of an online learning environment. He found that it would be a great success for any kind of institution, flexible to learn over Moodle for students, providing curriculum and so on. According to him, this is an innovation in teaching.

Jordi Garcia, Michel Somé, Eduard Ayguadé, Jose Cabré, Maria José Casany, Manel Frigola, Nikolas Galanis, Manuel García-Cervigón, Manel Guerrero, Pilar Muñoz (2012) found that Moodle is a teaching and learning instruments which is growing in numbers in universities for adopting online courses and digital platforms to replace or supplement classroom activities. They found that the way of learning would totally be changed in coming future rapidly.

Shivangi Saraswat (2014) found that Moodle is an online learning management system which is adopted globally by several colleges, Universities and Organization to enhance online learning. It offers course materials for students, collect assignments and manage grades. Moodle was designed to support additional cooperative and participative teaching and learning atmosphere than different learning management systems. She has mainly focused on customization and implementation of LMS Moodle. She succeeded in finding Moodle as the optimal E-learning platform.

III. RESEARCH OBJECTIVE

1. To find out whether the end users are happy to use Moodle as their E-learning Platform.
2. Is there any difference between male and female in their level of satisfaction using Moodle?
3. Is the level of satisfaction using Moodle varies depends on their educational background?
4. Is the level of satisfaction using Moodle varies depends on their experience?

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IV. METHODOLOGY AND ANALYSIS OF STATISTICAL RESULTS

The study was conducted at ITM Business School, Kharghar. As Moodle is a e-learning tool used by the students as their e-learning platform we took students as the sample to make the survey. We generated questions asking their level of satisfaction. We collected 47 responses and tried to find out the correlation in various aspects like gender, educational background and year of experience and the level of satisfaction.

The primary data was collected by the survey method. The secondary data was collected from Google Gender * I have used Moodle at my undergraduate level.

Crosstab

Count

		I have used Moodle at my undergraduate level.		Total
		0	1	
Gender	1	1	29	30
	2	0	17	17
Total		1	46	47

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.579 ^a	1	.447	1.000	.638
Continuity Correction ^b	.000	1	1.000		
Likelihood Ratio	.910	1	.340		
Fisher's Exact Test					
Linear-by-Linear Association	.567	1	.452		
N of Valid Cases	47				

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is .36.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	.110	.447
N of Valid Cases		47	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Gender * I am comfortable using new technologies.

Crosstab

Count

		I am comfortable using new technologies.		Total
		0	1	
Gender	1	1	29	30
	2	1	16	17
Total		2	45	47

scholar, Proquest, Wikipedia, e-journal, online news update and e-learning e-magazines to find out the level of satisfaction of using Moodle as the e-learning tool.

V. FINDINGS

1. To find out whether the end users are happy to use Moodle as their E-learning Platform.
2. Is there any difference between male and female in their level of satisfaction using Moodle?

Out of 47 most of the students we found that there is no significant difference between the sample of female students and male students in the level of satisfaction using Moodle.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.173 ^a	1	.677	1.000	.598
Continuity Correction ^b	.000	1	1.000		
Likelihood Ratio	.167	1	.683		
Fisher's Exact Test					
Linear-by-Linear Association	.169	1	.681		
N of Valid Cases	47				

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is .72.

b. Computed only for a 2x2 table

Symmetric Measures

	Value	Approx. Sig.
Nominal by Nominal Contingency Coefficient	.061	.677
N of Valid Cases	47	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Gender * I am comfortable using Moodle

Crosstab

Count

		I am comfortable using Moodle					Total
		1	2	3	4	5	
Gender	1	5	16	4	3	2	30
	2	0	11	6	0	0	17
Total		5	27	10	3	2	47

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.371 ^a	4	.079
Likelihood Ratio	11.554	4	.021
Linear-by-Linear Association	.002	1	.961
N of Valid Cases	47		

a. 7 cells (70.0%) have expected count less than 5. The minimum expected count is .72.

Symmetric Measures

	Value	Approx. Sig.
Nominal by Nominal Contingency Coefficient	.389	.079
N of Valid Cases	47	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Gender * I don't have any difficulty in completing the class assignments in Moodle

Crosstab

Count

		I don't have any difficulty in completing the class assignments in Moodle					Total
		1	2	3	4	5	
Gender	1	2	13	10	3	2	30
	2	0	8	7	1	1	17
Total		2	21	17	4	3	47

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.578 ^a	4	.813
Likelihood Ratio	2.250	4	.690
Linear-by-Linear Association	.019	1	.890
N of Valid Cases	47		

a. 6 cells (60.0%) have expected count less than 5. The minimum expected count is .72.

Symmetric Measures

	Value	Approx. Sig.
Nominal by Nominal Contingency Coefficient	.180	.813
N of Valid Cases	47	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Gender * I like taking quizzes on Moodle

Crosstab

Count

		I like taking quizzes on Moodle					Total
		1	2	3	4	5	
Gender	1	2	12	7	6	3	30
	2	1	7	4	4	1	17
Total		3	19	11	10	4	47

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.294 ^a	4	.990
Likelihood Ratio	.306	4	.989
Linear-by-Linear Association	.017	1	.897
N of Valid Cases	47		

a. 6 cells (60.0%) have expected count less than 5. The minimum expected count is 1.09.

Symmetric Measures

	Value	Approx. Sig.
Nominal by Nominal Contingency Coefficient	.079	.990
N of Valid Cases	47	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Gender * I like to submit my feedback through Moodle as it does not reveal my identity.

Crosstab

Count

		I like to submit my feedback through Moodle as it does not reveal my identity.					Total
		1	2	3	4	5	
Gender	1	5	18	4	1	2	30
	2	3	9	3	0	2	17
Total		8	27	7	1	4	47

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.134 ^a	4	.889
Likelihood Ratio	1.450	4	.835
Linear-by-Linear Association	.139	1	.709
N of Valid Cases	47		

a. 7 cells (70.0%) have expected count less than 5. The minimum expected count is .36.

Symmetric Measures

	Value	Approx. Sig.
Nominal by Nominal Contingency Coefficient	.153	.889
N of Valid Cases	47	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Gender * I find it very convenient to check my class schedule through Moodle

Crosstab

Count

		I find it very convenient to check my class schedule through Moodle				Total
		1	2	3	4	
Gender	1	19	8	2	1	30
	2	7	10	0	0	17
Total		26	18	2	1	47

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.593 ^a	3	.133
Likelihood Ratio	6.493	3	.090
Linear-by-Linear Association	.179	1	.672
N of Valid Cases	47		

a. 4 cells (50.0%) have expected count less than 5. The minimum expected count is .36.

Symmetric Measures

	Value	Approx. Sig.
Nominal by Nominal Contingency Coefficient	.326	.133
N of Valid Cases	47	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Gender * Moodle is always available when I need it

Crosstab

Count

		Moodle is always available when I need it					Total
		1	2	3	4	5	
Gender	1	14	11	2	1	2	30
	2	4	11	2	0	0	17
Total		18	22	4	1	2	47

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.371 ^a	4	.251
Likelihood Ratio	6.400	4	.171
Linear-by-Linear Association	.003	1	.957
N of Valid Cases	47		

a. 6 cells (60.0%) have expected count less than 5. The minimum expected count is .36.

Symmetric Measures

	Value	Approx. Sig.
Nominal by Nominal Contingency Coefficient	.320	.251
N of Valid Cases	47	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Gender * I am very happy using Moodle because I can access Moodle anywhere in the world

Crosstab

Count

	I am very happy using Moodle because I can access Moodle anywhere in the world					Total
	1	2	3	4	5	
1 Gender	12	13	2	2	1	30
2	4	11	2	0	0	17
Total	16	24	4	2	1	47

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.867 ^a	4	.424
Likelihood Ratio	4.869	4	.301
Linear-by-Linear Association	.004	1	.948
N of Valid Cases	47		

a. 6 cells (60.0%) have expected count less than 5. The minimum expected count is .36.

Symmetric Measures

	Value	Approx. Sig.
Nominal by Nominal Contingency Coefficient	.276	.424
N of Valid Cases	47	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

3. Is the level of satisfaction using Moodle varies depends on their educational background?

The results of the contingency coefficient indicate a level of significance of 0.516. So, here we can find that there is no significant difference between students with engineering background and students with other qualification.

I like to submit my feedback through Moodle as it does not reveal my identity. * Education

Crosstab
Count

		Education		Total
		0	1	
1	I like to submit my feedback through Moodle as it does not reveal my identity.	6	2	8
2		20	7	27
3		3	4	7
4		1	0	1
5		3	1	4
Total		33	14	47

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	.254	.516
N of Valid Cases		47	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

45 out of 47 respondents have confirmed that they are comfortable to use new technology and there is no significant difference between students with

engineering background and students with other qualification.

I am comfortable using new technologies. * Education

Crosstab
Count

		Education		Total
		0	1	
0	I am comfortable using new technologies.	2	0	2
1		31	14	45
Total		33	14	47

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	.136	.347
N of Valid Cases		47	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

46 out of 47 respondents have answered that they have not used Moodle at graduation level. This

indicates that most of the colleges can take up Moodle and use it for educational purposes.

I have used Moodle at my undergraduate level. * Education

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	.096	.510
N of Valid Cases		47	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

4. Is the level of satisfaction using Moodle varies depends on their experience?

On the question of being happy with Moodle as it can be accessed from anywhere, we find that there is significant difference between students having more

experience and those were fresh the level of significance is .002. It can be due the fact there is only one student with more than 3 years of experience who has strongly disagreed with the statement. 40 out of 47 respondents have strongly agreed or agreed with the statement.

I am very happy using Moodle because I can access Moodle anywhere in the world * Number of years of experience?

Crosstab
Count

		Number of years of experience?					Total
		1	2	3	4	5	
I am very happy using Moodle because I can access Moodle anywhere in the world	1	10	5	0	0	1	16
	2	4	13	4	2	1	24
	3	0	3	1	0	0	4
	4	0	1	0	1	0	2
	5	0	0	0	0	1	1
Total		14	22	5	3	3	47

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	.663	.002
N of Valid Cases		47	

- a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.

On the question of availability of Moodle as and when required, we find that there is significant difference between students having more experience and those were fresh the level of significance is .000. It can be due

the fact that out of 3 students two having experience above 3 years two have strongly disagreed with the statement. 40 out of 47 respondents have strongly agreed or agreed with the statement.

Moodle is always available when I need it * Number of years of experience

Crosstab
Count

		Number of years of experience?					Total
		1	2	3	4	5	
Moodle is always available when I need it	1	11	6	0	1	0	18
	2	3	14	4	1	0	22
	3	0	1	1	1	1	4
	4	0	1	0	0	0	1
	5	0	0	0	0	2	2
Total		14	22	5	3	3	47

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	.728	.000
N of Valid Cases		47	

- a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.

On the question of whether they are convenient to use Moodle to check their class schedule, we find there is no significant difference between experienced and non-experienced students due to the value .623.

I find it very convenient to check my class schedule through Moodle * Number of years of experience?

Crosstab
Count

		Number of years of experience?					Total
		1	2	3	4	5	
I find it very convenient to check my class schedule through Moodle	1	11	10	1	2	2	26
	2	3	10	3	1	1	18
	3	0	1	1	0	0	2
	4	0	1	0	0	0	1
Total		14	22	5	3	3	47

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	.417	.623
N of Valid Cases		47	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

On the question of whether they are convenient to submit feedback using Moodle, we find there is no significant difference between experienced and non-experienced students due to the value .723.

I like to submit my feedback through Moodle as it does not reveal my identity. * Number of years of experience?

Crosstab
Count

		Number of years of experience?					Total
		1	2	3	4	5	
I like to submit my feedback through Moodle as it does not reveal my identity.	1	3	4	0	0	1	8
	2	8	11	5	2	1	27
	3	3	3	0	1	0	7
	4	0	1	0	0	0	1
	5	0	3	0	0	1	4
Total		14	22	5	3	3	47

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	.456	.723
N of Valid Cases		47	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

On the question of taking quizzes on Moodle, we find that there is significant difference between students having more experience and those were fresh the level of significance is .000.14 students out of 47 who either has experienced or non-experienced has either disagreed or strongly disagreed.

I like taking quizzes on Moodle * Number of years of experience?

Crosstab
Count

	Number of years of experience?					Total
	1	2	3	4	5	
1	3	0	0	0	0	3
2	6	11	2	0	0	19
I like taking quizzes on Moodle 3	2	7	2	0	0	11
4	3	3	1	3	0	10
5	0	1	0	0	3	4
Total	14	22	5	3	3	47

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	.734	.000
N of Valid Cases		47	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

On the question of submitting assignment through Moodle, we find that there is significant difference between students having more experience and those were fresh the level of significance is .024.23

students out of 47 who either has experienced or non-experienced has either agreed or strongly agreed else all other has faced difficulty for submitting class assignment using Moodle.

I don't have any difficulty in completing the class assignments in Moodle * Number of years of experience?

Crosstab
Count

	Number of years of experience?					Total
	1	2	3	4	5	
1	2	0	0	0	0	2
2	8	13	0	0	0	21
I don't have any difficulty in completing the class assignments in Moodle 3	4	7	4	1	1	17
4	0	1	1	1	1	4
5	0	1	0	1	1	3
Total	14	22	5	3	3	47

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	.618	.024
N of Valid Cases		47	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Out of 47 students we found that if the student is not so comfortable of using new technology still they are happy using Moodle.

Correlations

		I am comfortable using new technologies.	I am comfortable using Moodle
I am comfortable using new technologies.	Pearson Correlation	1	-.032
	Sig. (2-tailed)		.831
	N	47	47
I am comfortable using Moodle	Pearson Correlation	-.032	1
	Sig. (2-tailed)	.831	
	N	47	47

VI. CONCLUSION

So, with this we can conclude that there is no significant difference in the level of satisfaction using Moodle between the students either from engineering or any other technical background and the students from some other non-technical background. So, Moodle is a completely user friendly e-learning tool for any student. We also found that there is no such significant difference in the level of satisfaction between the male and female students. We came to know that the fresh students are more adaptive towards new technology than the experienced ones. This may be because it is easier for a fresh mind to adapt any new technology. We also found that it is not necessarily that the students should be tech-savvy to use Moodle. They find Moodle very convenient to use though they are not good in new technologies. With this we can conclude that the students are happy and satisfied using Moodle as the e-learning tool from anywhere and anytime.

VII. LIMITATION

The limitation of this research is that the sample size is limited in ITM Business School, Kharghar. May be the outcome would be more appropriate if we would take a bigger audience.

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APPENDIX

Gender

Male

Female

Education

Engineer

Non-Engineer

Number of years of experience

None

Below 1 year

1 to 2 years

2 to 3 years

Above 3 years

I have used Moodle at my undergraduate level.

Yes

No

I am comfortable using new technologies

Strongly Disagree

Dis agree

Neither Agree nor Disagree

Agree

Strongly Agree

I am comfortable using Moodle

Strongly Disagree	Dis agree	Neither Agree nor Disagree	Agree	Strongly Agree
Moodle is very user friendly				
Strongly Disagree	Dis agree	Neither Agree nor Disagree	Agree	Strongly Agree
I don't have any difficulty in completing the class assignments in Moodle				
Strongly Disagree	Dis agree	Neither Agree nor Disagree	Agree	Strongly Agree
I like taking quizzes on Moodle				
Strongly Disagree	Dis agree	Neither Agree nor Disagree	Agree	Strongly Agree
I like to submit my feedback through Moodle as it does sensor the names				
Strongly Disagree	Dis agree	Neither Agree nor Disagree	Agree	Strongly Agree
I find it very convenient to check my class schedule through Moodle				
Strongly Disagree	Dis agree	Neither Agree nor Disagree	Agree	Strongly Agree
Moodle saves our time as it has the consolidated notes for every subject.				
Strongly Disagree	Dis agree	Neither Agree nor Disagree	Agree	Strongly Agree
Moodle is always available when I need it.				
Strongly Disagree	Dis agree	Neither Agree nor Disagree	Agree	Strongly Agree
I am very happy using Moodle because I can access Moodle anywhere in the world.				
Strongly Disagree	Dis agree	Neither Agree nor Disagree	Agree	Strongly Agree