

**SATISFACTION LEVEL ON THE DELIVERY OF LEARNING MANAGEMENT SYSTEM
AND ACADEMIC PERFORMANCE OF ELEMENTARY PUPILS
IN THE SCHOOL OF ST. JOSEPH THE WORKER-ECHAGUE**

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Abstract

The study was conducted to investigate the level of satisfaction of the respondents on the delivery of Learning Management System. The researchers utilized the descriptive-correlational method to describe the profile, academic performance, and the level of satisfaction of the respondents in using Learning System Management (LMS). Random sampling was used to select the respondents from the School of St. Joseph the Worker with a 5% margin of error as desired.

The result revealed that students were highly satisfied with the use of the Learning Management System (LMS). The study also revealed that the level of satisfaction of the respondents on LMS was not significantly related to their academic performance. Moreover, the findings revealed that there was a significant difference in the respondent's level of satisfaction with LMS according to sex. The overall findings showed no sufficient evidence to prove that satisfaction with LMS can predict academic performance.

Keywords: *Satisfaction, Distance Learning, Learning System Management*

INTRODUCTION

Due to the COVID-19 pandemic, the educational system in the Philippines has been massively affected. This brought new changes in the teaching and learning platform of the students and teachers. Underscoring the importance of education, the Department of Education has mandated all schools to continue providing the basic education the learners need even amid the pandemic. This became true with distance learning which was implemented nationwide. Radio-based and television-based modes of learning were introduced, including a modular learning modality. Other schools shifted to using a Learning Management System (LMS) in the delivery of instruction.

Marquesi (2009) defined Learning Management System as a virtual learning environment that aims to simulate a face-to-face learning environment through a digital platform. In an LMS, the interaction happens through devices that enable communication either synchronously or asynchronously, allowing the creation of different strategies to encourage dialogue and the active participation of students. Learning Management System

Software encompasses an array of functions, making it an efficient tool in tertiary education. Alshorman and Bawaneh (2018) and Tekinarslan (2010) had suggested the common functions and characteristics an LMS should possess: providing a medium for interaction; content presentation; and communication function. According to Sebastian (2018), in his survey about LMS use and satisfaction, sixty-nine percent of students who reported being satisfied or very satisfied with their institution's LMS also said they prefer completely or mostly face-to-face classes. This may reflect a desire to use the operational features of the LMS, along with a desire for in-class time with instructors, which students reported in their 2017 open-ended responses.

While teaching and learning take place on a digital platform, it is necessary to ensure that the students' satisfaction is still considered. As revealed in the study of Dhaqane and Afrah (2016), there was a strong relationship between students' satisfaction and their academic performance. Thus, emphasizing students' satisfaction even in the digital platform of the learning environment is crucial to an effective transfer of learning. In line with this, this study was conducted to delve into the level of satisfaction of the pupils in the digital platform of the learning environment and its interaction with their academic performance.

Statement of the Problem

The research study investigated the respondents' level of satisfaction on the delivery of Learning Management System and its relationship with their academic performance.

Specifically, it answered the following questions:

1. What is the profile of the respondents in terms of sex and grade level?
2. What is the level of satisfaction of the respondents with the implemented Learning Management System (LMS)?
3. What is the academic performance of the respondents during the implementation of the LMS-based mode of learning?
4. What is the difference in the level of satisfaction of the respondents on the implemented LMS when they are grouped according to their profile?
5. What is the relationship between the respondents' academic performance and their level of satisfaction in the Learning Management System?
6. What are the best predictors of the respondents' academic performance in terms of satisfaction with LMS delivery?

Scope and Limitations

The study was conducted to determine the level of satisfaction of the pupils on the delivery of LMS in the School of Saint Joseph the Worker in Echague, Isabela, and its interaction with their academic performance.

METHODOLOGY

Research Design

The study used a descriptive-correlation design. The collected data were organized, analyzed, and interpreted using the Statistical Package for the Social Sciences (SPSS) to provide necessary information on the level of satisfaction of the respondents in the delivery of Learning Management System. Correlational analysis was used to measure the linear relationship between the level of satisfaction within LMS and the academic performance of the respondents.

Respondents of the Study

The respondents of the study were the elementary pupils enrolled during the SY 2020-2021 in the School of Saint Joseph the Worker in Echague, Isabela.

The respondents were taken using stratified random sampling across the six grade levels with a 95% confidence level and a 5% margin of error.

Research Instrument

The researchers utilized a Semi-Structured Questionnaire as the main research instrument of the study.

The questionnaire consists of two parts: Part I includes the profile of the respondents in terms of age, sex, and grade level; Part II contains the Satisfaction level of the respondents on the delivery of Learning Management System (LMS) in terms of information quality, system quality, service quality, perceived usefulness, perceived ease of use, and communication quality, and user satisfaction.

To determine the level of satisfaction of the respondents, the actual description scores of the respondents were categorized using the 5-point Likert Scale described below.

Scale	Qualitative Description
4.21 - 5.00	Highly Satisfied
3.41 - 4.20	Satisfied
2.61 - 3.40	Neutral
1.81 - 2.60	Dissatisfied
1.00 - 1.80	Highly Dissatisfied

Statistical treatment of the Data

The analysis and interpretation of the gathered data were made through the following statistical tools:

1. Frequency, percentage, and mean distribution were used to analyze the profile of the respondents, their academic performance, and their level of satisfaction in LMS;
2. Pearson's-r was utilized to find out the relationship between the satisfaction level of the respondents on the delivery of LMS and their academic performance;
3. T-test and one-way ANOVA were employed to assess the difference in the level of

satisfaction on the delivery of LMS when the respondents are grouped according to their profile; and

4. Simple Linear Regression was used to determine the best predictors of academic performance in terms of satisfaction on the delivery of LMS.

Research Framework

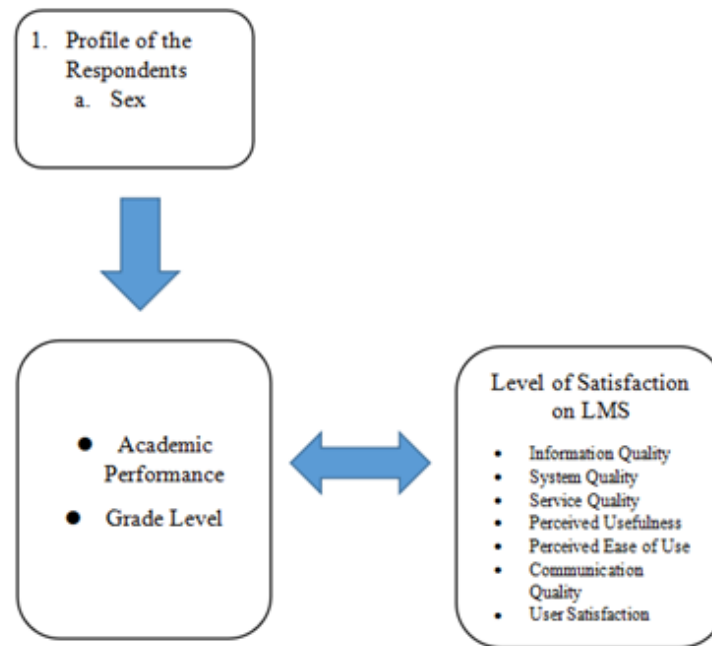


FIGURE 1. The Paradigm of the Study

RESULTS AND DISCUSSIONS

Profile of the Respondents

Table 1 presents the profile of the respondents in terms of sex and grade level. It can be gleaned from the table that in terms of sex, male and female respondents have the same frequency distribution of 46 or 50 percent.

Table 1. Distribution of the Profile of the Respondents

Variables	Frequency n=92	Percent
SEX		
Male	46	50.00
Female	46	50.00
GRADE LEVEL		
Grade I	10	10.90
Grade II	10	10.90
Grade III	15	16.30
Grade IV	22	23.90
Grade V	12	13.00
Grade VI	23	25.00

On the other hand, in terms of grade level, most of the respondents are Grade VI with 23 or 25 percent of the total sample, followed by Grade IV with 22 or 23.90 percent. On the other hand, Grade III comprises 15 or 16.30 percent of the total sample, while Grade V has 12 or 13 percent. Meanwhile, both Grades I and II have 10 or 10.90 percent of the total sample.

Level of Satisfaction on the Learning Management System

SATISFACTION LEVEL	Mean	Qualitative Description
Information Quality		
1. LMS provides accurate information	4.42	Highly Satisfied
2. LMS provides information that is relevant to the course of study that I take	4.37	Highly Satisfied
3. LMS provides complete information	4.43	Highly Satisfied
4. The required information from the LMS system is always available	4.41	Highly Satisfied
5. Learning material information is ready to use	4.38	Highly Satisfied
6. The information in the LMS is easy to understand	4.46	Highly Satisfied
Mean	4.41	HIGHLY SATISFIED
System Quality		
1. Reliable LMS	4.24	Highly Satisfied
2. The LMS provides the functionality I need to successfully carry out learning activities	4.29	Highly Satisfied
3. LMS is easy to navigate	4.30	Highly Satisfied
4. LMS can be used anytime and anywhere	4.34	Highly Satisfied
5. LMS can be accessed easily	4.38	Highly Satisfied
6. LMS can be accessed quickly	4.41	Highly Satisfied
7. LMS provides facilities that can connect with email well	4.35	Highly Satisfied
8. LMS provides facilities that can connect with video conferencing properly	4.32	Highly Satisfied
9. LMS provides facilities that can connect with libraries properly	4.26	Highly Satisfied
MEAN	4.32	HIGHLY SATISFIED
Service Quality		
1. Academic staff is always ready to help with LMS problems	4.49	Highly Satisfied
2. Academic staff try their best to help the problems faced by LMS users	4.51	Highly Satisfied
3. Academic staff provide quick responses in dealing with LMS problems	4.38	Highly Satisfied
4. Academic staff has good knowledge of LMS	4.48	Highly Satisfied
MEAN	4.46	HIGHLY SATISFIED
Perceived Usefulness		
1. Using LMS improves my study performance	4.35	Highly Satisfied
2. Using LMS increases my productivity	4.32	Highly Satisfied
3. Using LMS makes it easier for me to learn	4.27	Highly Satisfied
4. Overall I find LMS useful in my learning	4.35	Highly Satisfied
MEAN	4.32	HIGHLY SATISFIED
Perceived Ease of Use		
1. LMS is easy to use	4.37	Highly Satisfied
2. I quickly learned to use LMS	4.41	Highly Satisfied
3. I feel LMS is suitable for my needs	4.34	Highly Satisfied
4. Interaction with flexible LMS	4.25	Highly Satisfied
MEAN	4.34	HIGHLY SATISFIED
Communication Quality		
1. I feel that the LMS forum chat can easily share my opinion with other users	4.34	Highly Satisfied
2. I find video conferencing classes easy to follow	4.18	Satisfied
3. I feel the LMS allows me to get input from other users easily	4.26	Highly Satisfied
4. I feel LMS allows me to exchange opinions with other users easily	4.25	Highly Satisfied
5. I feel the LMS allows me to review my opinion in class more easily	4.29	Highly Satisfied
6. I feel the LMS allows me to integrate opinions from other students and teachers	4.27	Highly Satisfied
MEAN	4.27	HIGHLY SATISFIED
User Satisfaction		
1. I have a satisfying experience using LMS	4.41	Highly Satisfied
2. I am satisfied with the performance of LMS	4.41	Highly Satisfied
3. I am satisfied using LMS as a learning tool	4.43	Highly Satisfied
MEAN	4.42	HIGHLY SATISFIED
GRAND MEAN	4.35	HIGHLY SATISFIED

Table 2 shows the level of satisfaction of the respondents with the implemented Learning Management System (LMS) in terms of information quality, service quality, perceived usefulness, and perceived ease of use, communication quality, and user satisfaction.

As revealed in the table, the respondents are highly satisfied with most of the items. This resulted in the grand mean of 4.35 or "Highly Satisfied." This suggests that despite shifting the academic platform, the students are still highly satisfied with how the instruction is being delivered to them through LMS.

Academic Performance of the Respondents

Table 3. Academic Performance of the Respondents

Grading Scale	Descriptor	Frequency n=92	Percent
90 – 100	Outstanding	88	95.65
85 – 89	Very Satisfactory	4	4.35

Table 3 presents the academic performance of the respondents. It can be noted from the table that the majority of the respondents are outstanding in their academic performance, noting 95.65% of the total sample. Meanwhile, 4 or 4.35% of the sample has a very satisfactory academic performance. The grading scale was based on the K-12 grading system using the guidelines stipulated in Section VI of DepEd Order No. 8, s. 2015.

Difference in the Level of Satisfaction on the Delivery of LMS in Terms of the Respondents' Sex

Table 4. Difference in the Level of Satisfaction in LMS in Terms of Sex

Indicators of Satisfaction on LMS	Group Means		t-value	p-value
	Male	Female		
Information Quality				
1. LMS provides accurate information	4.41	4.43	0.19	0.85
2. LMS provides information that is relevant to the course of study that I take	4.33	4.41	0.71	0.48
3. LMS provides complete information	4.46	4.41	0.36	0.72
4. The required information from the LMS system is always available	4.37	4.46	0.70	0.49
5. Learning material information is ready to use	4.37	4.39	0.17	0.87
6. The information in the LMS is easy to understand	4.39	4.52	1.04	0.30
System Quality				
1. Reliable LMS	4.22	4.26	0.28	0.78
2. The LMS provides the functionality I need to successfully carry out learning activities	4.24	4.35	0.79	0.43
3. LMS is easy to navigate	4.26	4.35	0.63	0.53
4. LMS can be used anytime and anywhere	4.30	4.37	0.41	0.68
5. LMS can be accessed easily	4.37	4.39	0.16	0.87
6. LMS can be accessed quickly	4.39	4.43	0.31	0.76
7. LMS provides facilities that can connect with email well	4.35	4.35	0.00	1.00
8. LMS provides facilities that can connect with video conferencing properly	4.35	4.28	0.50	0.62
9. LMS provides facilities that can connect with libraries properly	4.26	4.26	0.00	1.00

Service Quality				
1. Academic staff is always ready to help with LMS problems	4.54	4.43	0.84	0.40
2. Academic staff try their best to help the problems faced by LMS users	4.54	4.48	0.52	0.61
3. Academic staff provide quick responses in dealing with LMS problems	4.48	4.28	1.51	0.13
4. Academic staff has good knowledge of LMS	4.52	4.43	0.65	0.52
Perceived Usefulness				
1. Using LMS improves my study performance	4.33	4.37	0.33	0.75
2. Using LMS increases my productivity	4.22	4.41	1.51	0.14
3. Using LMS makes it easier for me to learn	4.24	4.30	0.45	0.66
4. Overall I find LMS useful in my learning	4.26	4.43	1.28	0.20
Perceived Ease of Use				
1. LMS is easy to use	4.28	4.46	1.21	0.23
2. I quickly learned to use LMS	4.30	4.52	1.47	0.14
3. I feel LMS is suitable for my needs	4.30	4.37	0.45	0.66
4. Interaction with flexible LMS	4.33	4.17	1.11	0.27
Communication Quality				
1. I feel that the LMS forum chat can easily share my opinion with other users	4.26	4.41	1.15	0.25
2. I find video conferencing classes easy to follow	4.17	4.20	0.14	0.89
3. I feel the LMS allows me to get input from other users easily	4.24	4.28	0.32	0.75
4. I feel LMS allows me to exchange opinions with other users easily	4.33	4.17	1.04	0.30
5. I feel the LMS allows me to review my opinion in class more easily	4.26	4.33	0.45	0.65
6. I feel the LMS allows me to integrate opinions from other students and teachers	4.22	4.33	0.71	0.48
User Satisfaction				
1. I have a satisfying experience using LMS	4.28	4.54	2.14	0.03*
2. I am satisfied with the performance of LMS	4.30	4.52	1.77	0.08
3. I am satisfied with using LMS as a learning tool	4.33	4.54	1.71	0.09

Table 4 presents the difference in the respondents' level of satisfaction with LMS when they are grouped according to sex.

The result of the study reveals that male and female respondents have no significant difference in most of the indicators of satisfaction on LMS. This implies that regardless of sex, the respondents are all highly satisfied with the implemented LMS as a mode of the delivery of instruction. This is in consonance with the study of Mohamad et al. (2020) who corroborated that there is no significant difference in the satisfaction with the online distance learning with LMS among male and female students.

However, the item "I have a satisfying experience using LMS" under User Satisfaction shows a significant result with a t-value of 2.14 and a p-value of 0.03. This connotes those female respondents are more satisfied than male respondents with their experience of using the LMS.

Relationship between the Level of Satisfaction on LMS and the Grade Level and Academic Performance of the Respondents

Table 5 shows the relationship between the level of satisfaction of the respondents on the delivery of LMS and their grade level and academic performance.

It can be noted from the table that there is no significant relationship between the level of satisfaction of the respondents in the Learning Management System (LMS) and their grade level. This implies that the grade level of the respondents has nothing to do with their level of

satisfaction with LMS.

Indicators of Satisfaction on LMS	Grade Level		Academic Performance	
	r-value	p-value	r-value	p-value
Information Quality				
1. LMS provides accurate information	0.04	0.74	-0.11	0.31
2. LMS provides information that is relevant to the course of study that I take	-0.07	0.49	-0.04	0.67
3. LMS provides complete information	0.02	0.82	-0.02	0.86
4. The required information from the LMS system is always available	0.00	0.99	0.01	0.91
5. Learning material information is ready to use	0.05	0.64	-0.09	0.39
6. The information in the LMS is easy to understand	0.08	0.45	-0.14	0.20
System Quality				
1. Reliable LMS	-0.04	0.71	0.07	0.53
2. The LMS provides the functionality I need to successfully carry out learning activities	0.06	0.56	-0.06	0.58
3. LMS is easy to navigate	0.02	0.84	-0.02	0.83
4. LMS can be used anytime and anywhere	-0.15	0.14	0.11	0.28
5. LMS can be accessed easily	-0.08	0.47	-0.09	0.41
6. LMS can be accessed quickly	-0.11	0.29	-0.06	0.56
7. LMS provides facilities that can connect with email well	-0.02	0.87	-0.07	0.54
8. LMS provides facilities that can connect with video conferencing properly	-0.15	0.16	-0.08	0.44
9. LMS provides facilities that can connect with libraries properly	-0.02	0.83	-0.05	0.63
Service Quality				
1. Academic staff is always ready to help with LMS problems	0.08	0.45	-0.12	0.24
2. Academic staff try their best to help the problems faced by LMS users	0.06	0.56	-0.09	0.37
3. Academic staff provide quick responses in dealing with LMS problems	-0.04	0.74	-0.06	0.54
4. Academic staff has good knowledge of LMS	0.10	0.35	-0.06	0.54
Perceived Usefulness				
1. Using LMS improves my study performance	0.03	0.81	-0.11	0.32
2. Using LMS increases my productivity	0.04	0.67	-0.26	0.01*
3. Using LMS makes it easier for me to learn	-0.10	0.36	-0.07	0.52
4. Overall I find LMS useful in my learning	0.16	0.13	-0.13	0.23
Perceived Ease of Use				
1. LMS is easy to use	0.05	0.61	-0.05	0.67
2. I quickly learned to use LMS	0.05	0.67	-0.10	0.33
3. I feel LMS is suitable for my needs	0.03	0.76	-0.03	0.78
4. Interaction with flexible LMS	-0.12	0.24	-0.05	0.62
Communication Quality				
1. I feel that the LMS forum chat can easily share my opinion with other users	-0.03	0.79	-0.13	0.23
2. I find video conferencing classes easy to follow	-0.15	0.14	-0.14	0.17
3. I feel the LMS allows me to get input from other users easily	-0.09	0.37	-0.04	0.69
4. I feel LMS allows me to exchange opinions with other users easily	-0.11	0.31	-0.09	0.41
5. I feel the LMS allows me to review my opinion in class more easily	0.00	1.00	0.01	0.95
6. I feel the LMS allows me to integrate opinions from other students and teachers	-0.06	0.60	0.00	0.99
User Satisfaction				
1. I have a satisfying experience using LMS	0.04	0.68	-0.09	0.37
2. I am satisfied with the performance of LMS	0.07	0.53	-0.03	0.76
3. I am satisfied using LMS as a learning tool	-0.02	0.84	-0.07	0.51

Meanwhile, the table reveals that the academic performance of the respondents is significantly correlated with their level of satisfaction with LMS, particularly the item, "Using LMS increases my productivity" under Perceived Usefulness with an r-value of -0.26 and a p-

value of 0.01. This suggests that, ironically, while the respondents' productivity in LMS increases, their academic performance decreases. Considering the negative relationship between the level of satisfaction on LMS and the academic performance of the respondents, Zeqiri (2020) found out that satisfaction in blended learning, where LMS is utilized, is positively correlated with the academic performance of the students.

Predictors of Academic Performance

Table 6. Model Summary and Statistical Significance

Model	R	R-Square	F	p-value
1	0.25	0.06	0.81	0.58

Table 6 shows the model summary and the statistical significance of the model. It can be observed from the table that the model has an R-value of 0.25 and an R-Square value of 0.06. The lower R-square value suggests that the satisfaction level of the respondents on the delivery of Learning Management System does not explain much in the variation in the academic performance. This is also true with the F-value of 0.81 with a p-value greater than 0.05. This further implies that the satisfaction on Learning Management System does not statistically predict the academic performance of the respondents.

Table 7. Estimated Model Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t-value	p-value
Constant	94.55	2.193		43.11	0.00
Information Quality	-0.54	0.842	-0.131	0.64	0.52
System Quality	1.58	0.995	0.388	1.59	0.12
Service Quality	-0.292	0.602	-0.075	0.49	0.63
Perceived Usefulness	-1.061	1.368	-0.283	0.78	0.44
Perceived Ease of Use	-0.44	1.407	-0.118	0.31	0.76
Communication Quality	0.024	0.708	0.006	0.03	0.97
User Satisfaction	0.312	0.687	0.081	0.45	0.65

Table 7 presents the estimated model coefficients in terms of information quality, system quality, service quality, perceived usefulness and perceived ease of use, communication quality, and user satisfaction.

The coefficients were obtained by entering all the independent variables into the regression model. The table further shows that all p-values of the independent variables are listed to be greater than 0.05. This means that none of the independent variables are considered to be the best predictors of academic performance. It can be concluded then that there is insufficient evidence to prove that satisfaction on the delivery of Learning Management System can predict the academic performance of the respondents.

Conclusions

This study was conducted to investigate the level of satisfaction of the respondents with the implemented Learning Management System (LMS) for the school year 2021-2022. Most of the respondents were Grade VI with 25 percent. The study revealed that the level of satisfaction of the respondents on the implementation of the Learning Management System (LMS) was very high, with a grand mean of 4.35. However, the findings revealed that the level of satisfaction of the respondents on LMS did not significantly relate to their Grade Level. The study also showed that only one item under User Satisfaction was perceived to be significantly different in terms of the level of satisfaction on the delivery of LMS according to sex. On the other hand, the item "Using LMS increases my productivity" had a significant and negative relationship with the academic performance of the respondents. Finally, none of the indicators of satisfaction on LMS can statistically predict the academic performance of the respondents.

Recommendations

In the light of the findings and conclusion of the study, the following recommendations are worth considering:

1. Since the results indicated that the pupils are highly satisfied with the Learning Management System (LMS), teachers must continue utilizing the LMS as a new mode of distance learning during the pandemic.
2. To improve the productivity of the pupils and their academic performances, the schools must enhance the delivery of the Learning Management System (LMS) that support and give additional knowledge for students' creativity.
3. School administrators may continue to conduct observations for the satisfaction level in delivering LMS to their pupils and provide technical assistance to the teachers and guardians who are having difficulty in utilizing it.

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