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National Capital Region  
SCHOOLS DIVISION OFFICE OF LAS PIÑAS CITY  
**LAS PIÑAS NATIONAL HIGH SCHOOL**  
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# Evaluation of the Utility and Usability of the Learning Resource Management System of Las Piñas National High School-Learning Resource Center for Junior High School

An Action Research by

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## **ABSTRACT**

The study entitled, “Evaluation of the Utility and Usability of the Learning Resource Management System of Las Piñas National High School-Learning Resource Center of Junior High School”, aims to gauge the usefulness of the curated learning resource management system of the researcher and others. To ensure the best version of the portal, it was placed under 2 kinds of evaluation. First, from software evaluators—a bot or AI (artificial intelligence) that evaluate the website design in detail. It yielded a total of 90% grade from WebsiteGrader and a 73.8% total rating from Qualidator. The second evaluation was the user experience of the target audience of the resource portal. Data was collected through the opportunity sampling method. A Likert scale survey using a Google Form was implemented for grade 10 STEM students and science department teachers. The utility and usability of the portal were the main subjects rated by the respondents. To sum up, the overall UX (user experience) by the students and teachers resulted in 76% being very satisfied and 25% being satisfied with the LRMS. The website is very useful for students, parents, and teachers. Some minor enhancements will be made based on the comments and suggestions of the respondents to provide a richer experience when the LRMS is officially launched to the public.

## **RATIONALE**

The COVID-19 pandemic brought a big paradigm shift in the landscape of the Philippine education. (DepEd, 2020) The whole education system were forced to transition to digital and technology-inclined not just in the classroom setup, but also in everything we do, trainings, professional development, LAC sessions, and even conducting of classes. (Anoba, 2021) The teachers, students, and parents learned new terms such as, synchronous and asynchronous sessions, and a lot more.

The changes undergone were really drastic, but the system is thriving. Everyone was forced to adapt, because the closure has affected more than 1.2 billion learners worldwide with more than 28 million learners in the Philippines. (UNESCO, n.d.) The giving of instructions and assessment also shifted to online and digital platforms. The use of LMS (Learning Management Systems) became more prominent. Educators have to maximize the whole digital landscape to continue providing quality education to students.

Moreover, to continue adapting and adjusting in the digital world, the researcher and the ICT coordinator of the Science Department–Mrs. Jonalie A. Pajares, under the supervision of one of the Master Teachers of the same department, Mrs. Faith Marie B. Chavez, was tasked to build an innovation for our school, a learning resource management system. This project aims to provide to the students and teachers of Las Piñas National High School-JHS all the resource materials in one place–modules, worksheets, assessments, and the like. (Juntunen, 2014)

## ACTION RESEARCH QUESTIONS

- How utilized is the learning resource portal in terms of utility?
- How satisfactory is the learning resource portal in terms of usability?
- What's the overall impression of the teachers and student in the usefulness of the portal?

## INNOVATION, INTERVENTION, AND STRATEGY

The learning resource management system was designed through Google Sites. It is a free website generator from Google Suite—anyone with a Google account can create a portal design that is publishable in public. Any website created from the Google Sites has a domain URL under (Google).

The following figures are the user interface of the LRMS of Las Piñas National High School-JHS.

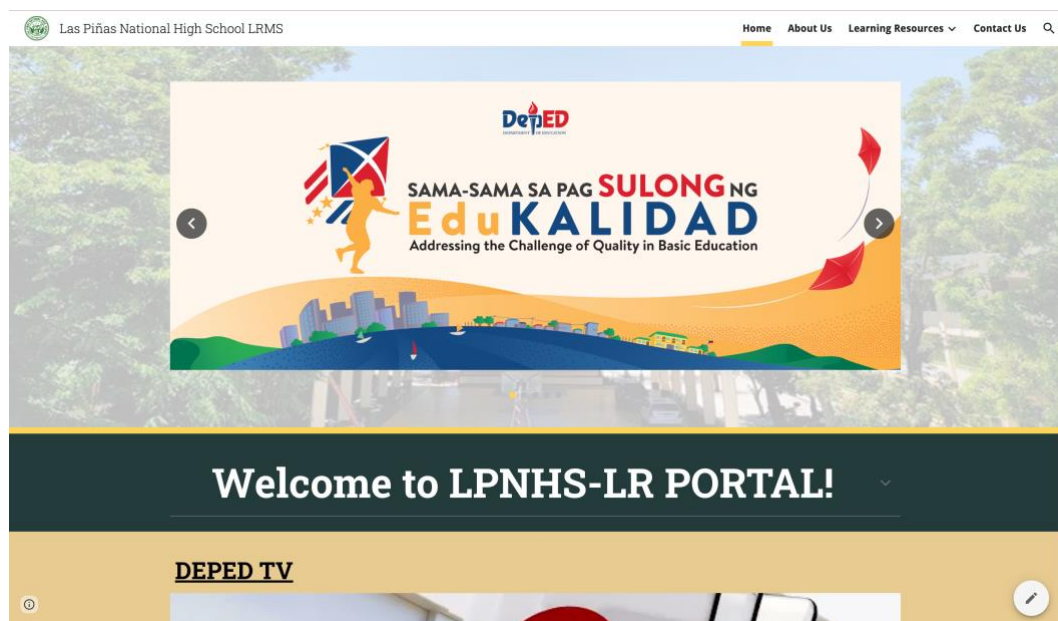


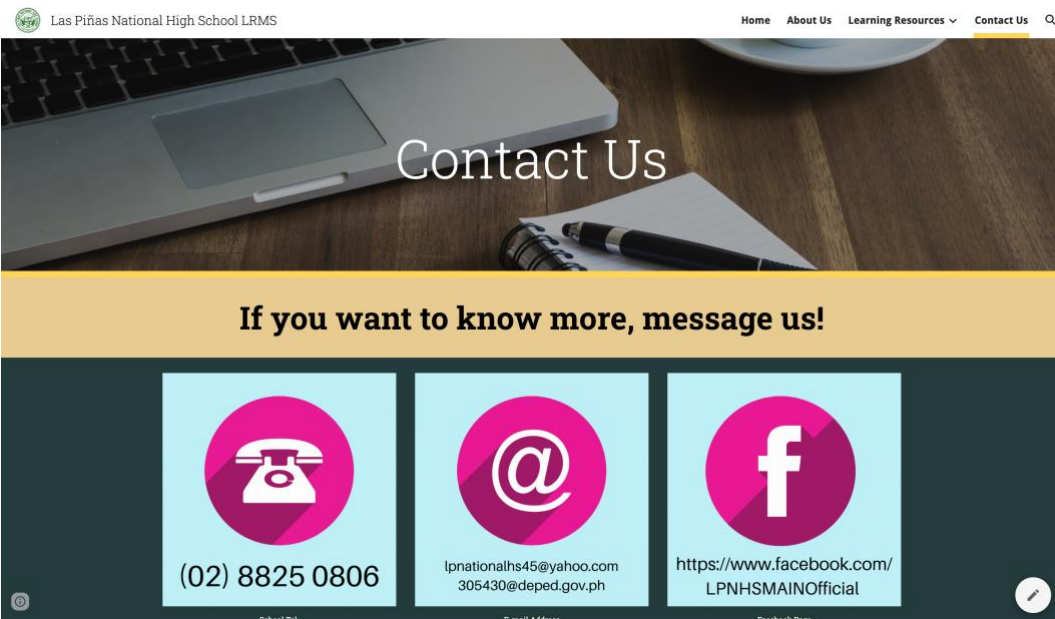
Figure 1. Home page of the portal



Figure 2. About Us section of the portal



Figure 3. Main page of the learning resources



**Figure 4.** *Contact Us* section of the portal

The creation of the LRMS portal is an intervention to aid the struggles of parents of going to the school monthly to retrieve and collect new sets of learning materials, to help the students who cannot go outside because of the virus, and to have one place where all the resource materials necessary can be found.

Click to fully access the [LPNHS-LRMS-LRC Portal](#).

## **PARTICIPANTS**

The selected respondents for this action research were grade 10 STEM students and Science Department teachers. An opportunity sampling method was utilized in this study. There are total of 54 students and 16 teachers participated in the Likert scale-survey. The whole population of the grade 10 STEM students participated; thus, responses are interpreted with 100% of confidence and 0-1% margin of error. On the other hand, 16 out of 35 science teachers from JHS participated; therefore, it yields 80% confidence level with only 12% of margin error.

## **COLLECTION OF DATA**

The portal was evaluated using 2 software evaluators. The first was, sitegrader.com. And the other was, qualidator.com. These 2 site evaluators were used in a study conducted on 2017 entitled, “Survey on Website Evaluation Tools”, (Khandare, 2017)

A google survey form was implemented to collect responses and feedback from both teachers and students after using the LR-Portal to access files and learning materials. A Likert-scale-survey was utilized, and it was divided into (2) two major components—utility and usability. It was then translated to quantitative data representations and analyses. Furthermore, comments and suggestions were interpreted qualitatively.

## DISCUSSION OF RESULTS AND REFLECTION

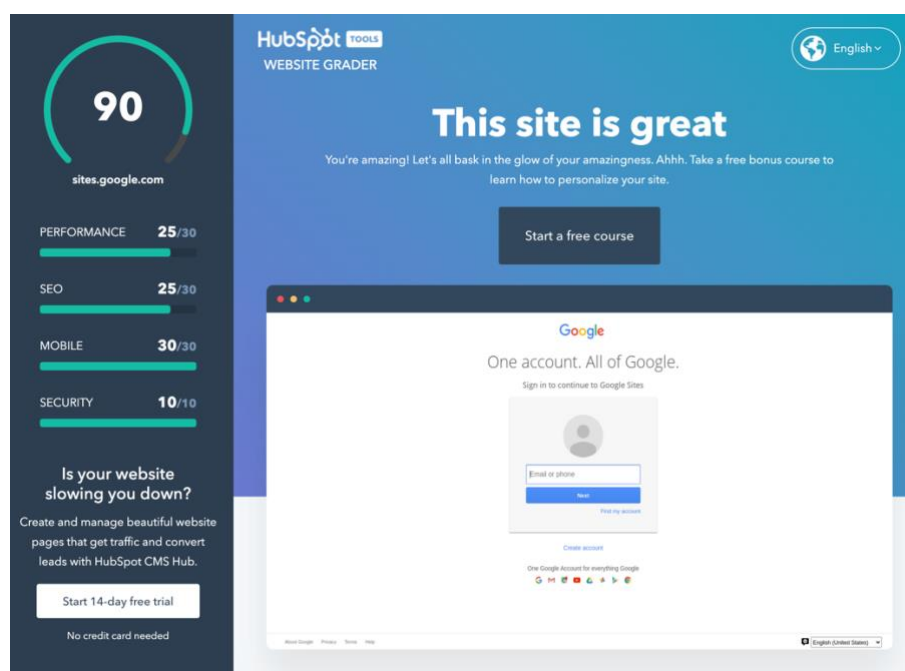
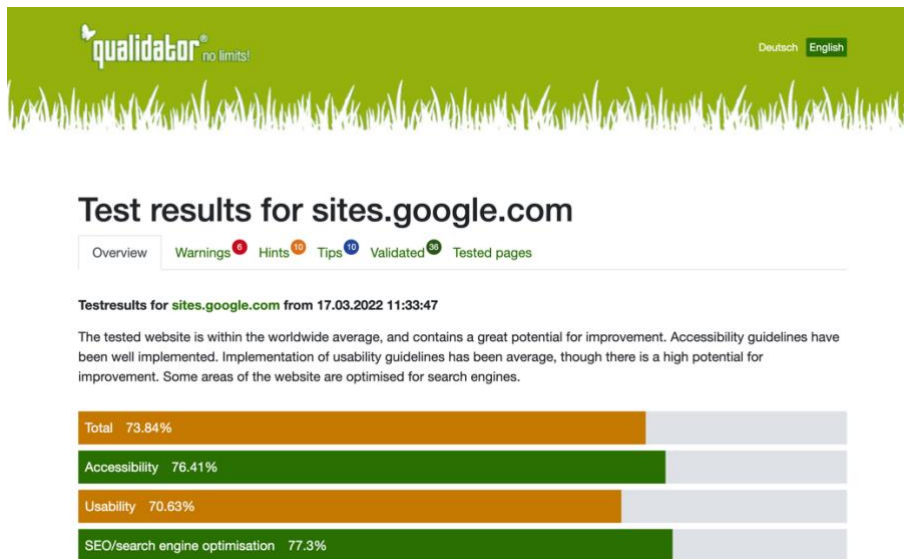


Figure 5. WebsiteGrader Evaluation

The LRMS received a total of 90 out of 100 of points from the WebsiteGrader. It breaks down with 20/30 of performance of the site, 25/30 SEO (search engine optimization), 30/30 mobile rating, and 10/10 security. Each category presented have their own sub-categories, this are attached on the appendices for further reference.



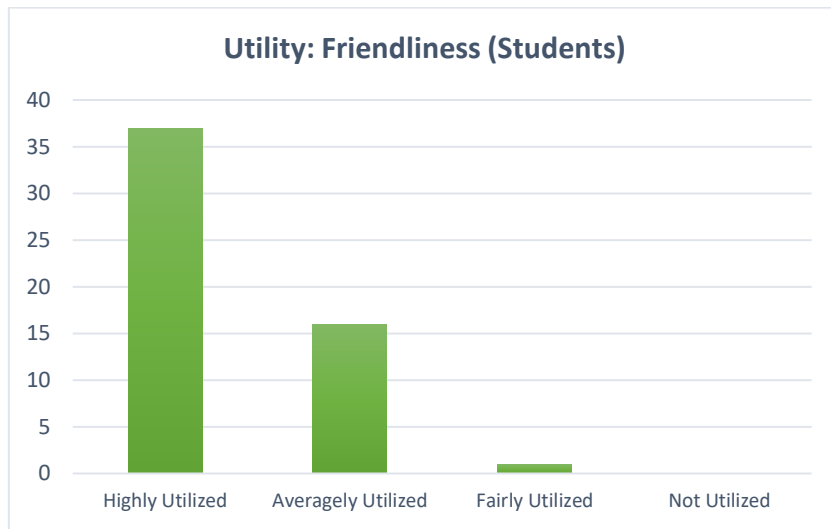


**Figure 6.** Qualidator Evaluation

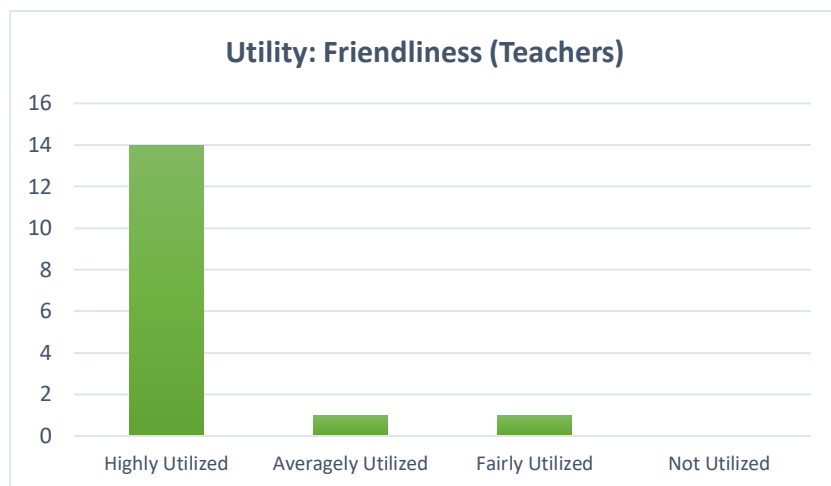
The Qualidator is another website evaluator utilized by web designers. The overall rating got by the LRMS portal was 73.84% out of 100% which was the average of 3-components. In terms of accessibility, it received 76.41% rating. For usability of the site was 70.63%. And for SEO of the portal, it garnered 77.3%.

The (2) two website evaluators used different grading systems and gauged different components of the portal. Thus, the result from both evaluations were incomparable.

**Table 1. Utility: Friendliness Rating (Students)**

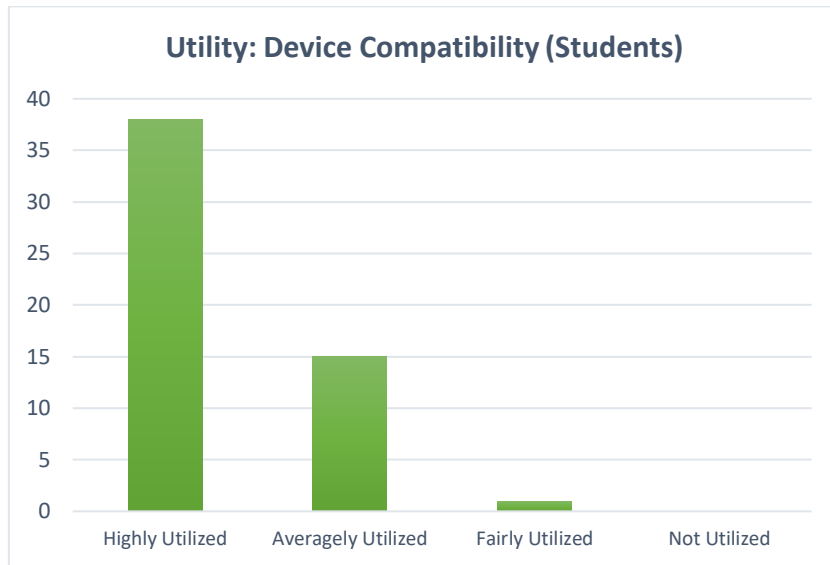


**Table 2. Utility: Friendliness Rating (Teachers)**

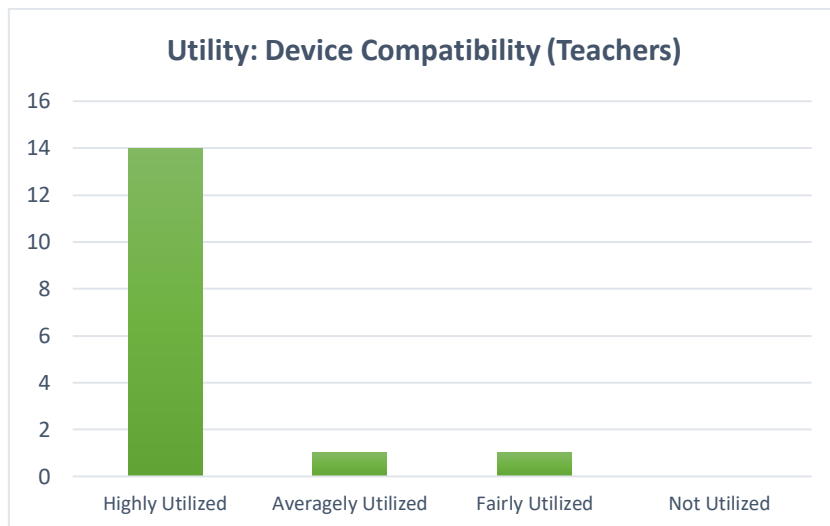


The table 1 and 2 show the students and teachers rating in the friendliness of the LRMS-portal. The average rating of students is 3.6 and 3.8 for teachers. It can be implied that the friendliness of the portal is highly utilized.

**Table 3. Utility: Device Compatibility Rating (Students)**

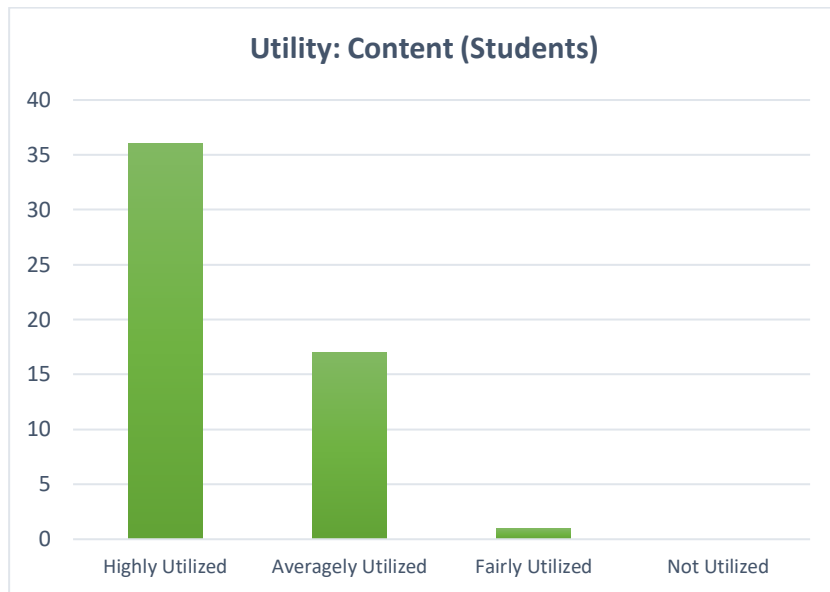


**Table 4. Utility: Device Compatibility Rating (Teachers)**



For table 3 and 4, it represents the rating of students and teachers in terms of the device compatibility. The average score of students is 3.6 and the teachers got a 3.8. It can also be implied that the device compatibility of the LRMS-portal is highly utilized.

**Table 5. Utility: Content Rating (Students)**



**Table 6. Utility: Content Rating (Teachers)**

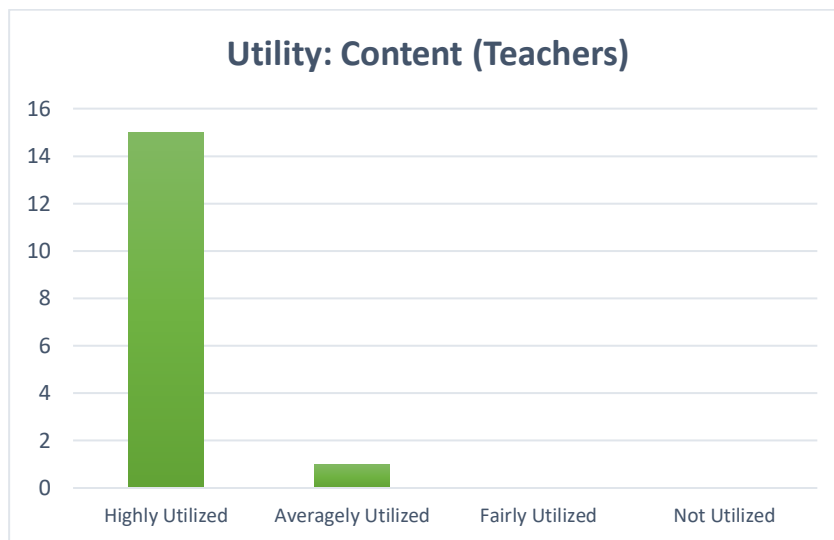
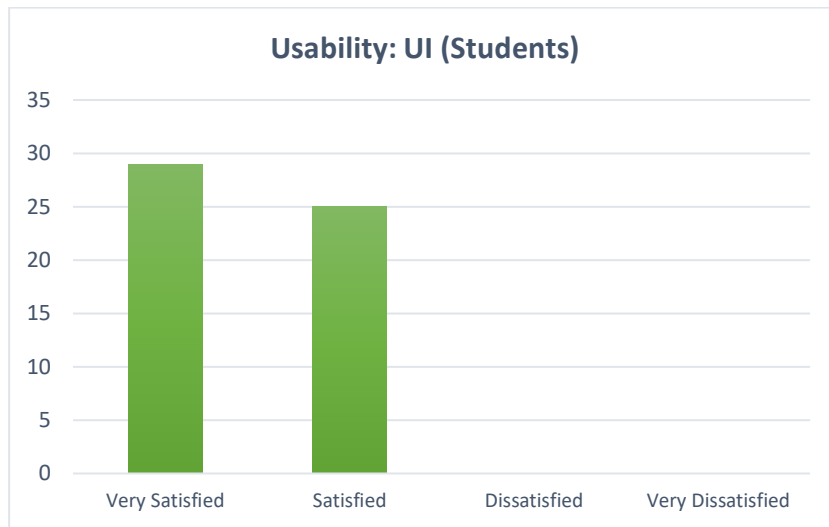
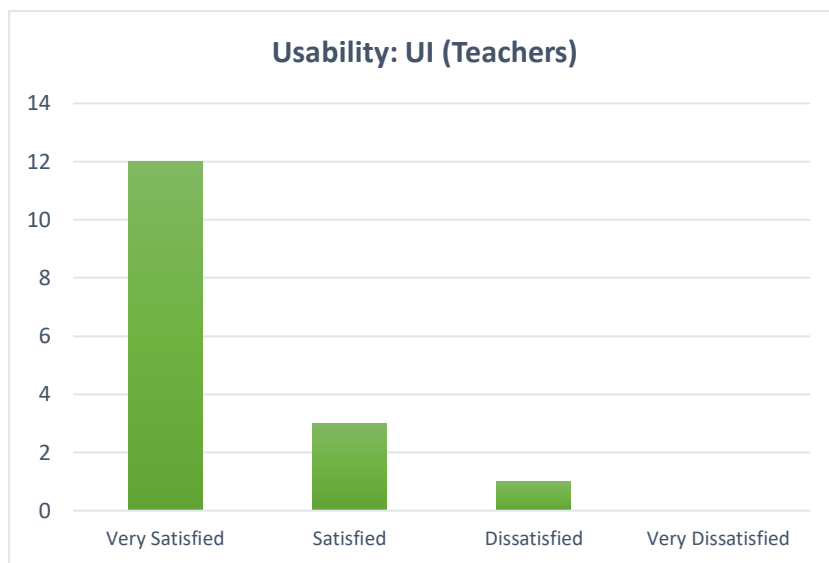


Table 5 and 6 represents the content rating of the students and teachers. The average score of students' evaluation is 3.6 and 3.8 for the teachers. This means that the content of the LRMS-portal is highly utilized.

**Table 7. Usability: User Interface Design/UI (Students)**

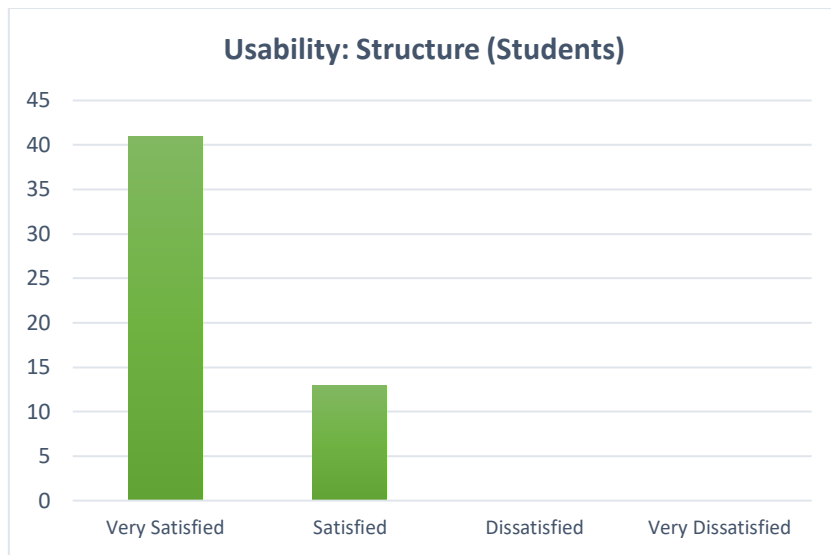


**Table 8. Usability: User Interface Design/UI (Teachers)**

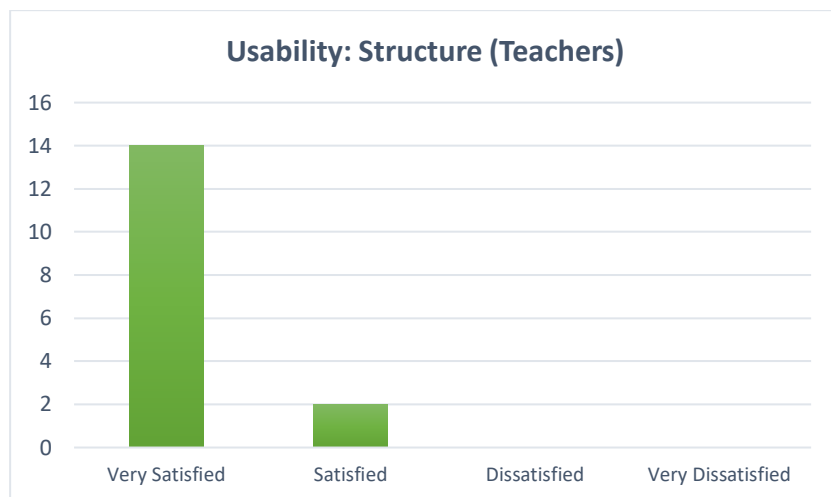


The table 7 and 8 shows the evaluation of the students and teachers in terms of the User Interface Design or UI. The average of students' evaluation is 3.5 and as for the teachers, it is 3.6. Although, lower than the previous point averages, it can still be considered as very satisfactory.

**Table 9. Usability: Structure (Students)**

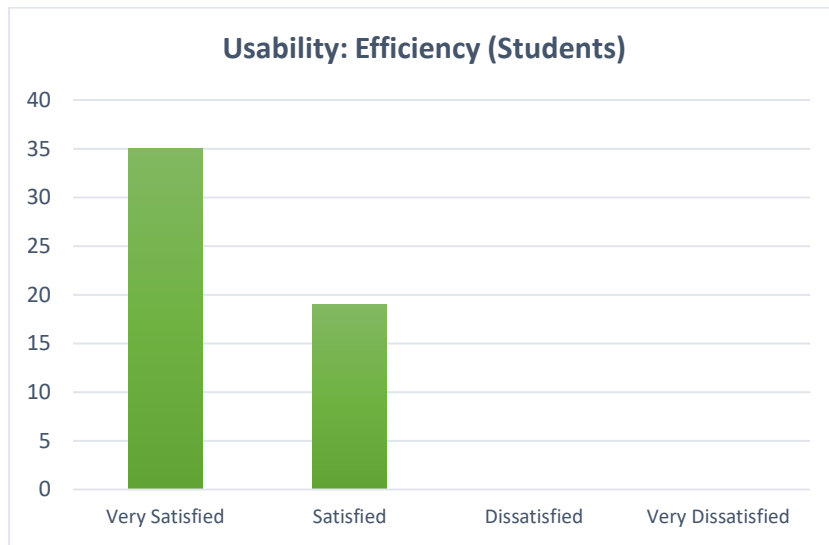


**Table 10.** *Usability: Structure (Teachers)*

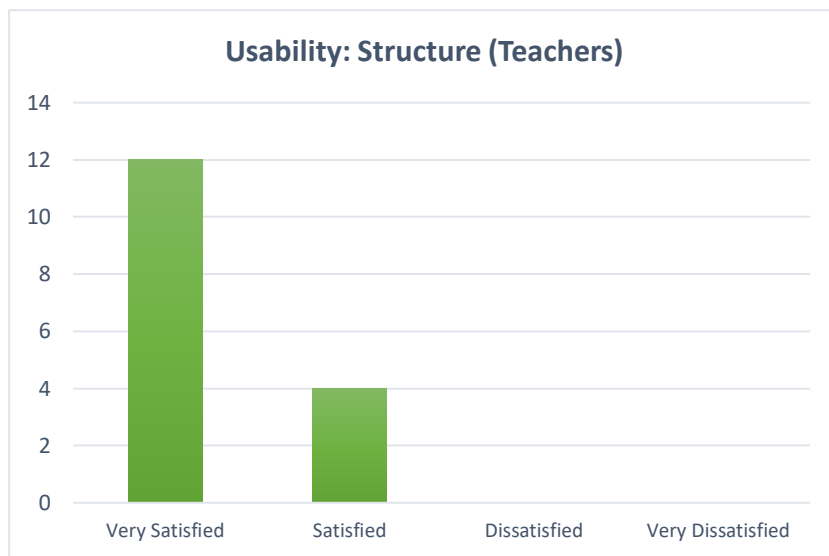


The table 9 and 10 represents the usability in terms of structure of the portal. It received a 3.75 average point from the students and 3.87 from the teachers' average evaluation. It gives a very satisfactory summary for this component of the portal.

**Table 11. Usability: Efficiency (Students)**

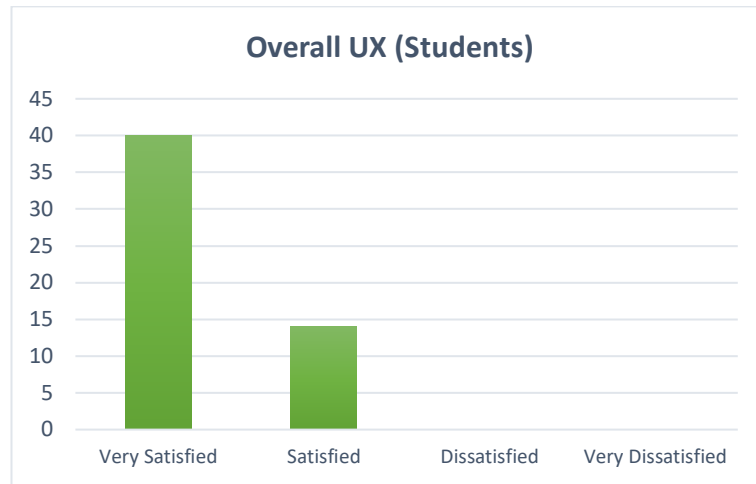


**Table 12. Usability: Efficiency (Teachers)**

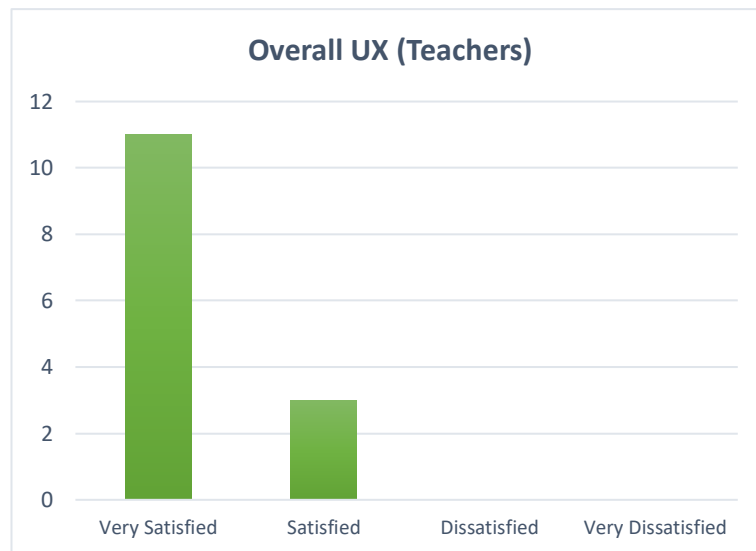


Last under the usability is the efficiency of the portal. It garnered a 3.6 average from the students and a 3.75 from the teachers. It can be implied that the structure is very satisfactory.

**Table 13.** Overall User Experience/UX (Students)



**Table 13.** Overall User Experience/UX (Teachers)



The overall user experience evaluation of the students and teachers are shown in tables 13 and 14. It yielded a 3.7 average from the students and 3.8 from the teachers. The combined average of both groups is 3.75, meaning that, the overall user experience of both respondent groups was very satisfied with the LRMS-portal.

Overall, the LRMS-Portal is a designed school website. The AI evaluation of the portal support this claim and the Likert scale-survey results align with it as well. In conclusion, the portal is highly utilized in terms of its utility–



friendliness, content, and device compatibility. And LRMS-website is very satisfactory from its usability–user interface, structure, and efficiency. Lastly, the user-experience of the respondents were very satisfactory from both groups.

## **ACTION PLAN**

To adapt the comments and suggestions of the respondents and republish the website publicly showing the revisions and improvements of the portal. To launch the LRMS-portal to all the students, teachers, and other stakeholders of Las Piñas National High School-Junior High School.

## **FINANCIAL REPORT**

There was no financial needed in the course of this study.

### **Bibliography**

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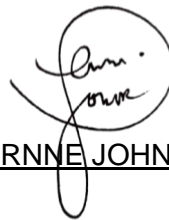
## APPENDIX A

### DECLARATION OF ANTI-PLAGIARISM

I, ERNNE JOHN F. DOLOR, LPT. understand that plagiarism is the act of taking and using another's ideas and works and passing them as one's own. This includes explicitly copying the whole works of another person and/or using some parts of their own without proper acknowledgment and referencing.

I, hereby attest to the originality of this research proposal and have cited properly all references used. We further commit that all deliverables and the final research study emanating from this proposal shall be of original content. We shall use appropriate citations in referencing other works from various sources.

I, understand that violation of this declaration and commitment shall be subject to consequences and shall be dealt with accordingly by the Department of Education.

A handwritten signature in black ink, enclosed within a hand-drawn circle. The signature appears to be 'Ernne John F. Dolor'.

PROPONENT: ERNNE JOHN F. DOLOR, LPT.

SIGNATURE:

DATE: MARCH 20, 2022

## APPENDIX B QUESTIONNAIRE

Section 1 of 5

### Evaluation of the Utility and Usability of the Learning Resource Management System of Las Piñas National High School-Learning Resource Center for Junior High School

An Action-Research by Erne John F. Dolor, LPT.

Email \*

Valid email

This form is collecting emails. [Change settings](#)

#### Consent Letter

Good day!

You are invited to participate in a research study entitled, Evaluation of the Utility and Usability of the Learning Resource Management System of Las Piñas National High School-Learning Resource Center for Junior High School. The goal of this research study is to evaluate the overall usefulness of the website from students' and teachers' end. This study is being conducted by the person undersigned under Philippine Normal University-Manila and Las Piñas National High School.

Participation in this study is voluntary. If you agree to participate in this study, kindly tick the "agree" below, and if you do not consent to continue, please click the "disagree" and submit the form.

Participating in this study may not benefit you directly, but it will greatly help us in the further development of the learning resource portal.

The information you will share with us if you participate in this study will be kept completely confidential to the full extent of the law.

If you have any questions about this study, please contact me thru [ernnejohn.dolor@depedlaspinas.ph](mailto:ernnejohn.dolor@depedlaspinas.ph) or [dolor.ejf@pnu.edu.ph](mailto:dolor.ejf@pnu.edu.ph)

Yours sincerely,

ERNNE JOHN F. DOLOR, LPT.  
Special Science Teacher I

Do you agree to continue and participate in this action research? \*

Yes, I agree

No, I disagree

## Respondent's Profile



Description (optional)

Name (optional)



Short answer text

Age



Short answer text

Sex



Male

Female

Designation



Student

Teacher



# Utility of the Learning Resource Portal



Description (optional)

## Friendliness \*

User-friendly is about making it easy for visitors to find the information they need quickly and easily on any device.

1 2 3 4

Not utilized     Highly utilized

## Device compatibility \*

The portal is viewable on a Smartphone, Tablet, Laptop, or Desktop.

1 2 3 4

Not utilized     Highly utilized

## Content \*

Content is the text, visual or audio content, and files that is made available online.

1 2 3 4

Not utilized     Highly utilized



# Usability of the Learning Resource Portal



Description (optional)

## UI (User Interface Design) \*

User interface (UI) design is the interface focusing on the style and interactivity of the portal

	1	2	3	4	
Very Dissatisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Satisfied

## Structure \*

Structure is how information is organized and interconnected on the portal.

	1	2	3	4	
Very Dissatisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Satisfied

## Efficiency \*

Efficiency is a measure of how well the portal does what it should do.

	1	2	3	4	
Very Dissatisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Satisfied



## UX (User Experience)



User experience (UX) is the interaction and experience users have with a product and its services.

Overall, how would you rate the usefulness of the Learning Resource - Portal? \*

	1	2	3	4	
Very Dissatisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Satisfied

Kindly leave any comments/suggestions for the improvement of the portal. \*

Long answer text

---

## APPENDIX C

### RESPONSES

Designation	Friendliness	Device compatibility	Content	UI (User Interface Design)	Structure	Efficiency	Overall, how would you rate the usefulness of the Learning Resource - Portal?	Kindly leave any comments/suggestions for the improvement of the portal.
Student	3	3	3	3	3	3	3	N/A
Student	3	3	3	3	3	3	3	none.
Student	3	3	3	3	3	3	3	Make the interface more interactive and easy to use. Allow students to access majority of the lessons offline. Improve the content with the learning materials.
Student	3	3	3	3	3	3	3	None
Student	3	3	3	3	3	3	3	Make it possible to access to any status
Student	3	4	3	3	3	3	3	My only suggestion is that, Junior High School students should try and test this portal so that they know how this works and have the experience to share to others.
Student	3	4	3	3	3	3	3	None so far
Student	4	4	3	3	3	3	3	Overall, it's good but somehow lacking of some information.
Student	2	3	2	4	3	3	3	The Hyperlink of Learning Resources some of them is cannot click
Student	3	3	3	3	4	3	3	none
Student	3	2	4	3	4	3	3	Everything is good
Student	3	4	4	3	4	3	3	For me po, add more features like adding the list of teachers, add also the respective class room adviser to be more inform and accessible, add also a the message of our dearest principal at the top or at the bottom.
Student	4	3	3	3	3	4	3	Some images in the website take time to fully load in.
Student	4	3	4	4	4	4	3	I think the portal has all its best traits, so I can't think of any suggestions about it.
Student	4	3	3	3	3	3	4	I have no suggestions as of the moment.
Student	3	4	3	3	4	3	4	I think the portal should be more organized in terms of the pictures.

Designation	Friendliness	Device compatibility	Content	UI (User Interface Design)	Structure	Efficiency	Overall, how would you rate the usefulness of the Learning Resource - Portal?	Kindly leave any comments/suggestions for the improvement of the portal.
Student	4	3	4	3	4	3	4	None
Student	4	4	4	3	4	3	4	The interface of the website is user-friendly and very easy to access.
Student	4	3	4	4	4	3	4	the struggle must be more organized in smartphone
Student	4	4	4	4	4	3	4	So far, the suggestion that I can think of is maybe changing the font size of some parts especially the size that was used in the announcement made in the "Schedule of Retrieval of Learner's Package." But everything works well in this portal.
Student	4	4	4	4	4	3	4	After trying the portal, i can say that it was good and very stable to use. This is very helpful to a lot of people specially to me as a student.
Student	4	3	4	3	3	4	4	For me, it is good and helpful to the students. I don't have any suggestion for now.
Student	3	3	4	4	3	4	4	As observed, it is easy to use although the page loading is slow in smartphones.
Student	4	3	3	3	4	4	4	As much as possible to make it a data saver because not all students have wifi in their homes.
Student	3	4	3	3	4	4	4	.
Student	4	4	3	3	4	4	4	I don't know po if this is necessary, but my suggestion is, improve the content by adding the Youtube channel of our school 'LPNHS Junior High School Official', as well as those subjects who have their own operating channel like the AP HUB of Araling Panlipunan.



