

User-Centered Analysis on the Existing Online Enrollment Platform of Mapúa University (myMapúa)

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Abstract- *This paper discusses the existing online enrollment platform “myMapua.” Since the institution is continuously leaning towards the technological approach, improvements on the enrollment system was mentioned. Despite the existence of myMapua, there are interruptions while enrolling online. To analyzed it further, the researcher based it on the online survey and almost majority of the fourty (40) respondents which are both students enrolled and alumni claimed that they were not satisfied with the existing platform and find it hard to complete the tasks mainly because of the encountered errors and confusion in the user interface (UI). A revamp on the existing platform was proposed.*

Indexed Terms- *Enrollment Platform, Usability, User-Centered, User-Experience, User-Interface, Website*

I. INTRODUCTION

Mapua University is one of the top engineering schools in the Philippines and they're technology-oriented people. However, deciding how to develop alternative online delivery mechanisms at an institutional level is not an easy task. The best approach is for each institution to address a few key criteria in the context of previous development. One major problem that the students continually address is the enrollment system of the university. Before any admitted student decides to enroll, they should carefully evaluate if they will be able to commit the time, money, and resources an academic program requires. That includes admission processes (Hudnett, 2019).

Unfortunately, this has been the opposite scenario in the school. Enrollment procedures in many universities not only in the Philippines usually do manual process even with the advent of the internet

and with so many sophisticated technologies (Custodio & Castro, 2016). Issues like the system's usability design and the vast number of students enrolling simultaneously. Additionally, slow internet speed access in the country can also be a major problem of the system. In line with this, there can be countless reasons why an admitted student fails to enroll.

The underlying ripple effects of stifling competition for education institutes is the growing necessity for schools to enhance their mechanisms for better serving student applicant's queries and objections (Jenny J, 2019). This will eventually help admissions of the school to ultimately enroll more students. Hence, the importance of an enrollment system in school should have the ease of convenience and efficiency. Students are not only looking for personalized attention at each step but also looking to get it quick. Which is why the inter-connectivity of computers and the web can now be integrated. The progressive development of the digital era is a good opportunity to continue innovating easier transactions on the education system. It will surely enhance the school's procedure in order to solve the present problem of the university and to maintain its technological university reputation.

- **Significance of UI and UX Design in websites**
A user interface (UI) is a system and a user interacting with each other using commands or techniques to operate the system, data, and contents (Heonsik, 2017). Hence, a UI design composed of the overall visual elements that a user might interact within a website or a product. Designers aim to create designs that users will find easy to use and pleasurable. User interface design also involves an essential part of the user experience; users are very swift to judge designs on usability and likability.

Designers focus on building interfaces that will be highly usable and efficient. Thus, a thorough

understanding of the context users will find themselves in making those judgments is crucial. Whereas, user experience (UX) provides meaningful and relevant experiences to users. It includes the entire process of acquiring and integrating the product. ("What is User Experience (UX) Design", 2019) The UX interface is also affected by its usability, content, services, user's affinity and user's value (Heonsik, 2017).

In this fast-paced society, the most successful websites/applications are those that respond quickly and effectively. Design and software are now heavily based in user experience because it has become all about the consumer. If the website takes ten seconds longer to load just to find a specific option, rest assured that it will show in the reports. People's perception of it could also be affected as some of them have short attention span.

- Online Enrollment Gap

Paper enrollment forms are becoming a thing of the past. In this digital era, online presence has been a mandatory task in dealing with transactions especially in academic institutions. It saves time, it's cost effective, and can give instant feedback. Online technology is a promising resource for conducting research. While the internet may improve a study's reach, it may also introduce a number of challenges for participants and investigators (Buis, Janney, Hess, Culver & Richardson, 2009). Therefore, educators and administrators should understand how students perceive online enrollment processes since most of them are technology savvy and would comment on the overall use of a website.

Additionally, colleges and universities need to address this gap as institutions are mainly focused on the student's satisfaction, retention and graduation rates (Noel-Levitz, 2010). For instance, University of the Philippines encountered a system error and a deliberate attack on the student database where hundreds of students camped out within the campus, while trying to log on to the website, which was then accessible using only UP's Wi-Fi connection (Cinco, 2016). College enrollment is complex and confusing at first. Adding courses online requires a lot of patience since there are hundreds of students accessing

the same website. Slow internet connection, capacity of the bandwidth, and extreme confusion were the common issues. Hence, it should take into account that online education is the subject of research not just a part of the school's operational activities (Western Cooperative for Educational Telecommunications, 2000).

II. METHODOLOGY

In order to satisfy the objectives of this paper, a quantitative approach is used. Since online survey specifically with the use of Google Forms, has become one of the most popular methods of data collection. Academic researchers, including both faculty and students, expect and require a good response rate to their research projects for reliable results (Saleh & Bista, 2017). This approach is an assessment based on the evaluation, knowledge, and interpretation of perceptions depending on experiences lived by students with online enrollment processes and acceptance of technology as a phenomenon was considered initially. Website evaluation encompasses the quality of the website. There are many factors or characteristic to evaluate the quality of the website (Fernandez, Insfran, and Abrahão, 2011). Usability is one of the factors and has different approaches such as FURPS Quality Model, McCall's Quality Model, Boeh's Quality Model, and QUIM Quality Model.

In this study, the researcher used the FURPS Quality Model to the 40 respondents. These are a combination of existing students, faculty, and alumnis. Robert Grady, while working at Hewlett-Packard, presented the FURPS model whose acronym indicates the set of quality factors (Grady, R.,1992). *F* means *Functionality* where it provides functions and services when used under the specified condition. *U* stands for *Usability (UX)* as the ability of the software to be learned, used, understood, configured, and executed. *R* is for *Reliability* which maintains a specific level of fault tolerance when used. *P* is *Performance* where it is determined by the capacity, speed, efficiency, and scalability of the software. *S* is defined as *Supportability* where it composes of flexibility, sustainability, maintainability, and testability (Kaur, 2012). The table shown below is Grady's FURPS model.

Quality Factor	Description
Functionality	Feature Set, Capabilities, Generality, Security
Usability	Human Factors, Aesthetics, Consistency, Documentation
Reliability	Frequency or Severity of Failure, Recoverability, Predictability, Accuracy, Mean Time to Failure
Performance	Speed, Efficiency, Resource Consumption, Throughput, Response Time
Supportability	Testability, Extensibility, Adaptability, Maintainability, Compatibility, Configurability, Serviceability, Installability, Localizability, Portability

Table I. Components of FURPS Model (Adapted from Robert Grady)

In these set of components, the researcher selected one component for each acronym in order to simplify the online survey and focused on usability while including basic components needed to evaluate the existing enrollment platform “myMapua.” The questions were subdivided in seven categories namely: Efficiency which falls under *Performance*; Effectiveness on *Supportability*; Satisfaction, Navigation & Interface, and Learnability for its *Usability*; Accessibility to test its *Reliability*; Security to assess the *Functionality*.

The online survey was targeted to both students enrolled and alumni with a total of 40 respondents. By assessing their experiences in using myMapua, we can tell if the platform is effective or not. Hence, a user-centered analysis helped the researcher to evaluate generally if the study is feasible. User experience (UX) usually determines the ease of use in website with different personas and scenarios to continually improve. Additionally, user interface (UI) mainly focuses on the aesthetics of the platform. The overall design of the interface also affects the users in navigating the website. It is essential to understand these concepts as they are the core of the user’s perception.

III. RESULTS AND DISCUSSIONS

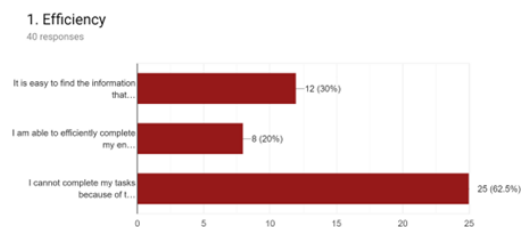
After analyzing the results of the online survey based on the 40 respondents, most of the students were not satisfied with the existing online platform “myMapúa.” Apart from the satisfaction of students, almost 60% of the respondents commented that it needs more improvement on the overall design, usability, and functionality of the website. One student suggested that upgrading the server would be better to accommodate thousands of students enrolling at the same time. Another student mentioned that a revamp of the platform or an alternative way can be a solution in overcoming this problem and designing it to a modern interface since it has a big potential and that enrollees are increasing. With regards to the survey given, below are the specific chart based on the FURPS Model:

Table II. Online Survey Results (based on the respondents’ answer per item)

	(F)Functionality	(U)Usability	(R)Reliability	(P)Performance	(S)Supportability
Q1: Efficiency				62.5% can’t complete tasks because of the conflict schedules and availability of	

				the sections	
Q2: Effectiveness					75% can't enroll quickly because of the encountered errors
Q3: Satisfaction		55% were not satisfied with myMapúa			
Q4: Learnability		67.5% claimed it's easy to use for the first time			
Q5: Accessibility			77.5% said that it takes time to open the web page		
Q6: Navigation & Interface		55% answered that the navigations, buttons, and labels of myMapúa were clear			
Q7: Security	85% trusts the platform in keeping their personal information safe				

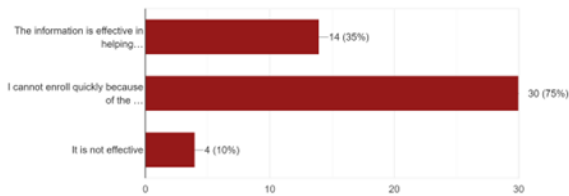
The graphs shown below represents the percentage of each checkbox based on the 40 responses:



For question 1, 62.5% of the respondents claimed that they cannot complete their tasks because of the conflict schedules and availability of the sections. 30% answered that it is easy to find the information that the need while the latter 20% said they were able to complete the online enrollment efficiently.

2. Effectiveness

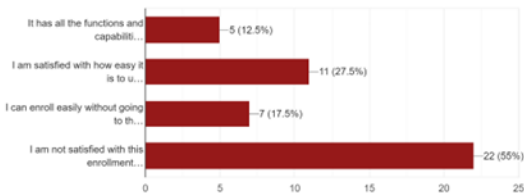
40 responses



75% of the respondents reasoned out that they cannot enroll quickly because of the encountered errors while accessing online. 35% answered that overall it is somehow effective in completing the enrollment. Then 10% claimed that it is not effective at all.

3. Satisfaction

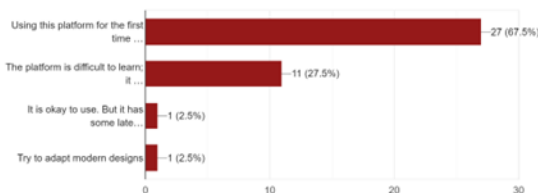
40 responses



With regards to the satisfaction of the respondents, 55% said that they are not satisfied with the existing online platform while the minority answered that it has all the functions and capabilities that they expect it to have.

4. Learnability

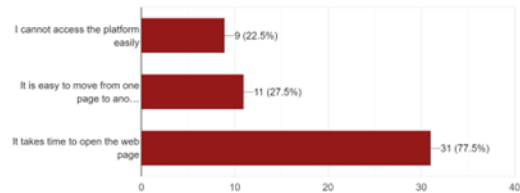
40 responses



In this category, most of the respondents answered that this platform was easy to use for the first time while 27.5% claimed that it is difficult to learn. 5% mentioned that it needs to adapt modern designs and has delay issues in using it.

5. Accessibility

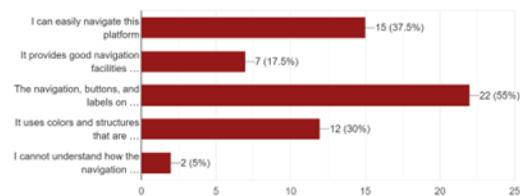
40 responses



In this section, the majority of the respondents answered that it takes a lot of time to open and switch to different web pages. 22.5% said that they cannot access it easily.

6. Navigation and Interface

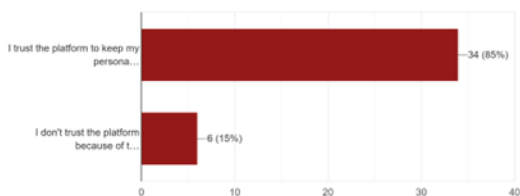
40 responses



55% of the respondents answered that the navigation, buttons, and labels were clear but needs further improvement on the totality like adapting a modern design and simplified version. 5% claimed that they cannot understand how the navigation works; colors and labels for them were confusing.

7. Data Security

40 responses



Security falls under the Functionality component and 85% agreed that they trust the online platform in

handling their personal data and academic information while 15% claimed that they don't trust the platform because the encountered errors and issues.

CONCLUSION AND RECOMMENDATION

The study demonstrated reliability of the modified FURPS as a viable model that enables enrollment managers and academic administrators the analysis of the acceptance of their enrollment processes from the perspective of their students. The analysis of the opinion of the student as customers perceived that the online enrollment system "myMapua" is useful yet needs further development and innovation to continuously compete with other institutions and level its reputation as a technological university.

Due to the high response of the participants, the results of this study showed the correlation between the student perception of the online enrollment processes and the current issues that needs to be addressed. This study was able to demonstrate the assumption that the acceptance of the online enrollment increases as the student perception wants to improve the platform's usage and satisfaction. A modern alternative innovation and design is feasible.

To improve the totality of this study, the researcher recommends that it needs thorough observation on different personas of the students and dividing them depending on the year enrolled. As well as applying all the components of FURPS model. Since the existing online enrollment platform doesn't have major changes on the interface, the users might perceive it otherwise. Student's behavior varies every generation that might affect their perception with the existing platform "myMapua."

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