

Students' Assessment of the Online Enrollment System of Nueva Ecija University of Science and Technology: An Experienced Based

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Abstract:- The pandemic crisis brought a multitude of challenges in every higher educational institution for the reason that the national government imposed different restrictions and health protocols. Hence, this study aimed to determine the predicaments, situations, and experiences of students specifically in terms of the online enrollment process of Nueva Ecija University of Science and Technology for the academic year 2020–2021. The researchers of this study used a descriptive method of research to assess the feedback of 1,078 students in terms of the system's functionality, reliability, usability, efficiency, maintainability, and portability. At the same time, this study was conducted to identify the level of qualities the system can provide to the university's stakeholders and to determine the technical loopholes and attribute that requires updating to satisfy the university's clientele—the students. The results have shown that the students found the system very good in terms of its functionality, reliability, usability, efficiency, maintainability, and portability and only good concerning its efficiency. This means that the system provides a high level of quality and requires minimal rectifications for improvement. In that case, the researchers suggested improving the system in terms of efficiency which is about the use of possible input to produce a quality and highest possible amount of output. Finally, the researchers suggested conducting future studies wherein the system will be assessed by Technical Experts in terms of technical aspects of the system which is based on ISO/IEC 25010:2011 or software quality standards.

Keywords:- Assessment, Experience, Feedback, Online Enrollment System, Students.

I. INTRODUCTION

The pandemic crisis brought by COVID–19 virus significantly changed and challenged the entire humanity across the globe (Mina, Aydinan, Campos, and, Ayeo–eo, 2020). Indeed, the sudden emergence of a new disease shows that new health threats may evolve into emergencies at any time and that no country, rich or poor, is exempted from them (Wright, 2020). Due to novelty, the case of COVID–19 cascades different problems and multi–issues that manifest concrete evidence of poor health facilities and lack of human preparedness. As a matter of fact, according to Baticulon (2020), the Philippine health care system was never ready for a pandemic due to a lack of health facilities.

The ablaze ruins of damages experienced across the globe created an impact and magnitude shocked to all industries that involve massive manpower as primary stakeholders. Some of which are universities (Mina, Subia, Barlis, Tuliao, and Pastorfide, 2020), transportations industries, and hospitality industries which lead to a drastic economic recession due to enormous manpower layoff and uncontrollable financial turbulence of different institutions. The aftermath of this disastrous human destiny deepens the misery of individuals who have lost income as a result of the lockdown and economic halt (Valera, Balié, and Pedé, 2020).

The same dilemma goes with the educational sector all over the world. As the beginning of the new academic year becomes daunting, both teachers and students enter an extraordinary period of distance learning and teaching (Kerry, 2020). This is the time for a home–based learning experience to replace the conventional face–to–face classroom setting wherein every educational institution must be adaptive in this regard (Mina, Subia, Barlis, Tuliao, and Pastorfide, 2020). For instance, the Nueva Ecija University of Science and Technology as the largest university in the heart of Central

Luzon must continue to persevere and to uphold its academic mission to vanquish darkness and uncertainties by accommodating stakeholders who are in need and longing for knowledge.

However, zeal and dedication are not enough; this institution is also severely damaged in terms of procedures and processes due to drastic changes attributed to the New Normal. No face-to-face enrollment, virtual evaluation, online payment, virtual classrooms, and virtual consultations to mention some, are procedural strategies and tactics implemented by the university to address the health issues, to protect the manpower of the institution, and in compliance with the mandates of the National Government, thus, resulting confusion, upset and miscommunication due to lack of preparation—everyone caught unprepared!

Computer digitalization which is now marked as one of the leading inventions that an educational institution can have (Custodio and Castro, 2016) is the only solution in this kind of situation. If truth be told, computers are no longer used only for computation, but also to communicate and disseminate essential information as technology has evolved over the years. The advanced and abrupt shifting of enrollment system enhancement from traditional into more sophisticated online platforms to embrace the new normal challenge the operation management, communication management, and functional management of the university. Thus, it is expected that the system is in full parallel with the approved protocol of the International Organization for Standardization; however, the ISO protocol was approved before the advent of COVID-19. For that reason, balancing the system to maintain the high quality of services without jeopardizing the students' welfare is a must. As a result, it is believed that the online enrollment system is a clear improvement over paper-based (Thompson and Ahn, 2012). As with online registration processing, even foreign students can inquire and enroll through the internet without traveling (Then, 2006), which makes the institution more attractive.

On the other side of the coin, no matter how good the system is, there is always a chance or margin of error. For this instance, the only way to resolve the question is to extract information from the primary users of the online platform—the students. For that, the Management Information System department of the University will know how to revise, reengineer, and improve the current online platform utilized by the institution and all the stakeholders at large. Henceforth, the university will be able to continue its quality service for the welfare of all its stakeholders.

II. OBJECTIVES OF THE STUDY

The primary stakeholders of all academic institutions across the globe were students and learners in which the first step for them to be part of a certain institution is enrollment—first step, basis for the first impression! Thus, extracting information regarding different quality parameter bases for improving the attributes of NEUST—Enrollment procedure and system from the stakeholders is the primary objective of this study. Moreover, assessing the system's functionality, reliability, usability, efficiency, maintainability, and portability to identify the level of qualities that the enrollment system can provide to the stakeholder is also an ideal objective of this endeavor. Furthermore, implementing attribute gap analysis for further system enhancement to meet and to address the students' expectations and predicaments.

III. METHODOLOGY

To attain the objectives of this study, the researchers used the descriptive method of research. According to Ary, Jacobs, Sorensen, and Razavieh (2010), the research design is the researchers' plan of how to proceed to gain an understanding of some group or some phenomenon in its context. On the other hand, according to Gay (1992), descriptive research involves collecting data to answer questions concerning the current status of the subject of the study.

In this study, the respondents of the study were the one thousand seventy-eight (1,078) students of Nueva Ecija University of Science and Technology who are enrolled in the First Semester of the A.Y. 2020–2021. The researchers used a modified survey questionnaire designed in Google form. The modified questionnaire consists of assessing the enrollment system functionality, reliability, usability, efficiency, maintainability, and portability to identify the level of qualities that the system can provide to the university's stakeholders. Suggestions for modifications and improvements were done and it was set for a dry run and got tested by students from other universities.

After modifying and improving the instrument, the link <https://forms.gle/Ax6dQJKtc8b6kj8NA> was disseminated to the students of the university through their closed group, students' email account, group chat, and messenger to gather data. Upon completion of the data gathering procedure, responses were tabulated to facilitate the analysis during the interpretation of data. The data gathered were tallied, analyzed, and interpreted. Using the weighted mean, the typicality of responses was determined.

The following numerical and adjectival values were used:

Ranges	Rate	Assessments on Online Enrollment System
4.20–5.00	5	Excellent
3.40–4.19	4	Very Good
2.60–3.39	3	Good
1.80–2.59	2	Poor
1.00–1.79	1	Very Poor

IV. RESULTS AND DISCUSSION

This portion analyses and interprets the data of the students' assessments of the Online Enrollment System of the Nueva Ecija University of Science and Technology which they have used during enrollment.

Table 1. Functionality

No.	Item Statement	Weighted Mean	Verbal Description
1	The system suites its purpose to be an enrollment system.	3.96	Very Good
2	The system can register students and enroll in the right subjects.	4.11	Very Good
3	The system can interact with other systems (e.g. online payment)	3.74	Very Good
4	The system does not permit unauthorized users.	3.89	Very Good
5	The system is better than the physical enrollment process.	3.71	Very Good
Average Weighted Mean		3.89	Very Good

The results of the students' assessment of the online enrollment system in terms of its functionality can be noted from the data above. The learners believed that the system is very good for the reason that it can register students and enroll in the right subjects. Then (2006) mentioned that the system is designed to strengthen the enrollment system in terms of managing a large number of enrollees including the assignment of schedule and their respective sections. Zaid (2012) also mentioned that a good system provides information that helps students to choose appropriate qualifications to register.

The learners also thought that the system is very good because it suites its purpose to be an enrollment system. As everyone knows, university enrollment is the process of entering and verifying the data of students to register at a particular school. Different interrelated processes build up enrollment procedures called University Enrollment System (Academic Planning Division, 1988). Ramos et al. (2011) also noted that the enrollment system is used for student information records while Hinton, Blakley III, and Clark, (2006) probed on the record-keeping and retrieval of the

enrollees' documents and compiling them to produce an official registration form.

At the same time, the students also assumed that the system is very good when it comes to not permitting unauthorized users. According to Todd and Wixon (2005), an effective IT system promotes confidence amongst users because simultaneous system access by many users results in system slowdown (DeLone and McLean, 2003).

Over and above, the users assessed the system interaction with other systems (e.g. online payment) as very good. Aside from using visualization tools and the internet in the educational system, higher education institutions have also utilized these tools to manage information systems (Riad et al., 2009; Ng et al., 2011) and linked them to the payment system to make it more convenient on the part of the users.

Lastly, the students marked the online enrollment system very good because it is better than the physical enrollment process. The online registration system is far better than the walk-in queues (Scott, 2010) owing to the fact that new technology leads to a change in how people access different services.

Table 2. Reliability

No.	Item Statement	Weighted Mean	Verbal Description
1	The system does not fail 24/7.	3.32	Good
2	The system can recover from the component or environmental failure.	3.58	Very Good
3	The system can bring to full operation after the network goes down.	3.56	Very Good
Average Weighted Mean		3.49	Very Good

From the data above, the results of the students' evaluation of the online enrollment system in terms of its reliability can be noted. The learners found the system very good in terms of its recovery from the component or environmental failure. Gebauer and Schober (2006) believed that system failure is inevitable that is why a good IT system has to perform its functions as expected by users (DeLone and McLean, 2003).

Conjointly, the users rated the system very good in terms of how the system can bring to full operation after the network goes down. Indeed, system restoration is vital as system failure is unavoidable (Davis and Venkatesh, 2004). Due to this fact, system output needs to be constantly tested in the information technology environment to verify if it works as expected (Szajna, 1994).

On the flip side, the users only rated the system good in terms of it not failing 24/7. This is why it is a responsibility to collect data that is constant, up-to-date and that can be accessed on time and to interpret and use this data (Telem, 1991; Gentry, 2005).

If this is the case, by accessing accurate and up-to-date information from University Management Information Systems, administrators may make more successful decisions (Christopher, 2003).

Table 3. Usability

No.	Item Statement	Weighted Mean	Verbal Description
1	The system is easy to understand.	3.95	Very Good
2	The system is easy to learn by different users (e.g. beginner, expert).	3.87	Very Good
3	The system can be opened in different browsers (e.g. Internet explorer, Google Chrome, Mozilla Firefox)	4.05	Very Good
4	The system supports different languages/dialects.	3.87	Very Good
Average Weighted Mean		3.94	Very Good

The results of the students' assessment of the online enrollment system in terms of its usability can be observed from the data above. The learners found the system very good considering that the system can be opened in different browsers (e.g. Internet Explorer, Google Chrome, Mozilla Firefox) aside from their experienced that the system is easy to understand. Szajna (1994) stated that clear instructions make it easier to use the system. In order to make decisions in line with the goals of the university and to facilitate the control of the activities to achieve the goals, the University Management Information System department must provide information and different reports from the database (Telem and Buvitski, 1995; Telem, 1991; Christopher, 2003).

More than that, the students thought that the system is easy to learn by different users (e.g. beginner, expert) which is why they rated it as very good. The use of technology allows various scholars to have convenient access to services (Fjermestad et al., 2011). At the same time, Whitworth and Zaic (2003) stated that when the IT system is easy to use, it is likely to be fully utilized by users.

Besides, the system is believed that it can support different languages/dialects that is why it was rated very good in terms of this characteristic. DeLone and McLean (2003) claimed that beneficial effects are likely to be achieved when a new system is implemented effectively.

Table 4. Efficiency

No.	Item Statement	Weighted Mean	Verbal Description
1	The system can response in 0.1 second time.	3.30	Good
2	The device does not “hangs” or “lags” when accessing different features of the system.	3.18	Good
Average Weighted Mean		3.24	Good

From the data above, the results of the students' evaluation of the online enrollment system in terms of its efficiency can be observed. It can be noted that the system was rated good considering whether the system can response in 0.1 second time. If this is the scenario, the faculty members, students, and all users may struggle to get the reports they need on time because of the slowness of the system (Whitworth and Zaic, 2003). The administrators must therefore fulfill the requirements and standards of their internal (faculty, student) and external stakeholders and ensure the correct and timely arrangement of the system being used within the university (Pegler, 1992).

In conjunction with whether the device does not “hangs” or “lags” when accessing different features of the system, the users rated the system good as well. The system’s reliability and performance determine confidence (Whitworth and Zaic, 2003). Hence, the developers and programmers must get feedback on the performance of the system they have created so that modification and updating can also be done.

Table 5. Maintainability

No.	Item Statement	Weighted Mean	Verbal Description
1	The system faults can be easily diagnosed by the technical support team.	3.58	Very Good
2	The system can be easily modified by the technical support team.	3.63	Very Good
3	The system continue functioning even if changes have made by the technical support team	3.61	Very Good
Average Weighted Mean		3.61	Very Good

From the above details, the results of the students' evaluation of the online enrollment system in terms of its maintainability can be noted. The students rated it very good in terms of whether the system can be easily modified by the technical support team. If such is the case, the Management Information System department must always be at hand to help. As indicated by Zaied (2012), a good system may be rated badly due to the unavailability of system maintenance staff. Furthermore, Gebauer and Schober (2006) suggested that if possible, every Information Technology System must be evaluated and enhanced on the grounds that students might have experienced problems during registration.

Alongside with whether the system continues functioning even if changes have been made by the technical support team was also rated very good by the users. On the business side, a new system should be used for a reasonable time to realize the return on investment (David and David, 2015).

Correspondingly, it was rated very good seeing the system faults can be easily diagnosed by the technical support team. This will eliminate the fact that if a system has established problems, it may provide incorrect details (Davis and Venkatesh, 2000).

Table 6. Portability

No.	Item Statement	Weighted Mean	Verbal Description
1	The system can be open on different devices (e.g. laptop, desktop, tablet, smartphone)	4.11	Very Good
2	All system features are present when opened with different devices.	3.93	Very Good
3	No system faults encountered when opening with different devices.	3.63	Very Good
Average Weighted Mean		3.89	Very Good

From the above details, the results of the students' evaluation of the online enrollment system in terms of its portability can be noted. The students perceived the system as something that can be opened on different devices (e.g. laptop, desktop, tablet, smartphone) which is why they rated it very good. Fjermestad et al. (2011) stated that flexible access to services due to technology adoption results in happy and satisfied users.

On top of that, all system features are present when opened with different devices. This characteristic was also rated very good. It was concluded that the most appropriate procedure is to perform accessibility evaluations after browser processing because a big percentage of the content of a Web page is not visible until loaded by the Web browser (Fernandes et al., 2011).

Lastly, the users believed that no system faults encountered when opening with different devices.

V. CONCLUSION AND RECOMMENDATION

Based on the results gathered, the following conclusions were derived:

1. In terms of the system's functionality, it can be concluded that the intended purpose as an online enrollment system was captured by the system. The system's overall functionality, as viewed by the students, is laudable with emphasis on student's registration and enrolling in the right subjects;
2. For the system's reliability, it can be concluded that the system is reliable in terms of failure and recovery factors. As per observation by the students, the system availability after experiencing failure is commendable;
3. It can be concluded, from the system's usability, that the system can easily be used by the users. The capability of the system to be used with different internet browsers was highly praised by the students;
4. In the system's efficiency, it can be concluded that some aspects are still in need of updating and improvement for the system to be perceived as more efficient by the users;
5. With the system's maintainability, it can be concluded that the system is maintainable being highly commended by the students particularly in terms of modification of the system easily by the technical support team; and,

6. For the system's portability, it can be concluded that the system is portable as viewed by the students. The system's portability was commended by the students specifically the capability of the system to be opened on different devices.

Based on the derived conclusions, the following recommendations were formed:

1. Although it is commended by the students and the system produces the desired output, it should be given priority because efficiency contributes to the overall performance of the system. This shall be done to improve the system in terms of efficiency which is about the use of possible input to produce a quality and highest possible amount of output. Since the lesser the resources used in the system to produce an output, the better the system is; and,
2. The assessment made by the students is insufficient since it only deals with the overall usage of the system. Therefore, the researchers suggest conducting future studies wherein the system will be assessed by Technical experts in terms of technical aspects of the system which is based on ISO/IEC 25010:2011 or software quality standards. Thus, to cover the technical aspect of the system, it should walk through a technical assessment to measure the performance of the system.

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