Online Modality of Learning in A Higher Education Institution During the Pandemic: Satisfaction and Difficulties of Criminology Students in The Philippines

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Abstract: **The pandemic has brought challenges both to students and teachers in higher education. This study determined the level of satisfaction and difficulties encountered by criminology students at Saint Mary's University Bayombong Nueva Vizcaya, Philippines during their online modality of learning. A quantitative, inferential, and descriptive research design was used among sixty (60) respondents from sophomore to senior criminology students. The study found that criminology students were satisfied with the methods of teaching, teacher's class requirements, teaching platforms, teacher's consideration, time schedule of classes, and student support from the department and that they experienced difficulty to a moderate extent with the gadgets used in online classes and availability of academic resources, Respondents have a neutral level of difficulty in terms of financial source, the strength of internet signal and time availability for doing class requirements. There is a significant difference in their level of satisfaction in terms of their year level in relation to the teachers' method of teaching, teaching platforms, teachers' consideration, and with their internet connectivity. There is also a significant difference in their level of difficulty in online learning when the students were grouped according to their year level, financial source, gadgets, and time schedules of classes; internet connectivity when it comes to financial source, internet signal, gadgets, and academic resources; and gadgets used (Laptop) when it comes to internet signal and academic resources.**

Keywords: **Pandemic, satisfaction in online learning, difficulty in online learning, criminology students**

I. INTRODUCTION

The deadly and infectious disease Corona Virus, also known as COVID-19, which was first discovered in China in 2019 and declared a pandemic by WHO in March 2020, has had a significant impact on the world economy[1]. This catastrophe has jolted every sector of society including the education sector. The anxiety resulting from the catastrophic change brought about by this health phenomenon has spread over the world. In the area of education, many schools and universities were forced to close temporarily. And because several locations around the world have been affected, there was concern that the current semester, as well as future semesters, might be lost. For a number of institutions, colleges, and universities that were able to find solutions so that education would continue, in-person instruction was phased out.

As a result of social separation during the pandemic, returning to regular teaching was not possible. Learning opportunities would suffer if no solutions were made. The situation highlighted the need for immediate scenario planning for academic institutions and many educational institutions scrambled to find answers to this difficult predicament. Many colleges opted to provide more flexible learning opportunities to their students as electronic communication became widespread and students need to juggle education, employment, and family life. Quickly, face-to-face classes in the traditional pre-pandemic learning situation were supplanted by online activities and discussions. There was a deferral of face-to-face classes due to the pandemic[2].

However, little study has been done to compare students' experiences and learning in the two modes: traditional learning and online learning. Online learning may have become the go-to solution for many schools during the pandemic but over the years, universities have been increasingly proposing more flexible learning settings in response to changing student lifestyles and rapidly evolving technology. For more than a decade, human technical advancements had prospered. In the higher education industry, the provision of online, e-learning experiences has grown rapidly. For a large proportion of university students in a variety of nations, online learning is now an integral element of their education [3].

With the advent of online education, students with hectic schedules and little flexibility can now acquire a superior education. Unlike traditional classroom teaching, Web-based learning allows students to take classes from anywhere on the globe with only an internet connection. Although it has some advantages over traditional schooling, online learning does have some disadvantages, such as a lack of social synergy. Nonetheless, it appears that more students are opting for online education to obtain a degree [4].

The obvious advantages of online programs to the university include growing enrollments and profits, extending

university reach, increasing student technological skills, mitigating the projected shortfall in instructors, disregarding congestion of classrooms, reducing infrastructure costs, consenting students to effort at their own pace, and learning style, reducing faculty bias, and improving retention and graduation rates. However, a range of institutional instructor and student-related hurdles to the successful installation, maintenance, and expansion of online programs still challenge educational institutions [5].

Online learning requires mobile devices support, for instance, smartphones or Android phones, laptops, PCs, tablets, or iPhones, in order to access data at any time or place [6]. While there appears to be a market for additional online programs with global reach, given the challenges stated above, appropriate planning and implementation of best practices and innovative methods are required for a university to successfully establish and/or grow online education. To launch a successful online program or course, the program/course must harness innovative technology in a way that enhances student learning beyond face-to-face classes rather than watering down the curriculum, promoting reduced learning, delivering an inferior product, and increasing student and faculty frustration. Any online program or course should give additional benefits to its many stakeholders, including students, instructors, administrators, and employers, in addition to a traditional program or course benefits [7].

The satisfaction of students was vital in the assessment of the performance of students in online learning [8]. Moreover, students will more seemingly rate a satisfactory rating to the professor in their evaluation if the latter organized the course effectively, evaluated students' work properly and accurately, communicated effectively, facilitated or encouraged the students in their learning, and showed respect and interest in students learning and progress [9]. For example, teachers can suggest several approaches to improve the standard e-learning system's intelligent discussion boards to aid students learning. E-learning is another term for online learning. Teachers must also be trained to use and develop it as a tool. To back up their claim, the tool can be "a valuable learning resource provided the instructor knows how to encourage meaningful posting." In addition, teachers must also be able to recognize and grasp the various learning styles of hundreds of students (how they learn and perceive) [10]. It is critical to communicate with pupils and exchange knowledge. Hundreds of students who are typically not observed by academics in an online learning environment are currently unaffected by technology. However, if the teaching staff is not trained in using online learning technology and does not have a firm grasp of how it works, student learning is likely to suffer.

One of the common concerns which are considered of computer competency. It is vital because it was found to be associated with the enjoyment and difficulty level of web-based courses [11]. Limited and unstable internet connection is one of the difficulties that affect online learning together with the lack of technological resources such as computers,

tablets, etc., and the upload/download of several course videos with limited internet connections. He also observed that a good computer, phone, and unlimited internet were the most important factors that facilitated distance education [12]. One study further showed that students faced many obstacles in a home learning environment, such as lack of mastery of technology, high Internet cost, and limited interaction/socialization between and among students [13].

Saint Mary's University in Bayombong, Nueva Vizcaya, Philippines is among these higher institutions of learning faced with predicaments caused by the pandemic. It has been more than a year now that it has used a flexible modality of instruction but most of its delivery is online instruction. It is then high time to check how well it has fared in its online delivery by asking its clients to evaluate the modality of instruction at least in one of its departments, the criminology department. It will also be good to know how the students are doing. Knowing if they have difficulties in the online modality of delivery of instructions can help the institution and even the parents as well as the students to be able to have a view on their current situation with the aim of improving the modality of instruction.

Learning today has become problematic that students, teachers, and the school administration must pull together all resources and modes of communication to be able to come up with an enhanced learning process suitable to the learning styles of students and maybe also the teaching methods of teachers. This study intended to determine the level of satisfaction and the difficulties in the new mode of learning of the criminology students of Saint Mary's University for the purpose of the improvement of online learning. The study also determined if there are significant differences when the respondents are grouped into their profiles. With all the data and results, this study aimed to provide recommendations for the improvement of the online learning process among criminology students of the Criminal Justice Education Department of Saint Mary's University.

II. METHODOLOGY

This study utilized descriptive and comparative research designs. The descriptive design was used to describe the levels of satisfaction and difficulties encountered by the criminology students. The comparative design was used to describe the differences when grouped according to their profile variables in the levels of satisfaction and difficulties encountered. Survey questionnaires were used to obtain the needed data from the respondents among the criminology students of Saint Mary's University S.Y 2020-2021 which consist of 18 second year, 24 third year, and 18 fourth-year students respectively. A survey questionnaire was used for data gathering since the data gathering period was done during the height of COVID-19 infection in the Philippines when travel is limited by quarantine protocols. Therefore, a survey questionnaire in its Google form was adopted for the collection of data. To determine the profile of the respondents, the researchers used percentage and frequency for the

treatment of data. For the level of satisfaction, the researchers used frequency, mean and standard deviation for the treatment of data same with the level of difficulties. The level of satisfaction in online learning was put together and decoded based on the guide for interpretation. To decide whether a significant difference exists in the degree of satisfaction level in online learning and level of experienced difficulties when compared by their profile factors, t-test and ANOVA were utilized. If there exists a significant difference, a posthoc test (Tukey HSD) is run which yields a multiple comparison table.

III. RESULTS AND DISCUSSIONS

This part presents the data, its analysis, and interpretation. The researchers used several statistical tools to answer the different problems of the study.

Profile of the Respondents

In terms of year level, out of 60 respondents, there are 18 or 30% 2nd year students, 24 or 40% 3rd year students, and 18 or 30% 4th year students. This means that most of the respondents are in their 3rd year level. The researchers did not include the 1st year as students because they participated in the pilot testing of the questionnaire before the conduct of the study. The purpose of pilot testing is to measure the validity and reliability of the questionnaire. From the above table, one can see that there are more junior students than senior and sophomore students.

For the age level of the respondents, out of the 60 respondents, there were only one aged 24 years as the oldest while there were 9 respondents aged 19 years old as the youngest. Moreover, generally, respondents were age 21 years old. A regular student at age of 22 should have already graduated with a four-year bachelor's degree.

In terms of internet connectivity of the respondents, out of 60, 8 or 13.3% have weak internet connectivity, 38 or 63.3% have irregular internet connectivity, and 14 or 23.3 % have strong internet connectivity. This shows that most of the respondents have irregular internet connectivity, which means that the Internet connectivity was unstable resulting in slow loading of recorded discussion and choppy audio in which the words coming from both students and teachers are difficult to understand due to missing words or statements uttered. This has repercussions because clarity is vital in communication.

In terms of gadgets used for online classes, out of 60 criminology students, 59 or 98.3% have a cellphone as their gadgets used for online classes. There was only one student who does not use a cellphone as a gadget. The student may have used either a laptop, desktop, or iPad for his online classes. Criminology students may have preferred to use cell phones because they are the most economically affordable and are handy, followed by a laptop which is a bit pricey, next is the desktop which makes online classes not accessible at any time anywhere, unlike cellphones and laptop and lastly, the iPad with few users.

In terms of the province, out of 60 respondents, 36 or 60.0% are from Nueva Vizcaya, 10 or 16.7 % are from Isabela, 7 or 11.7% are from Quirino, 4 or 6.7% are from Ifugao, 2 or 3.3% are from Nueva Ecija, 1 or 1.7% are from Kalinga. This means that most of the criminology students are from the province of Nueva Vizcaya. As seen, most of the criminology students are residents of Nueva Vizcaya and may have found SMU as one of the schools in the area offering a criminology course with the assurance of excellent education. The province of Isabela got the 2nd spot, followed by the province of Quirino, Ifugao, Nueva Ecija, and lastly, the province of Kalinga. This also shows that many students from neighboring provinces choose to study at Saint Mary's University.

Level of Satisfaction of Students in the Online Mode of Delivery of Instruction

Table 1. The Level of Satisfaction of Students with the Different Aspects of the Online Mode of Delivery of Instruction

Aspects of Delivery of Instruction	Mean	Level of Satisfaction
Teacher's Method of teaching	3.28	Moderately Satisfied
Teacher's Class Requirements	3.18	Moderately Satisfied
Teaching Platforms	3.70	Satisfied
Teacher's Consideration	3.65	Satisfied
Student Support from the Department	4.08	Satisfied
Time Schedule of Classes	3.67	Satisfied
Over all	3.59	Satisfied

Legend: Not satisfied: 1.00 – 1.49, Slightly Satisfied: 1.50 – 2.49, Moderately Satisfied: 2.50 – 3.49, Satisfied: 3.50 – 4.49, Very satisfied: 4.50 – 5.00

The table above presents the level of satisfaction of students with the different aspects of the online mode of delivery of instruction at Saint Mary's University. When it comes to the teachers' method of teaching and teachers' class requirements, the means were 3.28 and 3.18 respectively, which means the level of satisfaction falls both on moderately satisfied. In terms of these two aspects, the students may have been only moderately satisfied due to the teachers' unique characteristics and way of educating the students. As stated by one of the respondents, "sometimes they give only modules and you study it yourself they are not going to discuss it." Some teachers can be said to be passionate and dedicated to educating their students and ensuring that they learned something throughout the day. Still, their methods of teaching in the online classes were very different when there is face to face classes. From the qualitative responses of the respondents, it appeared that some teachers only uploaded recorded videos of discussions, others would only require an activity output and some teachers did not show up in scheduled time classes but when the exam was near, they would rush in discussing their subjects. These could be some of the reasons why students were only moderately satisfied with this type and form of methods of teaching and class requirements.

The table further shows that the teacher's class requirements got the least mean of 3.18 which means the criminology students are moderately satisfied with the requirements given by the teachers like giving enough time doing the class activities and requirements because of the unstable internet connection and other choirs that may disturb the students in doing the given class requirements. However, some of the respondents stated that they were "slightly satisfied in general because there are teachers who required many activities which fill the lack of requirements in other subjects." Another student remarked, "They should have taught us the lesson before giving us activities and projects."

In terms of the delivery of instructions, student support got the highest mean of 4.08 which means that the criminology students are satisfied with the support from the department amidst the pandemic and financial issues faced by everyone due to the economic freeze. The university's support programs such as load assistance, desktop installment, peer counseling, scholarship assistance, and tuition fee discounts were offered to help and motivate criminology students to pursue their academic careers. As a result, the students were satisfied with the support that they were receiving from the school. The support which came in material or spiritual form was beneficial and important to the students, especially during the pandemic when the economy was on freeze and it was hard for others to earn for their financial needs. Many actually became mentally distressed while others gave up on continuing their studies and chose to find a job to help in sustaining the family needs. Thus, in times like this, any support is welcome and greatly appreciated as it helps alleviate a person's state.

Teaching platforms came second and have a mean of 3.70 with a satisfied qualitative description. This result as mentioned above could be explained by the fact that students were also satisfied by the platforms used by their professor/teacher in their online classes such as zoom, google meet, messenger, Learning Management System (LMS), and others. The said platforms provide them an effective online classroom environment, wherein they could still learn and interact with their professor/teacher and classmates but with due limitations unlike in face-to-face classes when things were still normal.

Several studies also found that a variety of factors influence students' learning outcomes in online classrooms which may influence their overall satisfaction with the teachers' teaching methods. The instructor's demeanor and the manner in which the teacher conducts the online class may influence the learner's cognitive attitude. Teachers' real-time responses, teaching styles, and teaching attitudes were also found to aid learners in learning via an online learning platform [14], [15], [16].

The level of difficulty encountered by the criminology students during the online modality of class instruction.

Table 2 . The Level of Difficulty Encountered by the Criminology Students during the Online Modality of Class Instruction

Difficulties encountered by Criminology Students	Mean	SD	Level of Difficulty
Financial Source	3.40	.978	Neutral
Internet Signal	3.12	1.075	Neutral
Gadgets	3.68	1.112	Moderate Extent
Class Time	3.23	1.110	Neutral
Academic Resources	3.67	1.003	Moderate Extent

Legend: Not a problem: 1.00 – 1.49, Problem to a low extent: 1.50 – 2.49, Neutral: 2.50 – 3.49, Problem to a moderate extent: 3.50 – 4.49, Problem to a great extent: 4.50 – 5.00

The table reveals that criminology students have difficulty to a moderate extent in terms of gadgets used in online learning wherein they experienced difficulties which are likely caused by the fact that gadgets used by criminology students are not always available, are old models, or not personally owned. It could also be because they could not afford to buy a gadget that has good quality, that is, their gadgets do not meet the specifications for online learning or they were not familiar with or an expert in using the gadgets available to them which hindered them from being capable of coping with the online modality of instructions.

The criminology students having a problem to a moderate extent in terms of academic resources may be due to a lack of information and learning materials or absence of online book resources. The materials provided in class were not enough for the students to understand the subject of discussion and the school did not provide online books and enough resources and references for the online class during the pandemic.

Studies suggest that a lack of resources in the classroom can cause students and teachers great distress. Students and teachers are not only distressed, but they are also unable to learn to their maximum capacity due to a lack of resources [17]. Such distress may have caused difficulty for criminology students with the online modality of learning specifically in the area of gadgets used and academic resources.

One recent study confirms the study's results revealing that teachers find it challenging to employ new modalities of teaching for the following reasons: teachers' and students' poor internet connections, parents' financial circumstances, unresponsive students, and parents, students' coping mechanisms in terms of modular modalities, and a lack of students' resources, particularly gadgets that can be utilized for online learning [18].

However, the respondents also suggested solutions that may cater to the above-mentioned problems. They

suggested that teachers and students may look for a better internet provider, especially since a stable and fast internet connection supports the instructional delivery in online distance learning. For unresponsive students and parents, they suggested having a "parents, teacher and students' assembly" via Google Meet or face to face following health protocols. They also suggested proper guidance from parents and strengthening the communication of parents and teachers for the learners having a hard time coping up with the modular instructions. Lastly, they suggested financial support from the government for the students that do not have gadgets for online learning.

However, it was found that as of early this year, the Philippines' fixed average speed was only 26.18 mbps, putting the country at 114th in the world for mobile speeds and 108th for fixed broadband speeds [19]. Teachers rely on the internet for communication and resource sharing, yet reliability and speed are obstacles. Participants stated that their duties and work are hampered by an unreliable and slow internet connection. Signal disruption in various geographic locations adds to the problem that is beyond the control of teachers.

Moreover, teachers are not immune to a sluggish internet connection, which causes them to miss important discussions when the internet goes down during synchronous classes [20]. The success of any online distance learning modality heavily relies on an internet connection because a failure can detract from the entire online learning experience.

Significant Difference in the Level of Satisfaction in Online Learning when Grouped according to their Profile Variables

In terms of teachers' method of teaching, teacher's class requirements, teaching platforms, teachers' consideration, and student support from the department, in relation to the students' age shows no significant difference in the level of satisfaction which means that the youngest respondent and the oldest respondents have the same level of satisfaction on the said problems which leads to the non-rejection of the null hypothesis that there is no significant difference in the extent of the level of satisfaction on online learning of criminology students when grouped according to age profile.

Students' levels of satisfaction with the teacher's teaching strategies are significantly higher when they are grouped by year level. The 4th year students have the lowest mean on their level of satisfaction which may be due to their experience with the traditional face-to-face learning versus the new online mode of learning. For them, they would consider face-to-face classes as the better way to learn. The 2nd year students have the second highest meanwhile the 3rd year students have the highest mean that falls into moderately satisfied to satisfied respectively. It must be noted that the second-year students had not experienced face-to-face classes while the third-year students had experienced almost a year of face-to-face classes. It may be possible that the significant differences are attributable to the students' experiences of face-to-face classes and online learning modalities that they

can compare the teachers' method of teaching in both modalities which explains the significant difference.

In terms of teaching platforms, results show that there is also a significant difference in the level of satisfaction among criminology students when grouped according to their year level. Senior students have the lowest mean of satisfaction in terms of the teaching platforms which may mean that they have lower level of satisfaction than the other year levels resulting in the significant difference. It may be due to the reality that they were more exposed to face-to-face classes and so the adjustments to online learning might be more difficult for them, especially with the teaching platforms.

In terms of teaching considerations, there is a significant difference among the student respondents. Results show that 4th year students have the lowest mean on their level of satisfaction, and the 3rd year students have the highest mean level of satisfaction, followed by the 2nd year students. The difference may be between the senior students and the lower-year students. And from experience, teachers are stricter when it comes to senior students since they are graduating already. Teachers usually make sure that the graduating students are able to get the best competencies before they graduate. Thus, while senior criminology students are satisfied with teachers' consideration, they can have a lower level of satisfaction than the lower years which explains the significant difference as shown in the table above.

Students are said to be satisfied with university staff and faculty members who agree on specific online platforms to use, grading systems, assessment options, training workshops, and online technical support according to the study's findings. This only shows that level of satisfaction in online learning is influenced by teachers' method of teaching, teaching platforms, and teachers' consideration. Participants were most satisfied with Google Hangouts for lecture delivery, followed by Google Classroom and LMS (Moodle) for course management and assessments, according to the data. The COVID-19 problem in this study environment was managed satisfactorily only in terms of the students' online learning experiences.

When it comes to internet connectivity, there is a significant difference in the level of satisfaction of students when grouped according to their Internet connectivity in terms of teaching platform. This could be because some teaching platforms demand a regular and stable internet connection in order that learning is maximized and the best service is provided to both students and teachers. Some examples are Google Meet and Zoom, wherein a strong and stable network is needed in order for the smooth flow of communication between students and teachers to happen. That is why those who have irregular and unstable networks may have a different level of satisfaction because they cannot cope with the topics or understand the explanation of the teacher on the said platforms during an online class. This may greatly affect the significant difference in the level of satisfaction of

students when grouped according to their Internet connectivity as shown by the research findings.

According to one study about online learning in the Philippines showed that Google Meet, Zoom, and Learning Management System are the most common tools used in education [21]. In another study, it stressed that strong and reliable internet connectivity is essential for students to succeed while learning. Nearly 40 % of respondents in his study believed that there is an increase of internet and cellular connectivity issues in remote learning from home and its vital impact on education in online learning due to connectivity issues. The survey's findings found that Thailand had an average Internet speed of 7.4 Mbps, Sri Lanka 7.4, and Malaysia 4.3. Meanwhile, the Philippines' average Internet speed was 2.8 Mbps, ranking 104th out of 160 nations, with wealthy Asian countries such as South Korea (23.6 Mbps) and Singapore (12.9 Mbps) ranking first and second, respectively. The absence of competition in the Internet connectivity sector, among other things, lies at the foundation of the challenge of slow and expensive Internet connections, according to the findings. Examining the achievements of the Republic of Korea and other broadband-leading countries has yielded useful insights and suggestions for improving competitiveness [22].

Significant Difference in the Difficulties and Problems Encountered in Online Learning when Grouped according to their Profile

When their year level was compared to their financial source, gadgets, and time schedule of classes, shows a significant difference which rejects the null hypothesis that there is no significant difference in the level of difficulties encountered in online learning for criminology students when grouped according to their year level.

Lower years (3rd year and 2nd students) have higher tuition fees compared to those in their 4th years as they are still starting in gaining academic units but have a higher chance of gaining academic scholarship by maintaining good grades. They also have a heavy schedule of classes which gives them a short vacant time, unlike higher years with few units which means that they have lesser fees and more vacant time which allows them to have a part-time job to gain financial sources. It may be possible then that the higher years (4th year students) have a lower level of difficulty in terms of financial sources than the lower years (3rd year and 2nd year students) which explains the significant difference.

Further, while it is observable in the student respondents' profiles that there are more users of cell phones among them, it is their academic load that may have influenced their level of difficulty in terms of the gadgets that they use in online learning.

The items on internet signal and academic resources produced no significant difference which accepts the null hypothesis that there is no significant difference in the level of difficulties encountered in online learning by criminology students when grouped according to their year level.

There may be no significant difference between internet signal and academic resources because as we all know, the internet signal is poor and servers here in our country are only a few and have connections to each other. Also, everyone was equally given by the teachers the resources they need and the internet served as a vast source.

IV. CONCLUSIONS

The respondents were mostly junior students who are in their 20s in age, have irregular connectivity, mostly use cell phones as gadgets in their online classes, and are mostly from the province of Nueva Vizcaya. The criminology students were satisfied with the online modality of learning at Saint Mary's University in terms of the teacher's methods of teaching, class requirement, teaching platforms, teacher consideration, student support from the department, and time schedule of classes as parts of the online modality of learning. The criminology students in Saint Mary's University consider the different areas of the online modality of learning as concerns or difficulties for online learning to a moderate extent specifically financial source, the strength of internet signal, time availability for doing class requirements gadgets used in online classes and availability of academic resources.

For the significant difference in the level of satisfaction - age and province of criminology students do not describe the level of satisfaction in online learning; year level showed influence on the level of satisfaction in terms of teacher's method of teaching, teaching platforms, teacher's consideration, and internet connectivity; the use of cellphones, laptops, and Ipad have an influence on the level of satisfaction on the student support from the department and teacher's considerations respectively.

For the level of difficulty or problems - age, provinces and kind of gadgets do not have an effect on the level of difficulty of criminology students; year level influences the level of difficulty in terms of financial source, gadgets, and time schedule; internet connectivity influences the level difficulty in terms of financial source, internet signals, and academic resources; gadgets used influences the level of difficulty in terms of internet signals and academic resources.

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