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# Student-Focused Measures of Learning for Nursing Students In CALABARZON Region during COVID-19: An Explanatory Sequential Mixed Methods Study

*Sam A. Marcellana, PhDN, CMHA, DM, MAN, RN (Main Author)*

**ABSTRACT**

COVID-19 has changed the people's way of living. Among these aspects is the education sector  the primary concern of which is safety. It was laudable that effects were made to ensure that learning continued without compromising the students' health. However, was the quality of education not compromised?

This study entitled, "Student-Focused Measures Of Learning For Nursing Students In CALABARZON Region During COVID-19: An Explanatory Sequential Mixed Methods Study" tackled the factors that affected the self-efficacy and learning experience of nursing students during the pandemic. It discussed how online classes and simulation  replaced the traditional face-to-face classes and clinical exposures and affected the education of the nursing students particularly in the CALABARZON Region. A survey was  conducted to see the relevance and importance of having the necessary interventions and provide measures to address these factors.

The study presented student-focused measures of learning which will benefit nursing students, professors and those who are in the medical field and education sector. There are valuable contributions to improve and develop the learning experiences not only of the nursing students  but also the future patients that they will be tasked to care for.

Keywords: *Measures of Learning for Nursing Students; COVID-19*

## Introduction

The world is currently dealing with unprecedented difficulties, as well as, an epidemic that has spread throughout the world. Since the beginning of this year, the coronavirus has been responsible for the deaths of millions of people, and this trend is expected to continue as the virus continues to evolve and become more dangerous. The causative agent, the severe acute respiratory syndrome coronavirus 2, also known as SARS-CoV-2, was first identified in Wuhan, China, where the outbreak first began. Patients who are suffering from a severe viral infection have a larger viral load and a longer duration during which they are shedding virus. Despite this, it is still possible for viral infections to be passed on from people who are asymptomatic. Because of the new approach that was  taken in instructing students, there is a good chance that the coronavirus may create complications in the educational system, particularly in the nursing profession. In these conditions, there is an unavoidable risk of transmitting the fatal viral disease to health care workers. This poses a significant risk to nursing students whose education includes clinical practice and exposure to help them gain a better understanding of the responsibilities that come with working in the medical field. In the sphere of healthcare, nursing schools are getting ready for a remarkable impassion that will accelerate the education of the next generation of nurses and health care practitioners.

Due to the widespread  of COVID-19, the purpose of this study was to address the specific requirements and concerns of nursing educators and nursing students in facing this healthcare global emergency and pandemic disaster through consideration of a section of the early exercises, drawing on firsthand knowledge of attendant lecturers leading clinical courses in a post licensure nursing school. Moreover, the study investigated the concerns and feelings expressed by nursing students in response to these unexpected events during a pandemic crisis, as well as, ways to continue delivery of quality nursing education and extensive related learning experiences  while confronting a society that  takes precautionary measures such as social distancing, isolation, and quarantine, while leading nurses at the forefront of the effort.

According to Hsin-Yu Hsieh (2020), the COVID-19 pandemic had a huge impact on nursing education. Nursing education has two components: classroom instruction and hands-on training in a clinical environment, both of which are strongly suggestive of programs that deal with practices and skills. One such example is the popular effort to begin using simulation training in nursing education in 2020. This pattern has been there for quite some time. This issue features two studies that look into the use of simulation training in nursing education. The findings showed that scenario-based simulation training helped students become more prepared and successful learners. As a result, the art of learning, learning styles, and efficiency improved, while clinical stress decreased.

During a pandemic crisis that calls for more extensive safety measures and protection of both students and educators. At the same time, the primary focus of this research was on how nurses and nursing education will continue to meet the needs and development of the existing learning pedagogy, learning styles, and self-efficiency as a field.

## Background of the Study

Hospitals and universities serve as direct links of nursing students as the training grounds and learning haven in preparation to becoming professional clinical practitioners in the future. Students experience an extraordinarily high level of stress as a direct result of these circumstances, which may put their academic and clinical performance, as well as, their mental and physical health, in jeopardy. On March 16, 2020, regular university classroom instruction and student training in clinical settings were interrupted in many nations throughout the world, including the Philippines, due to a pandemic caused by the COVID-19 virus. Because of the widespread COVID-19 pandemic, the academic nursing program made the challenging choice to exclude students from participation in clinical practicums and exposures. The project of live distance lectures being offered to students in their homes was initiated by the establishment of online virtual classrooms, an efficient approach for preventing students and the entire community from becoming infected with COVID-19.The abrupt cessation of activities in face-to-face classrooms as originally planned, which integrate theoretical study with hands-on experience, has long-term, medium-term, and short-term implications for all levels of education. As a consequence the following information were revealed, namely: how courses are delivered; how nursing students acquire and comprehend the knowledge; and how effective the learning strategies used by educators and nursing students are. This is beneficial to all parties concerned. During the COVID-19 pandemic, instructional models were used all over the world, and they all had one thing in common: they were not considered by academic literature, as Distance Teaching (DT), because no material was programmed for this modality, or as homeschooling, when parents began to tutor and teach their children. This was due to the instructional models not being considered by academic literature as DT. This occurred because the relevant academic literature did not consider the educational approaches in question to be DT.

## Scope and Limitations of the Study

The Explanatory Sequential mixed methods focused on determining the "Student-Focused Measures Of Learning For Nursing Students In CALABARZON Region During COVID-19" in selected schools, colleges, and universities in Region IV-A CALABARZON (Cavite, Laguna, Batangas, Rizal, and Quezon) provinces.

This Explanatory Sequential mixed methods aimed to obtain the correct and precise information from the phenomenon under study. The participants of this study were nursing students from different nursing schools, colleges, and universities in Region IV-A CALABARZON (Cavite, Laguna, Batangas, Rizal, and Quezon) provinces. The Deans for School of Nursing were contacted to access the information of nursing students who were currently enrolled as regular students. The researcher did not interview the non-regular semestral nursing students because during the time of data gathering only regular semestral nursing students were available. Purposive sampling technique was utilized, and a self-made questionnaire tool was made based on what information the study wanted to obtain. Qualitative data from the survey of the participants will be processed through the Thematic Analysis while the quantitative data will be statistically treated using central tendencies (Mean) and level of dispersion (standard deviation or Frequency and Percentage). A 4-point Likert scale was used to rate students level of elf-efficacy. The study was conducted last June 15, 2021 to February 15, 2022.

## Theoretical Framework

The experiential learning theory proposed by Kolb (1984) functions effectively on two levels, namely a four-stage cycle of learning and four distinct learning styles. The internal cognitive processes of the learner are the focus of a significant portion of Kolb's theory. According to him, learning requires the construction of multifaceted ideas that are flexible enough to be applied in several contexts. His hypothesis was that the accumulation of new experiences is the driving force behind the formation of novel ideas.

"Learning is the process by which knowledge is formed via the transformation of experience," says John Dewey (Kolb, 1984, p. 38).

The Iterative Process of Learning Through Experience

The experiential learning style theory proposed by Kolb is often depicted as a four-stage learning cycle in which the student "touches all the bases," including the following:
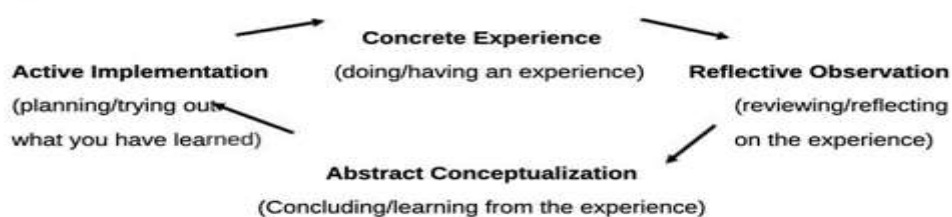


Figure 2.1 The Experiential Learning Style Theory

Concrete Experience - A novel perspective or set of circumstances is obtained, or a well-established body of knowledge is reinterpreted considering the new information.

Reflective Observation of the New Experience - The relevance of any inconsistencies that may exist between an individual's experience and their interpretation of that experience cannot be overstated.

Abstract Conceptualization When we reflect, we either come up with brand new concepts or we modify an old abstract thought. (The individual has become wiser because of their experiences).

Active Experimentation – The learner puts the notion or concepts into practice by applying them to their environment and observing the effects of their attempts to put the principles into action.

Learning occurs when a person goes through a cycle that consists of four stages: (1) having a concrete experience, followed by (2) observing and reflecting on that experience, which leads to (3) the formation of abstract concepts (analysis), and generalizations (conclusions), which are then (4) used to test a hypothesis in future situations, resulting in new experiences. Effective learning therefore occurs when a person goes through a concrete experience, then observes and reflects on that experience whereby abstract concepts are formed and generalizations made. When a person moves through these steps, they are more likely to have successful learning experiences. In Kolb's (1974) view, learning is an integrated process, meaning that each stage of the process mutually supports and feeds into the next one. This view is based on the idea that learning is an integrated process. It is possible to enter the cycle at any given point, and one can proceed through its logical progression in any sequence they want. On the other hand, effective learning can only occur when the learner is able to effectively complete all four stages of the model. This is the only condition under which effective learning may take place. Because of this, it is difficult for any one stage of the cycle to serve as an effective learning method on its own. As a result of this, the cycle cannot be broken down into its component parts.
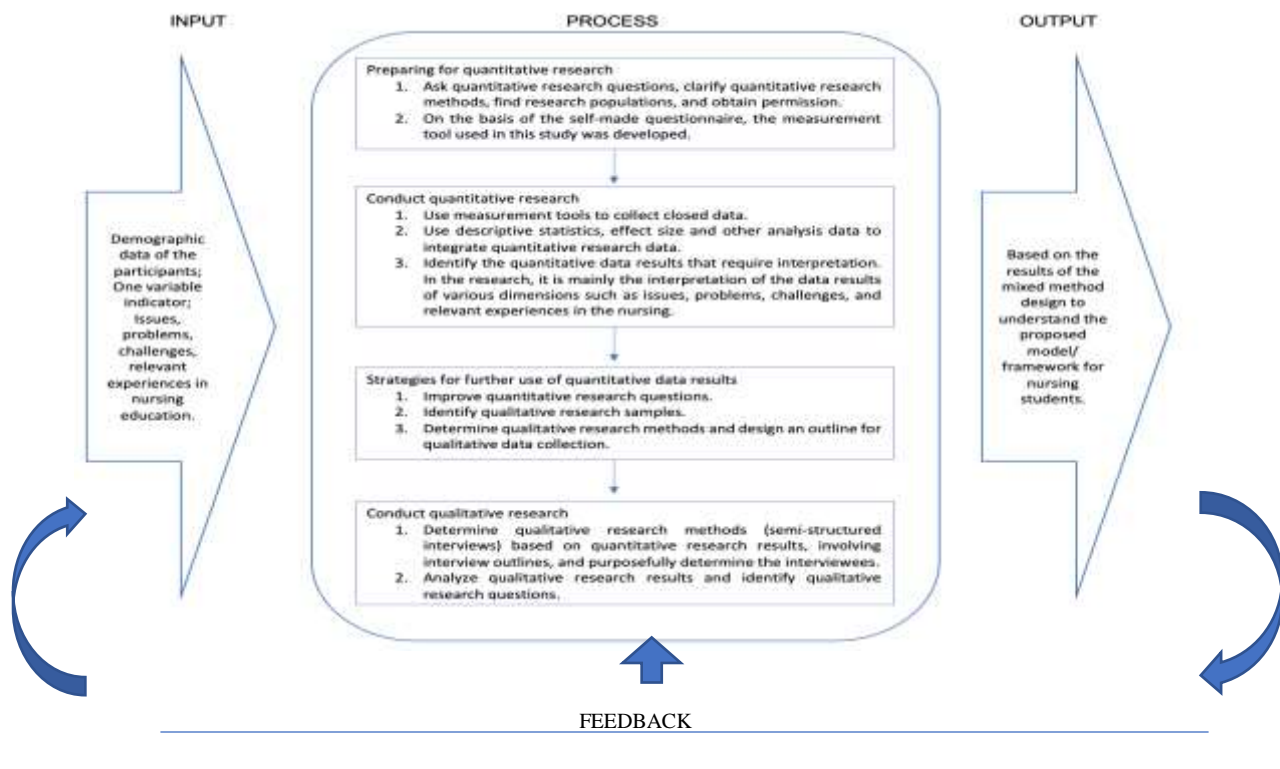
## Research Paradigm



Figure 2.2 Research Paradigm of the study composing Input, Process, and Output (IPO)

The General System Theory, which was developed by Ludwig Von Bertalanffy in 1928, serves as the foundation for this investigation. In a nutshell, it can be summed up as a cluster of components working together as a single entity. The analytical model of the system requires that the phenomena and concepts for organizing the phenomena be treated as if there is an existing organization, interaction, interdependence, and integration of parts and elements. This is because the analytical model of the system assumes that there is a relationship between the parts and the elements. An organization considered as a system, which exists in an environment, takes inputs from the environment, processes them, and then provides outputs for the environment,

while also managing the process using a feedback mechanism, is an excellent illustration of this concept. The components of system theory of organization are shown in vivid detail in Figure 2.2. These components include input, process, output, and feedback.

The input served as both the system's energizer and its opening material. It could be profile of the participants, student-focused efficacy self-made questionnaire, issues, problems, challenges in nursing education, relevant experiences, acceptability of the model/framework. Therefore, input is a representation of the qualities that participants possess. This system makes use of a wide variety of inputs in the process of producing output in many ways. In the context of health care, transformation processes include the provision of nursing care by a professional nurse who assumes a variety of roles and carries out a variety of nursing functions and activities to meet the needs of patients in a manner that is efficient and consistent with the standards of nursing practice.

The process, also known as throughput, was the act of distribution of validated self-made questionnaires, distribution of second set of semi-structured interview questionnaire, and development of model/framework converting gathered data received from the participants into reliable source information that was utilized in the study. The structures or processes that are responsible for the transformation of inputs into output are referred to as throughputs.

Proposed model or framework can be considered output for the nursing students. The outputs of one system can be used as inputs for the subsequent processing of the same system, as well as for the processing of the other system. In the process of realizing inputs, the system provides feedback in the form of information in order to help the system realize its full potential in a more comprehensive manner. The output is the goal as well as the services that the nursing institutions has generated.

Feedback is applied to monitor and adjust the operations of the system as further contact takes place. Adjustments to the inputs and even the throughputs themselves are made via the feedback process, which is how new output is generated. The utilized sources of organized input are the communication network and control process respectively. Considering the theoretical framework that was offered, the research paradigm that is depicted in Figure 2.2 gave guidance for the study that was conducted. It is broken down into three distinct sections. The different components are represented by the three frames, each of which has a specific variable. The first frame depicted the contributions made by the participants, which were broken down into the following sections: Part I Profile of the Participants; Part II Student-Focused Efficacy Self-made Questionnaire - Likert Scale; and Part III Conclusions. Issues, problems, and challenges in Nursing Education, related experiences that are applicable, as well as, the acceptability of the model or framework.

The process or throughput that would serve as a tool in identifying the student-focused measurements employed during the COVID-19. The process is depicted in the second frame, which depicted that process or throughput. Round 1 consisted of the distribution of a validated self-made survey questionnaire, round 2 consisted of the distribution of a second set of semi-structured interview questionnaire. The results of the survey were taken during the first round, the results of Round 2's determination of whether there was consensus over the inclusion, and the development of a model or framework

As a means of analyzing how a Model/Framework could make a difference on student-focused measures of Learning in Nursing Education during COVID-19, a feedback loop goes between the process and the input. These student-focused measures of learning for nursing students include self-efficacy.

## METHODOLOGY

### Research Design

This study utilized the Explanatory Sequential Mixed Methods. As stated by Mahin (2017), qualitative research is an organized method of describing people's experiences and internal feelings. Qualitative research provides a thorough and deep overview of a phenomenon through data collection and presents a rich description using a flexible method of research thematic analysis. This approach involves the presentation of qualitative information, which refers to data that is not numerical in nature. The methodologies of qualitative research is developed in such a way to assist in elucidating the behavior and perception of a target audience in relation to a specific subject matter. The outcomes of qualitative approaches are more explanatory, and it is quite simple to draw conclusions based on the information gathered by using these methods.

The problems associated with the mixed-methods sequential explanatory design, requires the collection and examination of quantitative data first, followed by qualitative data in two successive phases carried out inside a single study. These issues include deciding the priority or weight given to the collection and analysis of quantitative and qualitative data in the study, the sequence of the data collection and analysis, and the stage or stages in the research process at which the quantitative and qualitative data are connected and the results are integrated. Other issues include the order in which the data collection and analysis are performed. In the sequential explanatory design, it offers a methodological overview of priority, implementation, and mixing, as well as some practical guidance in handling those difficulties. Additionally, it provides some guidance in addressing such concerns. In addition to this, it specifies the actions that need to be taken to graphically illustrate the procedures that were followed in a study that utilized mixed methods (Creswell, 2006). As a result, the researcher was better able to investigate the relevant experiences in terms of the educational contacts that the participants had throughout the pandemic by using this research methodology in the conduct of the study. Verbal data from sources such as interviews, surveys, and discussions, as well as data from focus groups and personal journals, are the types of data that are most frequently subjected to qualitative analysis (Patalot, 2013).

When conducting qualitative research, it is a common practice to gather data at the location where the participants are having difficulties or troubles. These are real-time data, and the participants are only occasionally needed to go to other geographic regions so that information can be collected. Instead of relying on a single source of data, qualitative research will often collect many types of data using methods like interviews, observations, and document

reviews (Bhat, 2017). This resource pack was developed with the intention of instructing primary health care practitioners and providing them with a fundamental knowledge-base in order for them to comprehend the philosophical underpinnings of qualitative research. Consequently, this was the primary motivation behind its creation. It provides a summary of the several aspects that need to be expected from qualitative research and displays these parts in order. In addition to this, it included a comprehensive and comprehensible analysis of the several research methodologies that are suitable for use in primary health care settings, such as phenomenology (lived experiences of human being) (Salvador, 2016).An open-ended inquiry was offered to a panel of selected experts at the beginning of the design process. The goal of this inquiry was to gather detailed knowledge about the topic or content area using a divergent approach. During the successive rounds of the process, which were convergent in nature, research experts not only altered the content of the questions on the questionnaire by making modifications or additions, but they also ranked the value of the individual items. "The goal of the process is to arrive at a unanimous decision over a succession of rounds," (Custer, Scarella, and Stewart as cited by Calayag, 2018).

**Participants and Sampling**

Purposive sampling was used to select the participants of this study. During COVID-19, a total of seventy-five students who are currently enrolled in a Bachelor of Science in Nursing program at a variety of nursing schools, colleges, and universities located in the provinces of Region IV-A CALABARZON (Cavite, Laguna, Batangas, Rizal, and Quezon) were selected and asked about Student-Focused Measures of Learning for Nursing Students during CoVid-19 pandemic. Purposive sampling represented a group of different non-probability sampling techniques also known as judgmental, selective, or subjective sampling. Purposive sampling depends on the researcher when it comes to selecting the units that are to be studied. The researcher used purposive sampling in situations when in need to reach a targeted sample quickly, and where sampling for proportionality was not the main concern.

Phase 1: Region IV-A (CALABARZON) consists of five (5) Southern Tagalog Provinces namely: Cavite, Laguna, Batangas, Rizal, and Quezon Province. Currently, there are forty-five (45) Licensed Nursing Schools operating in Region IV-A: eleven (11) in Cavite, fourteen (14) in Laguna, nine (9) in Batangas, four (4) in Rizal, and seven (7) in Quezon Province. In this research study, the target number of participants was seventy-five (75) Nursing Students from all year levels. There are forty-five (45) Nursing Schools with first year to third year students ranging from thirty-one (31) to thirty-six (36) Nursing Students enrolled per year level; wherein the average number of Nursing Student enrollees is thirty-four (34). Multiplying the average number of Nursing Students which is thirty-four (34) by the number of Nursing Schools in Region IV-A which is forty-five (45) that gives the product of 1,530 Nursing Students. Based on the demographic data, it shows that Region IV-A (CALABARZON) had forty-five (45) nursing schools and 5% of 1,530 which was 75 was sufficient to be the participants of the study.

Phase 2: In this research study, the target number of participants was ten (10) Nursing Students from all year levels from five (5) Southern Tagalog Provinces namely: Cavite, Laguna, Batangas, Rizal, and Quezon Province. (CALABARZON) Three (3) from Cavite, five (5) from Laguna, and two (2) from Quezon. There were no participants coming from Batangas and Rizal.

| Code | Location |
|------|----------|
| **P1** | **Laguna** |
| **P2** | **Cavite** |
| **P3** | **Laguna** |
| **P4** | **Quezon** |
| **P5** | **Cavite** |
| **P6** | **Laguna** |
| **P7** | **Cavite** |
| **P8** | **Laguna** |
| **P9** | **Laguna** |
| **P10** | **Quezon** |

Table 3.1. Location and Number of Participants Interviewed

**Research Locale**

The research was carried out in Region IV-A of the Philippines, which is also referred to as CALABARZON (Cavite, Laguna, Batangas, Rizal, and Quezon). This region is comprised of 45 registered and licensed schools, colleges, and universities that operate and offer a Bachelor of Science in Nursing Course. This course has recently been honed to produce future nurses of high quality and competitive level who are capable of carrying out the correct and proper delivery of healthcare services. An institution known as a nursing school is one that offers nursing education as well as professional training for the purpose of preparing students to become fully qualified nurse practitioners in terms of their knowledge and abilities once they have graduated from the program and received their nursing license from the state in which they practiced. Education and certification requirements for nurses can be very different in different parts of the world due to the diversity of nursing's roots and practices. Since the middle of the twentieth century, nursing education has made tremendous strides forward in a lot of different countries, continuously growing and adjusting to the current problems that people are

going through in their lives. These schools, colleges, and universities are the best nursing schools in the region because they are known for producing qualified professional practitioners. They provide their students with a wide variety of academic specialties and subspecialties that will enable them to become professional practitioners.

**Ethical Consideration**

This study adhered carefully to ethical principles, standards, and procedures throughout its entirety. Initially the permission of the selected school's Institution Dean was sought before any of the participant's records could be accessed. The participants in this study were given some background information about it before the data were collected. Using google forms and an email confirming participation, participants were provided with further explanations and information regarding the study. This was done in compliance with the disclosure requirement of the informed consent principle. After that, the participants in the study who had previously accepted to take part had their informed consents collected from them. As the principle of voluntariness requires, there was neither the practice of nor the making of any form of coercion. The participants were asked to complete the survey questionnaire on student-focused metrics after they had given their consents for the study. When the forms were retrieved, they were examined to determine whether all of the questions had been answered completely. The participants were given plenty of time to fill out and finish the survey questionnaire. Likewise, they were given the assurance that any information or data that was obtained would be kept confidential and would be utilized for the study's intended purpose only. The participants had the right to be protected as subjects prior to, during, and after the implementation of the data gathering procedure of the study. The protection of the participants' privacy was the topmost priority, as well as the sense of being in control of access. The data that was obtained from the participants were respected as stated, and the researcher practiced confidentiality of the results handled properly by placing the data in a safe storage, disposing of the paraphernalia in a way that prevented anyone from retrieving the data once it has been completed, and labeling the information in a generic manner when it was presented in public forum. During the process of obtaining informed consents, participants were informed of the precautions taken to ensure the confidentiality of the data, as well as the parties who would or may have access. This allowed participants to decide whether or not the measures were appropriate, as well as whether or not it was acceptable to potentially disclose private information to parties who were interested in that information.

**Research Instrument**

This study utilized and developed a self-made questionnaire based on what information the researcher wanted to obtain from the participants. Since the participants were in the tertiary level with improved communication and comprehension skills, the questionnaire was prepared in English. Paperless forms were sent to each participant and online consent was obtained from the participants. The three-part self-made questionnaire consisted of three parts, namely: Part I consisted of the demographic profile of the nursing students which included age, gender, year level, and category of school. Part II dealt with the extent of demonstration of the participant's student-focused efficacy using Likert Scale. Part III focused on the relevant experiences, issues, problems, and challenges of each participant amidst COVID-19.

**Data Collection**

The processes of data collection were divided into two distinct parts (Figure 3.1). After requesting approval and permission from the Deans of Nursing Schools in Region IV-A (CALABARZON) to conduct a study via electronic mail (email), the researcher then sent out a request to currently enrolled BS Nursing students of all year levels through respective nursing schools for participation in the study. The Nursing Dean was also provided with a copy of the online survey questionnaire and an informed consent form that was submitted through google forms. Moreover, since this investigation was carried out during the pandemic, an online Google form version was the ideal option for the research instrument in terms of ensuring the safety and security of all participants. Before responding to the survey forms, the participants were given a section of the instrument labeled "informed consent" to read so the participants could gain a better understanding of the nature of the research being conducted. Before moving on to the next step in the online survey form, the researcher made sure that the participants were aware of the confidentiality of the data and the information would only be disclosed with their permission to maintain respect for human integrity. This was done to ensure that the participants understood the purpose of the study. Then, the questionnaire for the online survey was sent using links to google forms. To collect responses to the questionnaire from the participants, the researcher requested 10 to 15 minutes of the participant's time and attention. During that time that the researcher was collecting data he kept close tabs on the participants by monitoring their activity making him available to address any follow-up questions or concern the participants might have via online chat, text messages, and phone calls. No inquiry or request for clarifications at any point during the process of completing the tool and collecting data was made by the participants.

To show the researcher's appreciation for the time and effort each participant put into taking part in the research study, an acknowledgment and a thank you note were displayed on the website upon the completion of the online survey. Information was obtained from online surveys by using google forms. With the assistance of a statistician, the quantitative data acquired from the survey were tallied, then statistically processed, analyzed, and interpreted in a manner that was both accurate and insightful. Using google forms, a total of 75 nursing students from different year levels in CALABARZON Region IV-A took part in the survey

In the second phase of the research, a semi-structured interview was done. The purpose of this interview was to further obtain an analysis and exploration of the issues, problems, and relevant experiences that were affecting the student-focused measures in learning for nursing students in CALABARZON Region IV-A during the COVID-19 Pandemic. A total of 10 participants participated in the second phase of the study to make a stronger statement for the qualitative data process, in which discussion focused on their related experiences, concerns, problems, and challenges as nursing students during the pandemic. The most important questions that were asked of them were variations on the following: "As a nursing student, what are the issues, problems,

and obstacles you encountered in the school and during the Related Learning Experience (RLE)?" and "What experiences have you had that are important to your role as a nursing student?"
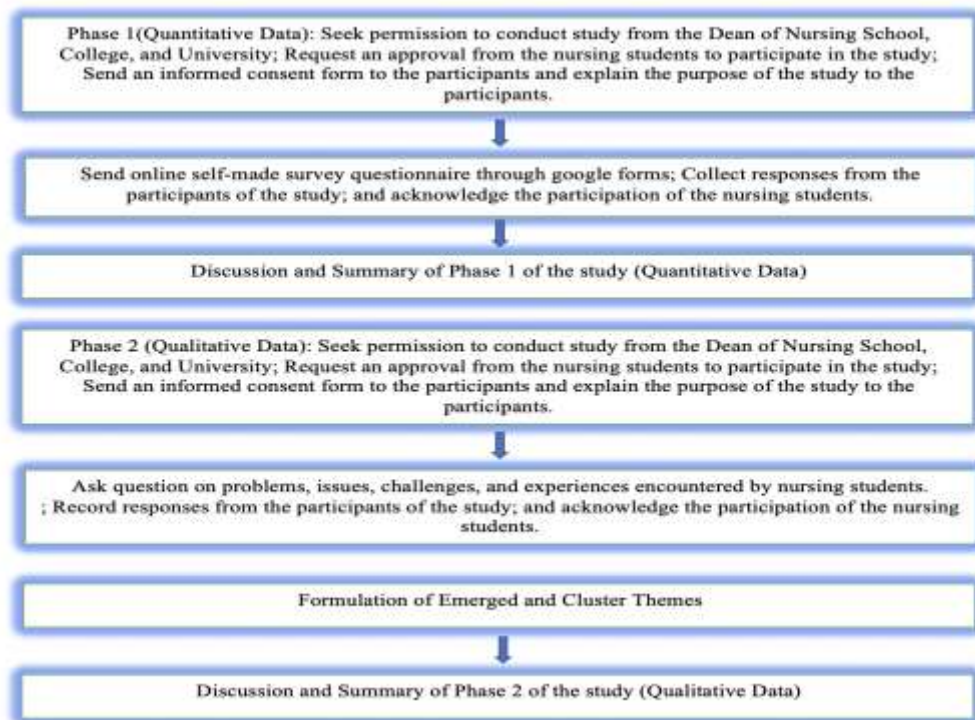


Figure 3.1 Data Collection Flow Chart

**Data Analysis**

The Interpretative Phenomenological Analysis research method was utilized in this study. Interpretative phenomenological analysis, or IPA for short, is a type of qualitative research that strives to give in-depth assessments of personal lived experiences for its participants. It does this by producing an account of related experience in its own terms rather than one that is mandated by pre-existing theoretical beliefs, and it acknowledges that this is an interpretative endeavor as humans as sense-making organisms of the surroundings. It is clearly idiographic in that it commits to evaluating the specific experience of each case in turn before moving on to more general statements. This is done before moving on to more general assertions (Pain, 2015).

IPA is a methodology that is particularly useful for investigating subjects that are difficult to understand, confusing, and emotionally charged (Pain, 2015). In order to arrive at this conclusion, a deductive method was applied, in which the researcher looked for similarities and differences between the interview and the data. After having a discussion in a focus group or doing an interview with the participants, the researcher then identified sets of similar concepts, definitions, insights, or perspectives from the participants. The researcher made extensive use of the data obtained from the research informants until the gathered data were exhausted. The categories that surfaced throughout the process of data grouping served as the inspiration for the formulation of thematic coding. Themes that were derived based on the internalization of the study's prevailing sub-themes were used in this research study. A model for the student-focused efficacy measures has been designed with the help of analysis, interpretation, and reflection on this study.

## PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA

### PHASE 1 – QUANTITATIVE RESEARCH DESIGN

The following sub-phases were provided in succeeding phases: phase 1.A (Development of Questionnaire), phase 1.B (Quantitative Investigation-Correlational Strategy). Using these two sub-phases, the researcher defined the sequential procedure of the study and provided a detailed process map of the research process that was implemented in this study.

### 1.A. Development of Questionnaire

### 1.A.a. Creation of survey concepts, construct, and items

First, a self-development survey was conducted. The method that was based on phenomenology was utilized to establish topic domains, which were in turn used as names for the large-scale components of the survey. Themes and codes of the instrument were taken from qualitative data sets to create its categories, which were then used as survey items. Therefore, each newly formed contextual category was incorporated into a response item for the survey which was presented In a matrix that provided a definition of how the survey item parallels with the qualitative finding was prepared.

The categories of quantitative data that best characterized their respective types were selected as survey items in order to keep the survey as succinct as possible while still assessing the most important constructs discovered in the qualitative findings. This was done in order to ensure that the most important constructs could be evaluated.

**1.A.b. Validity Test**

Validity is defined in terms of the extent to which evidence and theory support the interpretation of test scores that is inferred by the propositioned applications of tests that are being used (Salvador, 2017). In the context of this inquiry, the reliability of a test is evaluated based on how well it predicts the outcome of the variable that it is intended to measure.

**1.A.b.1 Validators Profile**

In validating the newly developed survey tool, the following criteria were used: (1) at least more than ten (10) years of experience; (2) a field of expertise in nursing; (3) doctoral degree holder in nursing or related fields; (4) expertise in research and experience conducting tool development; and (5) faculty of any national and international university. The following were the validators of the study:

| Panel | Expertise | Academic Rank | Experience (Years) | Country |
|---|---|---|---|---|
| 1 | **Epidemiology and Biostatistics** | **Full Professor** | 23 | **Saudi Arabia** |
| 2 | **Adult Health Nursing** | **Associate Professor** | 15 | **Qatar** |
| 3 | **Nursing Education** | **Full Professor** | 11 | **Philippines** |

Table 4.1 Demographic profile of the panel of experts in tool development

**1.A.b.2 Face Validity**

Face validity was analyzed thru panel of experts/reviewers' qualitative comments, which were derived from the survey criteria of Oluwatayo (2012), as follows: (1) appropriateness of grammar, (2) clarity and unambiguity of items, (3) correct spelling of words, (4) correct structuring the sentences, (5) appropriateness of font size and (6) structure of the instrument in terms of construction and well-thought-out format.

| Criteria of Survey Tool | Panel's Qualitative Comments | Panel Reviewers |
|---|---|---|
| **Appropriateness of grammar** | **Revisit English proficiency .** | **1, 2, and 3** |
| **Clarity and unambiguity of items** | **Choose the appropriate terminologies known to public.** <br><br>**Split double-barrel questions.** | **1, 2, and 3** |
| **Correct spelling of words** | **Check for some wrong spelling** | **1 and 3** |
| **Correct structuring the sentences** | **Need to do some sentence structure corrections for improvement.** <br><br>**Improve sentence structure (subject-verb agreement) to be more consistent.** | **1, 2, and 3** |
| **Appropriateness of font size** | **Appropriate font size especially with the instructions.** | **2** |
| **Structure if the instrument in terms of construction and well-thought-out format** | **Format is acceptable.** | **1,2, and 3** |
| **Reference: Oluwatayo, J.A. (2012). Validity and reliability issues in educational research.** *Journal of Educational and Social Research* **2(2), 391-400.** | | |

Table 4.2 Criteria for face validity

The expert panel and reviewers recommended a few tweaks here and there to the survey instrument. The original version of the survey tool was reflected in its entirety, and all of Oluwatayo's (2012) requirements for a great survey tool were successfully implemented. Consultations with the panel of experts took place in person, over email, and over the phone, depending on their preferences.

**1.A.b.3. Content Validity Index (CVI) for Subject-Content Validity**

Content Validity Index (CVI) is used to determine the content experts' ratings of how relevant their contributions are (Polit and Beck, 2006; Lynn, 1986). It was requested of the expert panels that they assign a relevancy score between 1 and 4 to each survey item to show that: 1- the item was not relevant, 2- somewhat relevant, 3 - relevant, and 4 - very relevant. After merging and evaluating the individual results of the three (3) members of the panel of experts/reviewers, a self-developed survey tool containing a total of seventeen (17) survey items emerged as the final constituents of the tool. (Table 4.3) The reviewers concluded that each of the 17 survey items was pertinent to the respective constructions or thematic domains they were assessing. The ideas and recommendations were taken into consideration in making the necessary adjustments.

Table 4.3 Content validity index (CVI)

| Item No. | Item | # in Agreement | CVI |
|---|---|---|---|
| 1 | The use of blackboard and google classroom are effective in acquiring relevant information. | 3 | 1.0 |
| 2 | The use of online polling tool can add an interactive element to a lecture, presentation, and recorded session develops higher-order thinking skills. | 2 | 0.67 |
| 3 | The use of online applications helps to develop self- learning skills. | 3 | 1.0 |
| 4 | The use of lecture modules helps in acquiring theoretical knowledge. | 2 | 0.67 |
| 5 | The use of live streaming for teaching demonstration is effective in acquiring practical skills. | 2 | 0.67 |
| 6 | The use of group discussion activities (e.g., brainstorming and sharing ideas) helps in analyzing, solving, evaluating, and monitoring school assignments. | 3 | 1.0 |
| 7 | Reading books alone will provide better understanding and comprehension. | 3 | 1.0 |
| 8 | Nursing students choose to study at nighttime. | 3 | 1.0 |
| 9 | Nursing students can remember things best when they write down several times. | 3 | 1.0 |
| 10 | The use of an online applications helps to develop self- learning skills. | 2 | 0.67 |
| 11 | Pre-recorded lectures allow the students to listen and learn in their own pace. | 3 | 1.0 |
| 12 | Constantly attending lectures improve critical thinking, problem solving, and decision-making skills. | 3 | 1.0 |
| 13 | All classrooms, laboratories, and virtual/online platforms provide a friendly and conducive learning environment for the students. | 2 | 0.67 |
| 14 | All classes both theoretical and practical are strictly adhering to the set time schedule. | 3 | 1.00 |
| 15 | Various learning tools (e.g., books, notebooks, and writing materials) could be easily always accessed and available to the students. | 2 | 0.67 |
| 16 | State-of-the-art and highly technological equipment (e.g., computers and smart tablets) could be easily always accessed and available to the students. | 2 | 0.67 |
| 17 | All faculty members and teaching staffs are competent (e.g., knowledge, skills and attitude) in delivering teaching-learning processes to all students. | 3 | 1.00 |
| | Total<br>Total Favorable =<br>Proportion Favorable =<br>(14.69/17) | 100<br>0.86<br>(Very Good) | 14.69 |

**1.A.c. Reliability Test**

As per the institution's requirement for the dissertation, a certificate of survey validation was issued once all of the validators' recommendations were adopted (Masuwai et al, 2016). The researcher promptly pilot-tested the survey instrument's reliability (its internal consistency). Pilot testing involved 37 people via online survey and email. The online survey used Google Forms. The instrument was initially validated by experts. Upon administration of the questionnaire to the participants, the questionnaire was tested for validity and reliability using Face Validity and Content Validity Index Tests. Inter-rater repeatability was also utilized to test the reliability of the questionnaire. The study was validated by experts from higher educational institutions. Pilot testing was applied to nursing students not included in the study. The rest of the process to test validity and reliability was conducted. After validation the questionnaire was then subjected to a reliability test using Cronbach Alpha. A reliability test measures a system's appearance, performance, and stability over time and in unambiguous testing situations (West, 2011). Mora (2011) defines dependability as the degree to which distinct statements or questions measure the same properties. Mora's concept of reliability encompasses both.

The reliability test showed a high acceptable internal consistency (Cronbach Alpha =0.7599825 ). The questionnaire was found to be reliable and indicated that the internal consistency of the total cases (N= 17) was *acceptable (*Tables 4.4, 4.5 and 4.6).

| DESCRIPTION | VALUES | INTERNAL CONSISTENCY |
|---|---|---|
| number of Items | 17 | |
| sum of the item variance | 1.9275 | Acceptable |
| variance of the total score | 5.63167 | |
| Cronbach alpha | 0.7599825 | |

Table 4.4 Cronbach Alpha Validation Result of the Student-Focused Efficacy Questionnaire

**Internal Consistency**

To test the coefficient of reliability and internal consistency of the self-developed survey tool, Cronbach's alpha was used to measure the consistency of the set of scale, concept, or survey items (Dunn, Baguley and Brunsden, 2013). The expected result of α coefficient of reliability would be from 0 to 1. Zero (0) means that all survey items are independent from each other (no covariance) and one (1) means that the scale approaches infinity. The higher the α coefficient is, the higher covariance existed and shared by the items. The most acceptable table of interpretations of internal consistency can be seen in Table 4.5.

| Cronbach's alpha | Internal consistency |
|---|---|
| $0.9 \leq \alpha$ | Excellent |
| $0.8 \leq \alpha < 0.9$ | Good |
| $0.7 \leq \alpha < 0.8$ | Acceptable |
| $0.6 \leq \alpha < 0.7$ | Questionable |
| $0.5 \leq \alpha < 0.6$ | Poor |
| $\alpha < 0.5$ | Unacceptable |

Table 4.5 Cronbach's Alpha Interpretation (Source: George & Mallery, 2003)

| Reliability Statistics | | |
|---|---|---|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| 0.759 | 0.7599825 | 17 |

Table 4.6 Internal consistency (Cronbach's Alpha)

**1.A.d. Presentation of the Newly Developed Survey Tool**

The second phase of the study was the quantitative phase starting with the self- development of survey tool procedure. The most exemplified quantitative data categories were chosen as survey item to keep the survey as concise as possible, likewise, surveying the most essential constructs in the quantitative findings. Therefore, all emergent contextual categories were represented as survey response items. A matrix defined how the survey item parallels with the quantitative findings. This study utilized and developed self-made questionnaire, prepared in English, to gather the relevant information from the participants. Google forms were sent to each participant and online consents were obtained from the participants. The three-part self-made questionnaire consisted of the demographic profile of the nursing students as Part 1. The demographic profiles of the participants included age, gender, year level, and category of school. Part II dealt with the extent of demonstration of the participant's student-focused efficacy using Likert Scale.

**PHASE 1.B – QUANTITATIVE DESIGN (CORRELATIONAL STRATEGY)**

**Demographic Profiling**

In accordance with the objectives of this study, a descriptive cross-sectional survey was carried out to evaluate the capabilities of millennial nurses for positions of management and leadership. For the purpose of gathering responses for the recently developed and formulated survey instrument, a total of 75 participants were selected. Since the phase 1 of this sequential strategy is descriptive in nature, elements of the participants' demographic profiles were analyzed for their contribution to interpreting and analyzing the study's findings. Demographic profiling is essential when conducting a survey to understand the responses. This allows the researcher to determine if target audiences were effectively searched. GfK (2016) says knowing a person's identification, ethnicity, address, gender, and other information might help market a product to the intended population. Knowing this information would also help discover study patterns. Needle (2013) noted that some people may feel apprehensive about making their personal information public. The researcher made it his duty to ensure that autonomy, privacy, and secrecy were observed throughout the investigation. Much research was done to determine the demographic profile parameters for this self-developed survey instrument in consideration for future quantitative connection and comparative study.

| Demographic Profile Description | Demographic Profile Description | Demographic Profile Description | Demographic Profile Description |
|---|---|---|---|
| Age | 18 – 20 | 23 | 31 |
| | 21 – 23 | 34 | 45 |

| | | | |
|---|---|---|---|
| | **24 and above** | **18** | **24** |
| | **Total** | **75** | **100%** |
| **Gender** | **Male** | **18** | **24** |
| | **Female** | **57** | **76** |
| | **Total** | **75** | **100%** |
| **School Category** | **Public** | **3** | **4** |
| | **Private** | **70** | **93** |
| | **Sectarian** | **2** | **3** |
| | **Total** | **75** | **100%** |
| **Location** | **Cavite** | **30** | **40** |
| | **Laguna** | **40** | **53** |
| | **Batangas** | **0** | **0** |
| | **Rizal** | **0** | **0** |
| | **Quezon** | **5** | **7** |
| | **Total** | **75** | **100%** |

Table 4.7

Demographic Profile of the Participants

**B. Results of the Descriptive Cross-Sectional Study**

In analyzing the results, each dimension had survey items (n=17) that were added up accordingly (e.g., Self-efficacy = ) and eventually calculated the weighted mean. Weighted mean was used to measure the general responses of the survey samples.

Table 4.8 Weighted Mean per Survey Component

| Areas | SD | Weighted Mean | Interpretation |
|---|---|---|---|
| 1. The use of blackboard and google classroom are effective in acquiring relevant information. | 0.69 | 2.88 | Agree |
| 2. The use of online polling tool can add an interactive element to a lecture, presentation, and recorded session develops higher-order thinking skills. | 0.48 | 3.01 | Agree |
| 3. The use of an online applications helps to develop self- learning skills. | 0.70 | 3.09 | Agree |
| 4. The use of lecture modules helps in acquiring theoretical knowledge. | 0.73 | 3.20 | Agree |
| 5. The use of live streaming for teaching demonstration is effective in acquiring practical skills. | 0.76 | 3.08 | Agree |
| 6. The use of group discussion activities (e.g., brainstorming and sharing ideas) helps in analyzing, solving, evaluating, and monitoring school assignments. | 0.63 | 3.37 | Agree |
| 7. Reading books alone will provide better understanding and comprehension. | 0.64 | 3.11 | Agree |
| 8. Nursing students choose to study at nighttime. | 0.79 | 3.17 | Agree |
| 9. Nursing students can remember things best when they write down several times. | 0.64 | 3.51 | Strongly Agree |
| 10. The use of an online applications helps to develop self- learning skills. | 0.64 | 3.11 | Agree |
| 11. Pre-recorded lectures allow the students to listen and learn in their own pace. | 0.70 | 3.01 | Agree |

| | | | |
|---|---|---|---|
| 12.  Constantly attending lectures improve critical thinking, problem solving, and decision-making skills. | 0.66 | 3.07 | Agree |
| 13.  All classrooms, laboratories, and virtual/online platforms provide a friendly and conducive learning environment for the students. | 0.75 | 3.25 | Agree |
| 14.  All classes both theoretical and practical are strictly adhering to the set time schedule. | 0.72 | 3.07 | Agree |
| 15.  Various learning tools (e.g., books, notebooks, and writing materials) could be easily always accessed and available to the students. | 0.73 | 3.05 | Agree |
| 16.  State-of-the-art and highly technological equipment (e.g., computers and smart tablets) could be easily always accessed and available to the students. | 0.61 | 3.20 | Agree |
| 17.   All faculty members and teaching staffs are competent (e.g., knowledge, skills, and attitude) in delivering teaching-learning processes to all students. | 0.57 | 3.42 | Strongly Agree |
| N=17 | Total | 3.153 | Agree |

Interpretation: 3.41 -4.00- Strongly Agree     1.81 - 2.60 - Disagree

2.61- 3.40 – Agree    1.00 -1.80 - Strongly Disagree

**Reason for Doing Qualitative Investigation**

Generally, qualitative research is carried out through the use of interviews or focus groups. A method which give participants the opportunity to speak openly and in depth about the subject matter that is being investigated. The significance of qualitative research can be ascribed to the fact that it allows for a more in-depth examination of specific research topics than quantitative research ever could. Typically, the size of the qualitative sample is limited since the objective is not to ensure that the sample is representative of the population; rather, the objective is to ensure that the sample is reflective of the complete width and depth of nursing students' opinions and experiences.

**2. PHASE 2 – QUALITATIVE INVESTIGATION (PHENOMENOLOGICAL STRATEGY)**

**A. Brief descriptions of the participants in phase 2 (qualitative)**

The participants included eleven (10) nursing students who have met the inclusion criteria utilizing  purposive (typical) sampling: (1) nursing students enrolled in regular semester-long programs; (2) had completed all prerequisites for the major and minor subjects; (3) attend schools, colleges, or universities located within Region IV-A (the province of CALABARZON); (4) and be willing to take part in the research's data collection activity.

| Code | Initial Code | Gender |
|---|---|---|
| **P1** | **RD** | **Male** |
| **P2** | **JS** | **Female** |
| **P3** | **SP** | **Female** |
| **P4** | **AT** | **Female** |
| **P5** | **MK** | **Male** |
| **P6** | **AM** | **Female** |
| **P7** | **JC** | **Female** |
| **P8** | **RK** | **Male** |
| **P9** | **KS** | **Female** |
| **P10** | **YD** | **Female** |

Table 4.9 Demographic profile of the participants in phase 1 (qualitative design)

The informed consents of the participants were obtained by email, and each subject's  agreement signed electronically. Participants were given the opportunity to provide the researcher with their available time and date while the researcher for the  conduct of the study.  A semi-structured interview guide was developed and employed.  The interview guide questionnaire was made up of free-form questions designed to elicit the experiences of nurses

(Creswell, 2013). The interview started on the 3rd of August 2021 and continued until the 23rd of August 2021. It began with the introduction of the researcher and participants to establish rapport, followed by a discussion that lasted sixty to ninety minutes and examined various nursing experts' perspectives on ideal leaders for millennial nurses. After the familiarization, the purpose of the interview was elaborated. During the interview, the group went over the themes that the researcher has prepared and presented The interviews were carried out in a laid-back and casual way to make participants feel comfortable expressing themselves freely. The policy stipulated that all participants had the right to equal care and privacy, which was founded on the concept of fairness. This right was included in accordance with the concept of justice. To ensure that everyone received the same treatment participants were selected according to the inclusion criteria and the conditions of the study. Participants who declined to take part in the study or withdrew from it were not treated differently from other participants, as required by the informed consent document.

## Emerged Themes

### Theme 1: Clinical Exposure and Related Learning Experiences of Nursing Students

Throughout their clinical rotations and other learning opportunities related to patient care, nursing students were presented with a multitude of obstacles during the Covid-19 pandemic. These difficulties are covered by this theme. According to them these concerns also interfered with their ability to concentrate on their academic pursuits.

Moreover, this theme demonstrates participants' potential extent of clinical exposure and related learning experiences for their professional obligations and personal choices with one's actions, as reflected in the six clusters of "*virtual simulation, practical skills, return demonstrations, skills laboratory, practice-based experiences, face-to-face interaction.*" The major theme also clearly simplified the clinical obstacles they had experienced through various learning modes.

*"Virtual simulation was a huge task to accomplish for me. Every time we are doing it, I feel lost sometimes until I psych myself out to look at myself as the nurse inside the hospital taking care of that patient." (P2)*

"Practical skills cannot be just taught online and expect perfect execution. There are skills that need to be done in person to learn it well." *(P9)*

"Return demonstrations are difficult because there is no feedback if you're doing it right or not." (P7)

*"Skills laboratory I have an issue dealing with skills lab myself, not because my CIs aren't great but because I'm questioning my abilities to expand my creativeness and eagerness to do more in a particular return demo. I must ask my friend what return demonstration she watched so that I can watch it too and jot down everything important, but the thing is I'm pressuring myself in times that I think I can relax and do the job." (P1)*

*"As a hands-on type of learner, it is harder for me to absorb the knowledge coming to me without actually applying it." (P4)*

*"I hope that face to face learning and clinical exposure would resume the soonest and safest time possible because what I am taking up needs clinical and direct exposure to patients for a better understanding of the theories that we are studying."(P6)*

In support of these experiences, as mentioned by the Department of Medical Education Jawaharlal Institute of Postgraduate Medical Education and Research (2020) students would have unrestricted freedom to plan and carry out their very own individualized instructional and educational strategy. Students might also be required to write multiple-choice questions (MCQs), clinical vignettes, or case scenarios for a certain topic. These materials would then be sent to the students' respective professors for comments and consideration as possible uses of the materials. Students will benefit from this in two ways: first, it will encourage them to become more familiar with the content of their course, and second, it will foster higher-order thought.

Nursing students learn how to provide care to patients by developing active skills and gaining hands-on experience in a variety of clinical settings and hospital environments. Nursing is a career that relies heavily on the acquisition of practical knowledge. During the Covid-19 epidemic, in-person classroom meetings and the immediate closing of all businesses, including schools, colleges, and universities, were both enacted as measures to reduce the likelihood of the virus being passed from person to person. The development of telemedicine has made it possible to do clinical tasks remotely. Depending on the amount of education they have obtained, medical students at teaching hospitals that offer telemedicine services may be recruited to provide remote help in the delivery of routine outpatient clinical therapy. Students may also be qualified to conduct therapy on inpatient services in wards that do not include COVID-19 patients if they are under the supervision of senior residents or consultants and are working in conjunction with a telemedicine facility. This has a variety of effects on academics, including early exposure to clinical settings, the development of communication skills, and the opportunity to master both the science and the art of medicine (Zayapragassarazan et. al, 2020).

### Theme 2: Motivation and Attitude towards Learning.

This theme highlights the psychological issues and problems experienced by nursing students to acquire knowledge and learning during Covid-19 pandemic. Moreover, it demonstrates participants' potential extent of motivation and attitudes towards learning as reflected in the six clusters of "burden, miscommunication, eagerness to study and do clinical practice, helplessness, professional independence." This major theme also clearly simplified the professional character that the nursing students had experienced through various clinical modes.

*"I had a problem with self-motivation. Online classes are overwhelming because of tons of schoolwork. It left me exhausted mentally and emotionally. It affected my motivation to study." (P2)*

*"Most of the time the other CIs are not very approachable."(P3)*

*"The challenge for the past school year is being able to do anything flexible plus pressuring myself to do better each day, each return demonstration, each lecture, each quiz, in everything. Back then, I really wanted to challenge myself when it is still faced to face, but now I'm in my comfort zone, I can't even go out of my box since I am home. I am doing everything in the house where in fact I wanted to go to school, be with my friends whom I can relate the same hardships with as mine. At least, in those times that I was with my friends I was motivated enough to do my work."(P9)*

*"Wearing a nursing type uniform makes me feel that I am part of the society willing to serve and learn more experiences in the healthcare field. As a student nurse, I have taken this course seriously because I wanted to be part of the healthcare team."(P2)*

In support of these transcriptions, According to Baloran (2020), 80.38 percent (426/530) of students agreed with the closure of schools during the COVID-19 pandemic, and 65.85 percent (349) of students agreed with the extension of the start of classes for the next semester due to the COVID-19 pandemic situation. These results are based on the attitudes of students toward schooling during the COVID-19 pandemic. In addition, H.A. Alharbi (2021) and her colleagues noted that nursing is for people who have a strong desire to serve the community and help people, even in the most unfavorable moments of their lives, and that nursing is a profession for those people. The views of friends and family members who appreciated nurses and nursing as a profession, as well as expressing confidence in the individual's ability to become a nurse, contributed to the individual's sense of accomplishment. The love and support that the student nurse receives from their significant others serve to boost their morale as a sign of their support for their career choice. This is a factor that is important regardless of how dangerous the situation is now but is a part of this incredible medical team. For instance, Surjono (2017) investigated the effects of several learning styles on the performance of college students. The findings revealed that students learn better when one learning type and their instructor's teaching style match. According to Ahmad,et. al (2017) there is a considerable connection between students' preferred modes of education and their overall academic performance. Despite this, they mentioned several factors, such as learning styles and study habits, that can influence academic accomplishment. In addition to this, nurses place a high emphasis on their professional identity. Many students cite this as a major factor and motivator in their career choice to pursue what they want to be in the future. Some people associate the excellent outcome of being a nurse with the concept of nursing as a vocation or a calling (Bertello & Rogers-Clark, 2020).

**Theme 3: Equipment and Tools.**

This theme highlights the learning materials and tools needed by the nursing students during this Covid-19 pandemic to be able to comply with the academic and clinical requirements of the course.

In addition, this theme states different kinds of problems encountered by nursing students when it comes to having high technology equipment and services available at home as reflected in the clusters of *"lack of equipment and tools, internet connection, gadgets and other electronic learning devices."* This also clearly simplified the student's lack in learning materials and resources throughout their nursing course during the pandemic.

*"Unavailability of the necessary tools that could help us familiarize with its proper use / skill execution."(P8)*

*"Internet connection stability. Both students and professors do experience this challenge."(P6)*

*"Low to middle specifications of gadgets or devices used for class."(P2)*

*"We have the internet at home. However, there was a time when I couldn't access it for almost 2 weeks because there was a problem with the cable connected to our modem. I loaded my phone so I could use data and attend my online classes, but the connection is poor. So, most of the time I was struggling to find a signal. I would sometimes inform my teacher or classmates that I am only using data and I could barely reconnect again to the online class discussion."(P7)*

*"Learned to deal with the resources that I have and maximize its potential to be able to catch up with the demands as a student nurse. Finding alternative resources and ways would be beneficial for growth and learning."(P4)*

*"Recording and uploading return demonstrations with poor internet connection. No room for experimentation. Sometimes, my eyes feel tired from using too many gadgets. Most of the time I am facing my laptop because I have online classes and schoolwork to do afterwards. Even though I am using my anti-radiation glasses, my eyes still feel tired."(P2)*

In support of these transcriptions, Baloran (2020) stated that, 59.25 % (314/530) disagreed with how the Online-Blended Learning Approach was carried out. Most of these students were absent due to a lack of internet connection (227/314, or 72.29 percent), which was the primary cause for their absence. Majority of those who participated in online-blended learning had unfavorable opinions of the experience, according to the findings of the study, which revealed that this was related to sluggish internet access. During the COVID-19, findings that were discovered in literature assessments about the adaptations of learning and teaching strategies for undergraduate radiology and nursing educations were determined to be very similar. Although it has been reported that some clinical placements and practical classes have been replaced by simulated learning, simulations in physical MRS laboratories and the use of immersive three-dimensional (3D) virtual reality (VR) simulation tools may not be possible during the lockdown. Examples of such tools include VR software developed by Virtual Medical Coaching Ltd. (Christchurch, New Zealand) and VERT (Vertual Ltd., East Yorkshire, United Kingdom). MRI Simulator, Shaderware Virtual Radiography (located in Darlington, United Kingdom), and several more CBS programs. Mobile phones,

particularly in comparison to laptops and tablets, have emerged as one of the most popular devices for students to use for e-learning. In addition, many students in remote places of the world lack internet connection, financial resources, textbooks, computers, and rely largely on college libraries (Agu, 2021). These pupils rarely own computers. Many of these students don't have PCs. This study found that 66 percent of college students utilize mobile devices for e-learning, which is quite close to the results of this study, which found that 76 percent prefer mobile devices. According to the findings of a study that was carried out in Spain (Agu, 2020), students prefer to use cellphones for educational purposes because it is simpler for students and teachers to communicate via mobile than it is on other devices. In the piece that Angela Murphy, et. al. (2021) wrote, they talk about how learning can take place at any time and in any setting. Mobile devices came in second place after laptops for e-learning, while laptops came in second place after mobile devices (Abbasi et al., 2020).

**Theme 4: Scheduling and Time Management.**

This theme highlights the different external factors encountered by the nursing students at home that affect the learning process and efficiency when keeping up with their educational requirements.

Moreover, the nursing students participated in a lively conversation of the various obstacles that nursing students face when attempting to organize their schedules and put their responsibilities in the proper order of importance as reflected in the clusters of

"*lack of break time and interval time im-between lectures, overwhelming school loads, poor lecture scheduling, fast-track online lectures, conflict schedules, learning time management.*" The participants had a discussion regarding the challenges in scheduling and time management that nursing students faced during the pandemic.

"*Our lecture subjects have no in between breaks. Sometimes we are already experiencing information overload and cannot pick up the succeeding topics being discussed.*"(P3)

"*The online class setup leads to burn out in the long run. The students feel as if they just wanted to get through the day, the week and the whole month thinking this will end too.*"(P5)

"*Waking up in the morning having two classes at the same time due to overlapping classes and just always behind the screen affected my whole body, especially eyes and back.*"(P4)

"*Students tend to lose interest in lengthy 3-to-6-hour online discussions in a single subject.*"(P9)

"*I had difficulty in time management and schedule, before my RLE schedule is from 1-7 fundamentals and health assessment then the day before RLE mostly its reviewing time because most of the profs give exams on for example Monday or the same RLE day. So, I had to struggle in memorizing the other subjects and the procedures for the same return demonstration.*"(P10)

"*Aiding students in proper scheduling can provide for a better overall experience. I believe some students lack the capability to manage their time wisely and therefore would be good to educate on time management.*"(P8)

"*Self-study or recap after a tiring day of lectures made me be more careful because we have limited learning due to our current situation. Many projects on same deadlines. Short period of time performing RLE because of less professor and long list of students.*"(P4)

"*I had a hard time with time management. Since I am living alone, balancing house chores, school, business, and personal time was a struggle for me.*"(P10)

In support of these transcriptions, because clinical placements have been put on a hold, one other aspect that emerges from this summary is the demand that students produce innovative solutions in order to complete their education within the scheduled period. Abreu (2020) states that during this period of confinement, when face-to-face teaching rapidly transitioned to remote emergency teaching, it was extremely important to determine whether this improvised shift would have an impact on the perceptions of university students' perceived self-efficacy to achieve academic performance given that students were not prepared. This occurred about as a direct consequence of the nursing students' inadequate preparation since students were unprepared. The transformation from traditional classroom instruction to online learning and the end of clinical training has lengthened the program. Beginning the course, pupils consented to a four-year program. In view of current conditions, the curriculum will likely be expanded by at least one semester to accommodate clinical experience and regulatory clinical hours. This will meet regulatory standards for clinical hours (British Columbia College of Nursing Professionals, 2020).

**Theme 5: Environmental Factors**

This theme highlights the different external factors encountered by nursing students at home which affect the learning process and efficiency when keeping up with their educational requirements.

Moreover, the participants stated a variety of issues and concerns about their surroundings, all of which had substantial impact on the method of education that they are receiving through online schooling, and which were brought to light by the participants themselves as reflected in the clusters of "noisy environment, school and domestic responsibilities, home/personal issues, electrical supply challenges, online dependency.

"*Hirap akong makapag memorize ng mga demo kapag maingay yung nasa paligid ko.*"(P2)

*"Naaapektuhan ang pag-aaral ko 'pag nasa bahay ako dahil may iba akong kapatid na nag-aaral din. Andyan din yung habang nasa klase ako uutusan ako na alagaan ang kapatid ko o kaya maglinis ng bahay dahil pwede naman daw ako making sa online class habang nag-aalaga o naggagawaing bahay."(P9)*

*"To handle yourself whenever you are under stress from school and home problems."(P3)*

*"I am taking my online classes while I'm in my province. Brownouts are frequent here. Most of them are unannounced and will take more than an hour for the electricity to go back."(P1)*

*"My friends always help me out when I went to them, surprisingly, when it comes to assignments and other things, I do them on time."(P4)*

*"Sometimes, just staying in your room learning skills or reading alone became tiring for me and it occurred to me that unless there's class going on, I'm not learning." (P6)*

*"It's not the most effective for me because our house is located in a noisy and busy place not considering this as a place conducive for learning."(P7)*

*"The scheduled power interruptions are inevitable and may affect my studies because we rely on the internet so much."(P1)*

*"Need to wear a uniform though big universities don't require it. It's too hot especially during afternoon class if you don't have an air-con at home."(P2)*

One of the concerns that was discussed was the fact that the environment in which the participants are immersed has a considerable bearing on the quality of their mental health. Examples of these challenges are the loud noises, issues, and responsibilities associated with the household, the loss of electrical power, and the insufficiency of supplies for the family.

In support of these transcriptions, the most common difficulties associated with online learning were difficulties in integrating diverse learning styles, difficulties in performing responsibilities at home, and inadequate communication from professors or a lack of clear instruction. According to the findings of this study, almost two-thirds of the students who responded had to deal with these difficulties on a constant or frequent basis. It was very typical for students to struggle with their mental health, and there was frequently a lack of physical space that was conducive to learning. On a daily or weekly basis, one student out of every ten struggled to meet necessities such as a lack of access to food, water, medication, and safe environment (Baticulon, 2021) In addition, in nursing education, equal weight is given to theoretical classroom instruction as well as developing skills in a clinical setting. Not only are bedside skills like handling prescriptions, delivering injections, and wound care necessary of nurses, but so-called "soft skills" like therapeutic communication, counseling, and behavioral management are also essential for them to practice their vocation successfully. In this context, pandemic-related restrictions in face-to-face tutor and student interactions, as well as hospital-based patient care options, have brought major obstacles to nursing education. Students have expressed concerns regarding potential disadvantages in their future careers in comparison to other cohorts who have not undergone home-based learning as a direct consequence of the lack of home-based learning opportunities to hone these essential skills (Hu, 2022).

**Theme 6: Financial Factor**

This theme highlights the different financial concerns experienced by nursing students that greatly affect their financial status especially during this Covid-19 pandemic. In Addition, the participants face a variety of concerns over their current financial status as they continue along the course they have chosen as reflected in the clusters of *"unnecessary school fees, increasing laboratory fees, maximizing the value for ,money during expenditures, school requirement fees."* These concerns emerged throughout the duration of their course.

*"The cost of education is still expensive even if we are not in the campus using the school's facilities like libraries, classrooms, and laboratories."(P3)*

*"There is a higher fee when it comes to laboratory fees."(P3)*

*"Ang mahal ng mga iba pang bayarin na sa tingin ko ay hindi naman necessary dahil online class nga ang lahat sa ngayon."(P5)*

*"Bukod sa mga libro na pinapabili sa amin ng school may mga iba pang libro na ginagamit ang mga CI na kung saan nagkakaroon kami ng additional gastos dahil syempre gusto naming mabasa o magkaroon din ng kopya ng ginagamit nila para maintindihan naming ang itinuturo nila sa amin.(P8)*

*"Lack of financial support dahil dati nakakaipon ako sa baon ko ng pambili ng mga gamit para hindi na manghingi sa magulang ko. Bilang online class na ngayon, walang baon 'pag nanghingi ako ng pambili ng kailangan minsan napapagalitan pa dahil dapat daw ay provided na ng school ang mga kailangan naming sa mahal ng tuition fee."(P7)*

As evidence for these transcriptions, The Health Education England website (2020) claims that Students who take advantage of the opportunity to complete an extended placement will be reimbursed at a rate that corresponds to the pay that nursing care assistants get at the facility in which the students are working. To provide the most appropriate level of care for the students, placement will be determined based on the student's home location within facilities that offer both medical and social services. Another advantage is that there will be no need for the student to spend on books for references, advanced readings, or study purposes. This results in significant cost-effectiveness. The students reported that they were concerned about the lack of face-to-face interaction, that they were having a tough time concentrating and understanding their topics online due to limited time and internet access, and that they belonged to low-income and medium-income countries that are unable to fully support that kind of education due to limited resources (Baticulon, 2021). The majority of educational institutions do not have pre-recorded procedures that they can rely on during times of crisis, such as a pandemic. Students must pay a lot of money to gain access to web-based resources, and unfortunately, educational institutions do not have pre-recorded procedures. As a direct consequence of this, educational institutions like universities are compelled to find new approaches to teaching their student bodies. At the

level of the institution, there are sometimes budgetary restrictions, which causes the institution to focus emphasis on other things. Because of the pandemic, it is now much more difficult to overcome these financial constraints. Therefore, the difficulty of attempting to urgently subsidize virtual products to supply the curriculum in developing nations, even at discounted costs, is significantly greater than it would be under normal conditions (Agu, 2021).



Figure 4.1 Summary of Emerged Themes and sub-themes

# DISCUSSIONS

## A. Quantitative Results

The quantitative data can provide information that is objective and can be clearly communicated through statistics and numbers, but it is unable to provide distinctions between individuals, gain in-depth information about a specific topic from the perspective of an individual, or answer questions about the experiences nursing students encountered during the pandemic. It will only serve as a basis for evaluating the true perceptions of nursing students regarding the impact of the pandemic on the nursing profession when it has been correlated with qualitative data that can support the issue. This will be a crucial aspect in assessing the actual challenges, difficulties, and bottlenecks encountered by nursing students during the pandemic, as well as the experiences directly related to those episodes. In addition, this will be a major influence in determining the experiences that were directly related to those occurrences.

In interpreting the results, the values were referred to the standard 4-point Likert scale with its pre-determined range and interpretation: (4) Strongly Agree = 3.41-4.00; (3) Agree = 2.61-3.40; (2) Disagree = 1.81-2.60; and (1) Strongly Disagree = 1.00-1.80. The results were ranked from highest to lowest with its corresponding interpretations: The combined total weighted mean of the participants (n=75) was 3.153. The overall result of the Student-Focused Measures of Learning For Nursing Students In CALABARZON Region During COVID-19 was "*agree*" which clearly answered the fourth research question.

## Qualitative Results

It is a typical practice to use the benefits of one form of data to compensate for the deficiencies of another type of data. When qualitative data are incorporated into the analysis of a study along with quantitative data, the findings drawn from the study are both deeper and enhanced. When using a mixed methodology, the qualitative results can be used as supporting evidence for the quantitative findings, and the mixed methodology can be used to expand upon the quantitative findings in a predefined sequence. Both of these possibilities are available when utilizing a mixed methodology.

The qualitative material particularly the issues, problems, challenges, and relevant experiences from the first round was analyzed for themes. Braun and Clarke, as cited by Calayag (2018) provided two primary ways in thematic analysis: either inductive /bottom-up way or theoretical/deductive, also called top-down way. The researcher utilized the theoretical/deductive approach in this study. The deductive approach to qualitative data analysis involves analyzing data based on a structure pre-determined by the researcher. In this case, the researcher could use the research questions as a guide for grouping and analyzing the data. This was a quick and easy approach to qualitative data analysis and can be used when the researcher has an idea of likely responses from the sample population. Upon the thematic analysis of the 300 responses, a total of 6 themes emerged.

The categorized themes were presented in Table 4.16.. Coding was used to identify possible themes. Deductive research approach explores a known theory or phenomenon and tests if that theory is valid on a given circumstances (Gulati, 2009). It has been noted that "the deductive approach follows the path of logic most closely. The reasoning starts with a theory and leads to a new hypothesis. This hypothesis is put to the test by confronting it with observations that either lead to a confirmation or a rejection of the hypothesis. Moreover, deductive reasoning can be explained as reasoning from the general to the specific. In other words, deductive approach involves formulation of hypotheses and their subjection to testing during the research process (Gulati, 2009).

**Mixed Methods Analysis**

In order to provide answers to the questions posed by the research, mixed methodologies research incorporates quantitative and qualitative components. Mixed methods research can provide a more complete depiction than quantitative or qualitative study alone. This is owing to the fact that mixed methods research combines the advantages of quantitative and qualitative research. If the process of doing the study reveals that quantitative data or qualitative data alone are insufficient to answer the research question, mixed methods research may be the best option for the researcher or the interested party.

According to the research that Colaizzi (1978) did on the data, there were five (6) primary themes that emerged from the participants' tales. The following themes were identified as reflecting the viewpoints of the participants with regard to Student-Focused Measures of Learning for Nursing Students in the CALABARZON Region During COVID-19 in the future: (1) The Clinical Exposure and Related Learning Experiences of Nursing Students; (2) Students' Motivation and Attitude Towards Learning; (3) Equipment and Tools; (4) Scheduling and Time Management; (5) The Environment; and (6) Financial Factor. When it comes to dealing with student self-efficacy measures during a pandemic, these characteristics will serve as the cornerstone for building a framework or model that will test the various abilities of the nursing students. This will be accomplished by putting the students through a series of scenarios that simulate real-world scenarios. It has been proven that a survey instrument that is both valid and reliable has been constructed in order to assess the self-efficacy of nursing students. The purpose of this test was to determine whether or not nursing students felt confident in their abilities. This tool has the potential to serve as the foundation for the discovery of ways and means, such as the establishment of methodical and rigorous action plans, to address the aspects that were shown to be adversely affected throughout the course of this study. Specifically, this study found that certain aspects were negatively affected. When it is put through its paces, as a consequence, this questionnaire is capable of serving either diagnostic or interventional functions, depending on the context.

Quantitative and qualitative aspects are both included in research conducted using mixed approaches. Research that employs mixed methodologies can give a more comprehensive picture than either quantitative or qualitative investigation on its own could.



Proposed Model for the Nursing Students

The Samutres' Model

**Phase 1**

**Alumni Sponsorship**

Campus organizations that have been officially recognized and are working toward the goal of advancing the ideals of the Student Alumni Association on campus by means of the organization of events or participation in initiatives are eligible to receive financial assistance through the Alumni Sponsorship program. This assistance can take the form of either a one-time grant or an ongoing subsidy that can be used over the course of the program's duration. Alumni who are interested in arranging events or activities and education sponsors who want to promote alumni participation by developing links between alumni and students are eligible to apply for these opportunities.

**Non-Government Organization (NGO) Partnership**

Educational sponsorship is the practice that takes place when a company engages in the activity of educational sponsorship by investing in educational programs. That is, ensuring that illiteracy is eliminated while also ensuring that everyone has access to opportunities that are of a higher quality. These aims can be realized by a firm in a variety of ways, such as through the provision of cash and in-kind contributions (such as equipment and money), educational grants, and so on. The major goal is to increase the scope of educational options and to inspire more people to take advantage of them.

Educational programs often consist of a variety of various kinds of activities that cover a wide range of subject areas. For instance, numerous non-governmental organizations all over the world are willing to pay the tuition expenses of students who are studying in their professions. These organizations are in a variety of countries. On the other hand, a wide variety of local and international organizations offer support to private colleges in their efforts to improve their relationships with the communities in which they are located. This assistance might be provided in the form of monetary funding, the donation of expensive equipment, or even the development of vital infrastructure such as classrooms and buildings.

Nevertheless, the sponsorship of students through the establishment of a foundation is by far the most common approach taken by non-governmental organizations. Students who can demonstrate both superior academic performance and a significant financial need are frequently eligible to receive direct financial assistance in the form of scholarships from the latter. Students must maintain a specific general weighted average throughout the whole of the course and must not receive any failing grades to be eligible for the partial or full scholarship program. In addition, students must not receive any failing grades.

**Curriculum Enhancement**

Bringing about constructive changes in the educational system can be accomplished through a process known as curriculum development, which is characterized as a process that is deliberate, purposeful, gradual, and methodical. When there are shifts or advances in the world, there are repercussions for the educational programs that are in place. They need to be modernized so that they can fulfill the requirements of modern society. It is the decision made collectively by teachers regarding the goal, content, organization, and format of the curriculum to ensure that it meets the requirements of the students. It is supportive of the decisions that instructors make, which strengthens their commitment to the implementation of the curriculum. It is not just about the institution of education, its students, or its staff members, so it covers a wide range of topics. In a broader sense, it is also about the growth of a society over time.

In today's knowledge-based economy, the creation of educational curricula is an extremely crucial factor in the overall growth of a nation's economy. In addition to this, it offers responses or solutions to the most serious conditions and challenges that the world is currently facing, such as those pertaining to the environment, politics, socioeconomics, and other concerns concerning poverty, climate change, and sustainable development.

To build a civilization, there needs to be a series of linked developmental processes. First, the educational curriculum, particularly in higher education, needs to be revised to protect the nation's sense of national identity and to assure the continued expansion and stability of the country's economy.

Many students, including those from other nations, may choose to enroll in a university's programs if those programs offer innovative instruction that is also in high demand on the regional, national, or international job market. The universities' bottom lines would benefit from an increase in the number of students enrolled in their programs. Because of this, if the income is substantial, it might be put into the advancement, scholarship, and remuneration of teachers. Additionally, it can be utilized in the support of research and development activities, as well as in the construction of educational institutions, libraries, and research labs.

**Nursing Professors and Clinical instructors' Qualification**

The education system cannot function properly without professionally trained and educated faculty members. Face-to-face contacts with pupils are one of those things that technology will never be able to take the place of, even though we live in an era in which technology has taken over most of the areas of our lives. The following are some of the reasons why highly qualified educators are essential in the classroom: Students can increase their intelligence by using the many strategies that professors and clinical instructors teach them. These strategies will help students better absorb the material and quickly apply what they have learned. They are highly qualified educators who can manage nursing students and present information in a way that is engaging and enjoyable for the students. In addition to the references that nursing students already possess, their professors and clinical instructors give them with a variety of additional resources they can use to deepen their knowledge in the field. They are also able to engage with nursing students on a personal level, which allows them to anticipate how nursing students will learn at their highest potential. In addition, these professors and clinical instructors can advise students in a variety of disciplines because they have obtained a broad education, which is necessary for them. Nursing students get the ability to become self-assured in their performance of their tasks and obligations as nursing students when they have access to professors and clinical instructors who are highly qualified. In addition to these requirements, a highly qualified professor and clinical instructor must also obtain the following credentials and accomplishments for the record: earn a bachelor's degree, become a licensed professional, demonstrate knowledge in subject areas, maintain a teaching license, and earn a master's and/or Doctorate Degree.

**Phase 2**

**Procurement of Equipment, Tools, etc.**

If new equipment and facilities are purchased, as well as upgrades made to existing ones, it will be much better for educators, clinical instructors, and nursing students to fulfill the requirements of the educational system, which is especially important considering the current pandemic. Having equipment that is new and up to date results in increased uptime, more working hours for the equipment, fewer repair costs, and consequently increased teaching-learning input among the professors, clinical instructors, and nursing students. In addition, having equipment that is new and up to date reduces the

likelihood of malfunctions, which in turn reduces the likelihood of downtime. The equipment is quick to operate, has a lesser chance of breaking down, and functions effectively. It also has a lower risk of breaking down.

**Scholarship**

A scholarship, which is the same thing as a grant, may be given to a student in order to provide financial assistance to that student so that the student can continue their education. This assistance will allow the student to continue their study. Scholarships are granted according to a wide range of criteria, the majority of which are intended to symbolize the goals and objectives of the person who initially established the award or granted the scholarship. It is often awarded to nursing students who are capable, have the potential to maintain grades that are significantly higher than average, and who are responsible enough to finish on time. Other requirements typically include:

**Financial Assistance**

Students and their families can reap the benefits of the assistance made available by college financial aid programs because these programs cover the expenses associated with obtaining a higher education. These expenses include not only tuition and fees but also room and board, books and supplies, and transportation. When applying for financial aid, a student is required to respond to a series of questions that are intended to assess the student's capacity to pay for college on their own. This information is then included in the application. After that, a determination is made regarding the students' eligibility for financial assistance based on the application, and students are given the option to either accept or reject the assistance that is offered to them. The type of help that was provided has a direct bearing on whether or not a payback is required to be made. It is likely that students will be required to submit further applications for them to be evaluated for additional scholarships or private assistance. If this occurs, students will be able to receive private assistance or scholarships. Students who participated in the assistance program are given the chance to work for the university in an administrative role after they have completed their degrees in higher education. This opportunity is available to students who took advantage of the program.

**Improvement of Facilities**

The physical environment of a school has a significant impact, not only on the teaching and learning experiences of its faculty but also on those of its students. The conveniences provided by a school have an influence not only on the institution's capacity to recruit and retain qualified faculty members but also on the amount of commitment and effort put forth by those individuals. Amenities at schools have an effect not just on pupils' physical well-being but also on their demeanor, the extent to which they take part in their own education, and their overall academic progress and success. As a result of this, academics typically arrive at the conclusion that it is extremely difficult to serve a large number of children with complex needs when there are not adequate facilities and resources. This is because it is difficult enough to serve a large number of children with complex needs.

**Phase 3**

**Sustainability of the Program**

Encourages faculty members, clinical instructors, nursing students, and all other members of the school's or university's staff to think and conduct in a positive manner about the future of the institution. It gives each person the ability to comprehend the effects that their own actions have on the world, and it inspires people to make choices that are responsible for the acts they choose. The upholding as well as the continued implementation of the plans that were made to achieve the highest form of education delivery and to keep a high caliber of students who successfully graduate each year. the goals of these plans are to:

**Strict Supervision**

Having strong oversight toward the effectiveness of the plans that have been implemented helps anchor the core of instruction during periods of sudden twists and turns of scenario, such as what is happening during the pandemic. The provision of opportunity is essential to the successful mentoring that can be accomplished through educational supervision. Those who oversee supervising education are the ones who are accountable for ensuring that important levels of advising and help are maintained for pupils throughout the numerous lessons. Participants in the training program should make the most of this assistance by getting their questions answered, having conversations about themes that are pertinent to their futures, and receiving direction for their academic and professional trajectories.

**Follow up of the Implementation of the Program**

This will provide information that is current regarding the programs that are now being conducted in their entirety in their entirety in their entirety in their entirety in their entirety. Depending on the series of programs that have been mapped for a certain emphasis and goal, this will also show to what step or level the program is on, and it will determine how far along the series the program is. Because of this, it will be possible to tell how far ahead in the series the program now is. Additionally, this will serve to improve the experience of the institution, and if this is done, a problem may be solved before it even becomes an issue. If this is done, a problem may be remedied before it even becomes an issue. If this is done, there is a chance that a problem can be solved before it even becomes a problem.

**Post Evaluation**

This will be used to determine the standard once all the action steps that were executed have been completed. This will determine whether the actions that were done were successful, as well as whether the programs were correctly implemented and in line with the activities that were planned to achieve the goals and objectives of that program. The institution will also be able to determine, with the help of post-evaluation, whether certain aspects of the

plan require being updated or reworked to produce a more successful strategy that will assist the institution in preventing wasteful expenditures in the future. This information will be provided to the institution by the post-evaluation.

## Conclusions

Based on the above findings and results of analysis, the following conclusions are derived therein:

1.During their education, nursing students engage in a variety of instructional strategies, which determines how well they can demonstrate their proficiency in the competencies.

2. The nursing students believed that they were exceptionally successful learners and that they had demonstrated skill in the kinesthetic, aural, reading and writing, and visual modes of information intake.

3. At COVID-19, the most prevalent difficulty that nursing students faced was a lack of access to the Internet since all the lectures and other school activities were delivered via online portals and applications rather than in person.

4. Values acquisition and development were the best features and characters gained and nurtured by nursing students as they learn more about the nursing profession. Nursing student's creativity, resourcefulness, resiliency, flexibility, innovativeness, confidence, self-love, patience, compassion is very significant during the Covid 19 pandemic.

## Recommendations

Based on the findings of the study, the following are recommended:

**Nursing Students:**

- Enhancing both their abilities and their knowledge by participating in webinars and online trainings, as well as, by witnessing documented nursing processes obtained from reliable and factual materials that are available on a wide variety of educational and instructional websites and references.

- Despite the pandemic condition and limited access to a wider learning, demonstrating a passion in learning and an eagerness to do so by being prepared, developing a cheerful outlook about studying and increasing one's level of motivation by cultivating strong lines of communication with fellow students, teachers, and clinical instructors.

- In this high-tech era, maximizing the use of cellphones, tablets, and computers to download many applications that can greatly assist students in complying with and completing coursework.

- Making weekly plan of activities can be helpful for time management and figuring out which responsibilities and documents should be finished in the order in which they are listed

- Determining a spot and location in one's home conducive to learning, a study space that is favorable to online courses and skills practice. This could be beneficial in terms of the setting.

**Nursing Educators:**

- Having a better understanding of the processes and skills necessary to fill the voids left by the epidemic facilitated by enhancing educational materials and converting nursing files to digital forms that can be accessed through an interface designed specifically for students in educational institutions.

**Nursing schools, services, associations, and evaluators:**

- Obtaining learning aids and equipment based on requirements rather than preferences given the present trend and prevalence of delivering education to all students online.

**Nursing Research**

- Use other variables to assess the effectiveness of other teaching strategies to self-efficacy of the students

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