
Original Research

Alternative Learning Modalities (ALM) in Technology-Based Environment: A Phenomenological Study on Students' Pedagogical Experiences Amidst the Pandemic

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ABSTRACT

The impacts of the COVID-19 pandemic have afflicted various industries, and one of them is the educational sector wherein learning modalities have switched to online. This, in particular, has affected the clinical internship of Medical Technology students to be postponed for their safety. This study was conducted to evaluate the effectiveness of the Alternative Learning Modalities (ALM) by contextualizing the experiences of twelve medical technology interns through a semi-structured interview. The interview questions assessed the advantages, challenges encountered, the soft skills developed, and the impacts of ALM on the learning outcomes of the respondents' clinical internship. The interview was executed via an online video conference – Google Meet wherein each response is accurately recorded. The collected data were analyzed through a thematic analysis into seven categories that aid in themes to be produced. The findings of this study highlighted the utilization of alternative learning modalities (ALM) in the clinical internship of 4th year medical technology students. An advantage in the utilization of ALM is its innovativeness in having easy access to their learning materials at any given time and the useful features of the virtual laboratory simulation that aid in their theoretical understanding of the clinical procedures. However, students had challenges regarding their internet connection and ALM were limited in terms of supplemental knowledge of laboratory procedures as it is only theoretical. Aside from the challenges, students have stated that they developed their own coping mechanisms to adapt to the change in environment therefore, the implications drawn in this study would significantly augment the body of knowledge in Medical Technology notably in the internship program of students and will be beneficial to the whole educational administration and to learning curriculum developers.

Keywords: Covid 19, Health sciences, Medical technology, Pandemic, Professional development

INTRODUCTION

As the coronavirus continues to spread and persists with its threat, various aspects of people's life experience the serious impact it has. Part of the severely affected sector is the educational institution

(Hodges et al., 2020). These lead to making the schools and higher educational institutions to be closed and revoking all face-to-face classes as part of the preventive measures (Toquero, 2020). As a result, the transition from traditional education to distance learning has opened various challenges for both the

students and the instructors (Crawford et al., 2020). Furthermore, clinical internships were also compromised because of the high risk of coronavirus in the hospitals, thus, cannot be continued in the hospital setting. These challenges could be surmounted by developing a curriculum that adapts to the present need.

Moreover, new instructional methods/alternative learning modalities could be utilized or called the alternative learning modalities that would help the students still and flourish their skills despite being in a pandemic (Toquero, 2020). For this reason, alternative learning modalities have drawn attention in many universities and colleges. Such as recorded video lecture-discussion, problem-based activities, reflection, reporting, and virtual simulation especially, with the science field having laboratory exercises. Thus, this new way depicts the new normal of teaching and the ability to learn from the students. More so, no one is exempt in this kind of teaching-learning method, for it is the way to cope up with the comprehension and intelligence of the students to aim that no student should be left behind even though face-to-face classes are not yet allowed.

In the Philippines, the Department of Education employed one of the two distance learning modalities commonly used in this time of pandemic in which modular learning and the other one being implemented is called online learning (Rotas, 2020). Thus, for courses that require a clinical internship as their requirements and as a practice exercise to hone the skills of the students, virtual simulations are presented. The most used virtual laboratory simulation is the "Labster." In HEIs or Higher Education Institutions that are handled by the

Commission on Higher Education, implementation of distance learning and other alternative modes of delivery are being utilized depending on the institution (CHED, 2020). Thus, alternative learning modalities are presented and utilized to continue gaining knowledge and experience of the students, specifically the student interns.

It is, in some way, challenging for the students to be more bound in the book, especially courses that require skills. For this reason, internships paved the way for the students to retain their knowledge and be able to efficiently apply what the students had learned from laboratory exercises in real work. Thus, through the internship, students can hone their skills and be effective and competitive when sending to their preferred line of work. The internship program is viewed as favorable to student assistants since it offers 3 the occasion to have a real active encounter of the speculations learned inside the four corners of the homeroom (Nicolaidis, 2014; 2015).

The Medical Laboratory Science (MLS) program is one of the wellbeing science programs in the Philippines offered in different advanced education foundations. It is a program that plans to create equipped clinical lab researchers and satisfy the needs for able labor in the medical care administration to utilize profoundly imaginative advances (CMO no. 14, 2006). The chance to learn, especially in a face-to-face scenario, is more prominent when presented to various clinics due to the various strategies and approaches that the clinical innovation staff use in the everyday exercises and circumstances they face in the clinics they work.

The relationship between Medical Technology internship or other allied health courses

and alternate learning modalities are essential as the latter provides interesting ways to keep the training of the interns intact even without being in the workplace, which proves how technology can be innovative when it comes to producing potential employees and as a result, further improving the healthcare economy of a country.

Notable evaluations and testing are signifying the use of virtual laboratory simulation among several academic institutions. This encompasses the adaptation and application in technology and life sciences education. However, there are no studies focused on using alternative learning modalities specifically, the Labster, in exchange for 4 clinical internships. For this reason, this study focuses on the qualitative evaluation of the effectiveness of alternative learning modalities performed on intern medical technology students in Emilio Aguinaldo College by assessing the advantages and challenges, the soft skills developed by the 4th year medical technology students through and the effectivity of the intended learning outcomes for clinical internship.

METHODOLOGY

The study employed a qualitative research design to contextualize the experiences of the 4th year medical technology students at Emilio Aguinaldo College during their clinical internship in the time of pandemic. The evaluation is based on the ALM implemented and used in the said institution during the time of the pandemic. For this reason, this research method utilizes stated variables and uses thematic analysis that is useful to analyze the non-numerical data in this research study.

Data Gathering Procedure

With the help of online platforms such as google meet, the responses of the selected participants were collected during an interview session about the qualitative evaluation of the usage of ALM in the Emilio Aguinaldo College. Semi-structured questions were utilized to conduct interview sessions among the respondents. In selecting the respondents, purposive sampling was used. Hence, they were screened according to the following criteria: (1) must be enrolled in the school year 2019-2021, (2) must be 4th -year students at Emilio Aguinaldo College (3) must be under the alternative online learning modalities approach in the entire semester.

Research Instrument

The first part of the interview had two main questions and three follow-up questions to be able to address it. It was mainly about the advantages and challenges encountered by the respondents. The second research question is about the soft skills developed by the students. Lastly, the third research question was about the impacts of the alternative learning modalities (online virtual laboratory simulation, supplementary instruction methods, and bright space) in terms of addressing the learning outcomes intended for the clinical internship, and a total of two (one primary and one follow-up) questions were asked that help to answer the third question.

Data Analysis

The study used thematic analysis in order to identify themes and to be able to structure the analysis in the most cohesive way possible. open coding procedures in the research study. Then based on the statements gathered in the semi-structured

interview, codes, categories and main themes were done independently.

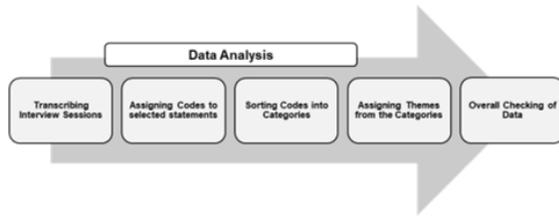


Figure 3. Data Analysis of the study

Ethical Considerations

Since all participants have moral and legal rights, ethical considerations are required for research studies. The researchers made sure they interacted with the participants in such a way that they did not breach their privacy without their consent and that all information acquired from them was acknowledged and appropriately represented for this study. For ethical consideration, the study's specifics and details were communicated to all participants. The study's

participation was entirely voluntary, and students were free to leave at any time. The participants' anonymity was ensured, and the research data was only available to researchers. Nonetheless, the Ethical Committee of the School of Medical Technology, Radiologic Technology and Pharmacy in Emilio Aguinaldo College Manila duly approved this research study on the 22nd day of February. (research/study review code 007-2021).

RESULTS AND DISCUSSION

Demographics of the Respondents

Semi-structured interviews were conducted among the 12 respondents selected by the researchers. In determining the respondents, the researchers have an inclusion criterion indicated in the research methodology chapter of this study. In the table below, it presents the total number of respondents as well as their age and phase of the clinical internship they are currently under

Table 1. Demographics of the respondents according to their gender and clinical internship phase.

RESPONDENTS	GENDER	CLINICAL INTERNSHIP PHASE
R1	Female	Clinical Internship 1
R2	Male	Clinical Internship 1
R3	Female	Clinical Internship 1
R4	Female	Clinical Internship 1
R5	Female	Clinical Internship 1
R6	Male	Clinical Internship 2
R7	Female	Clinical Internship 2
R8	Female	Clinical Internship 2
R9	Female	Clinical Internship 2
R10	Female	Clinical Internship 2
R11	Female	Clinical Internship 2
R12	Female	Clinical Internship 2

In this table, among the 12 respondents, 2 of them were male, and ten were female; thus, the

approach for both genders did not vary, and that the researchers maintained the same approach for the

overall interview sessions conducted. More so, the respondents only vary based on the phase of clinical internship where they utilized various alternative learning modalities. As shown in the table, seven of the respondents utilized the alternative learning modalities in their clinical internship 2, and the remaining five respondents utilized the alternative learning modalities in their clinical internship 1

Research Findings

The final data of this study consists of 7 themes that emerged from the collated narratives of the 12 respondents. Each of these themes was under a research objective determined in each research question.

In the first research question, there are three themes under the advantages and one theme under challenges. In the second research question, the research objective identified was to describe the soft skills developed by the 4th year medical technology students through the use of ALM, and only one theme emerged from this objective. In the third research question, two research objectives were identified: to classify the positive and negative impact of the alternative learning modalities in terms of addressing the learning outcomes intended for the clinical internship. A total of two themes were under the positive impact and only one theme for the negative impact. An additional theme emerged outside the research objectives: the coping strategies formed by the 4th year medical technology students in a clinical internship while utilizing alternative learning modalities.

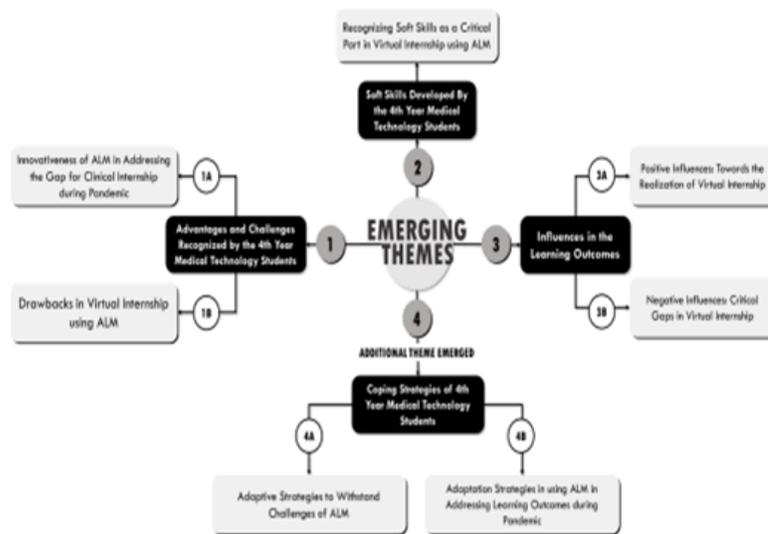


Figure 4. A diagram of the summary of themes that emerged from the thematic analysis

Each of the themes introduced above will be thoroughly discussed throughout this chapter, including the categories, codes, and directly quoted

statements of the respondents under each theme to support further how the themes were developed. In Figure 4, it shows a diagram that depicts how the

themes have emerged from the thematic analysis were done from the statements of the respondents during the google meet semi-structured interview.

Advantages Recognized by the 4th Year Medical Technology Students on the Alternative Learning Modalities

In response to the research question of this study, various information and statements from the respondents were gathered regarding the recognized advantages of alternative learning modalities during the pandemic. Thus, based on the extracted answers that were subjected to thematic analysis, one main theme emerged regarding their experiences using alternative learning modalities, demonstrating that utilizing alternative learning modalities do have an advantage in terms of its innovativeness in addressing the gap for clinical internship which was directly linked to the research question of this study about the recognized advantage of ALM during the pandemic. While each person's experience differs, the main theme emerging in the thematic analysis was treated significantly as an advantage of alternative learning modalities. The main theme is discussed in depth in the sections that follow.

From the responses and statements of our respondents, the researchers have emerged with one main theme. Under this main theme, "Innovativeness of ALM in addressing the gap for clinical internship during pandemic," there are eleven categories. The first category about the "benefits of using alternative learning modalities during pandemic" consisted of 2 codes and was mentioned four times by the respondents. Then for the second category that describes the "positive experiences in using alternative learning modalities" consists of 21 codes.

The third category about "the wide range of ideas while using alternative learning modalities" consists of 1 code. The next category, "Skills development while using ALM," consists of 1 code. The following category talks about the "perceived benefit of specific ALM" composed of 6 codes, then "development of clinical knowledge while using ALM" consists of 2 codes. There are 2 categories that talk about the book-based learning, and the assisted learning in ALM. Under these categories three codes were identified. Then the last three categories that have emerged, including adaptation by self-improvement, improved attitude, and the acquired productivity of students have a total of four codes.

Innovativeness of ALM in Addressing the Gap for Clinical Internship during Pandemic

When asked about the recognized advantages of alternative learning modalities, three of the respondents answered that using ALM's innovativeness helped them address the gap for the clinical internship during the pandemic. The statements below show the advantages and the perceived benefits of alternative learning modalities by being convenient, flexible, and help in familiarization of procedure during their clinical internship.

"Nakatulong sya in a way na convenient sya kasi online, syempre kapag online nasa iyo lahat ng mga resources ganyan. Mas nakakapag aral ka pa din kasi hawak mo yung oras mo and mas nakakaretain sya lalo na helpful yung informations na lumalabas sa Labster, kasi yung Labster though may lack sya na sa physical practice meron pa rin syang retain of informations gawa ng sa internship" (R1)

(It helped in a way that it is convenient because it is online, and you have all the resources needed. You can study more because you handle your own time, and it enables retention more because the information that are given in Labster are

helpful. Although Labster lacks physical practice—it still helps in information retention because of the internship)

“Yung advantages niya lang yung procedure. Mafamiliarized ka sa procedure” (R2)

(The only advantages are the procedure which will help you familiarize)

According to the respondents' statements, the first recognized advantage of using alternative learning modalities is that there is innovativeness in using ALM, which aided them in addressing the clinical internship gap during the pandemic. Furthermore, they also believe that using ALM is convenient and advantageous because it allows them to be self-reliant and to be able to learn at their own pace and flexibly.

This statement is supported by the findings of Cooper and Higgins (2015) on alternative learning modes such as distance learning. It is stated that there are benefits to using ALM in students' learning, such as flexibility and the ability to learn autonomously. These instructional videos or ALM may also aid in the acquisition of cognitive, affective, and psychomotor skills if they are constantly cast at their own pace.

Furthermore, flexibility in students' learning while using ALM is also supported in the study of Jang and Kim (2014) on e-learning. It is stated in the study that the various platforms encourage students' flexibility in learning by constructing a logical learning

environment in their phase at their own time, particularly when students are not in the classroom, implying that there is continuous learning.

Irwanto (2018) also stated in his study that virtual laboratories offer accessibility and flexibility when performing research. It aids in the completion of tasks even in a lesser time, making it more adequate than traditional learning. It also encompasses a conclusive effect on student's learning. Through this, students are capable of developing their problem solving and critical thinking skills, ingenuity, understanding conceptually, skills in grasping scientific process, laboratory skills, motivation, interests, and perceptions. In the course of time, they could enhance their learning outcomes that can be applied to the school curriculum. It can be accomplished anywhere and anytime.

One of the respondents also shares a positive experience while using an alternative learning modality wherein an improvement in technological aspects and a perceived wide range of ideas in using ALM are central to her answer on the innovativeness of alternative learning modalities.

“Hindi lang sya in Philippine setting, so yung mga methods dun maaaring wala dito sa Philippines pero makikita at maeexperience mo virtually nga lang. Pero nandun yung idea na yung iba na wala sa laboratory lalo na sa mga hospitals na pinagdadalan satin makikita natin dun so iyun yung parang pinaka benefit na naexperience yung Labster. Lalo ngayon yung mga advancements ng technology sa laboratory makikita mo dun, hindi lang yung pinaka common like sa Hema yung mga CBC yung sa CC, hindi lang yung pinakacommon na ginagawa yung makikita mo sa mismong Labster merong mas advance. And sa bawat methodologies na ginagawa mo sa Labster,

nandun yung evaluation, nandun yung parang meron ka ring staff na mag iinterpret na kung anong ginagawa mo, kung ano yung principle

ng ganitong machine, kung para saan yung ganito, meron kang patient na nakikita, parang ganun. So hindi malayo na parang meron ka pa ring experience, yung wala lang talaga yung physically yung nasa lab ka na nahahawakan mo pero nakikita mo.” (R3)

(For me, Labster is beneficial in terms of focusing on the different methods that are not only seen in the Philippine setting. So there are different methods that are not available here in the Philippines but you can experience it virtually through labster. You can experience the advancements in technology in the laboratory through Labster as well as those uncommon and advanced procedures in the laboratory. In every method you used in the Labster, there is an evaluation, an online like staff wherein it will interpret the things you did and explain the principle behind every machine. In Labster you also have a patient to attend to, like in the normal setup. So the experiences in the Labster is not far from the usual setup. The only difference is that you are not there physically in the laboratory, and you cannot touch the things but only view them virtually.)

Some participants went into greater detail about the innovative quality features of alternative learning that filled the clinical internship gap during the pandemic. For example, one respondent stated that one good quality feature of ALM is that it aids in knowledge retention.

“So para maretain yung knowledge mo, yung notes na ginawa mo iyun yung makakasagot sa mga tanong sa Labster, makakahelp sayo magretain” (R1)

(For you to retain your knowledge, the notes that you've made, it can answer the questions in Labster. In this, it will help you in retaining.)

Another respondent also shared his positive experience of an innovative feature of alternative learning modalities that aided him during his clinical internship. He emphasized the importance of studying broader topics while using ALM in order to fill the clinical internship gap during a pandemic. Siguro kasi, ang nangyari kasi kailangan namin aralin lahat ng section ng laboratory, required kami intindihin lahat ng sections, hindi lang yung sections na gusto namin. Iyun yung pinaka advantages. (R6)

(The advantages of using ALM, I think, is that we need to study all sections of the laboratory, it is a requirement for us to know and understand all sections and not only those sections we want.)

In the study of Hofstein (2003) and Pellegrino (2012), it is stated that the use of ALM in terms of virtual laboratory simulation allows students to achieve a deeper understanding of the content. As a result, it promotes effective learning among students, particularly those in scientific subjects. In a study similar to Hofstein and Pellegrino, Polly, Marcus, Maguire, Belinson, and Velan (2015) found that the virtual laboratory is at least as effective for students as learning in a real laboratory, particularly in terms of application and methodology.

Under the innovativeness of using ALM in addressing the gap for the clinical internship during the pandemic, another advantage based on the statements and experiences of the respondents is that it utilizes the use of technology-based learning environments in medical technology in their clinical internship. Three of the respondents talked about the

utilization of technology-based learning by sharing the perceived benefit of a specific feature of the ALM they used during their clinical internship during the pandemic.

“Actually meron naman, siguro ibat iba kasi sya e. para ka kasing naglalaro ng SIMS or evaluator. Parang kinokontrol mo lang sya, parang ikaw yung character mo na yun, natututo ka lang din sa part na, yung mga questions kasi sa Labster naka rely sayo kapag mali yung sagot mo, mali yung magagawa mo sa pasyente mo. Iyun din siguro yung isa sa maganda dun, at least tinatama ka ng Labster kung ano yung sagot na tama, iyun din ang magagawa mong tama sa patient mo. Parang, you're saving your patient, inaalam mo yung mga signs and symptoms, maganda din nun, iniisip mo ano kayang sakit neto, syempre MedTech tayo dapat alam natin yung mga signs and symptoms.” (R1)

(Actually, there is. You're like playing SIMS or an evaluator. Like you're controlling it, and you are that character. That's how you learn. There are also questions in Labster that will rely on you because if your answer is wrong, then it will reflect on your patient. I think that is one good thing, at least the Labster will correct your wrong answer. It is like you're saving your patient, knowing their signs and symptoms, and you'll think of what disease it is causing.)

“I think, yung knowledge na nakukuha ko rito is yung ano ineexplain niya lang kung ano yung process. So habang ginagawa yung laboratory activity may ineexplain yung robot na iyon. Sa actual internship, gagawin mo lang yung step, staining ganyan, dito (Sa labster) habang ginagawa ko yung staining, yung robot nag eexplain.” (R2)

(I think the knowledge that is collected here is that the processes are explained. So while the laboratory activity is being performed, the robot gives explanations. In the actual internship, you'll just do the step, staining like that, here (in Labster) while I'm doing the activity, the robot is explaining)

“Interesting din kasi parang may mga bagong learnings na nababasa ka online yung nga lang di mo sya maapply as of the moment kasi parang puro more on search ka lang.” (R13)

(I think it is also interesting because there are new learnings you read online but still as of the moment you cannot apply it)

According to the respondents' statement, it would be beneficial to them to use alternative learning methods such as virtual laboratories. This statement was supported and emphasized in the study of de Vries and May (2019), entitled "Virtual Laboratory Simulation in the Education of Laboratory Technicians – Motivation and Study Intensity," wherein it is stated that the usage of virtual laboratory simulation has a considerable effect to help the laboratory technician students to connect theory with practice. For example, using virtual laboratory simulation, students can visualize molecular processes as well as the practical laboratory procedures, which encompass the instrument techniques that will be useful in the application in the actual laboratory.

One respondent in particular captivated our interest by stating that the advantage of ALM for him is that it addresses the learning outcomes of students and establishes the foundation of the students by reducing the students' adjustment time.

“With the ALM program kasi diba parang eto yung parang nangyayari na si student, eto na yung internship ni student. Kung бага si ALM sya na yung nagaaid sa learning ng student na kapag after netong pandemic na ito kasi syempre hindi naman makapag work ngayon and hindi din naman kayo makapag intern, atleast naaano nya na yung foundation ng mga students lalo na yung mga hindi pa nakapag intern so that kapag dumating na yung time na pwede na mag intern or pwede ng magwork, kung бага meron na silang foundation and hindi na sila ganun mag adjust unlike us na dumiretso ng internship na parang culture shock ganun. At least dito meron na kami, sila na initial na knowledge.” (R6)

(It serves as a student internship with the ALM. It aids students' learning during the pandemic. In addition, it serves as a foundation for students, particularly those who were unable to complete their clinical internship in a hospital setting. If they are given a chance to perform in a clinical setting, they will have the necessary knowledge and foundation to avoid being surprised. As a result, we have our foundational knowledge.)

The given statement is supported by the findings of Irwato (2018), wherein using ALM such as virtual laboratories efficiently achieve learning outcomes. Additionally, it further revamps the quality of teaching and the learning outcomes of the students. In the study of Hofstein (2003), it is also stated that the alternative learning modalities, specifically the virtual laboratory simulation, present a new way of learning and preparing students for hands-on exercises, specifically laboratory work.

In addition to the innovativeness of alternative learning modalities, another advantage of

alternative learning modalities identified based on statements provided by the participants is the enhancement of their knowledge and certain skills that helped them become familiar with laboratory procedures by using ALM. When asked about if her skills were enhanced while using ALM, this respondent shared her experience on one of the good quality features of ALM.

“Oo naman, naenhance naman yung skills namin kasi meron kaming mga bagay bagay na hindi alam sa laboratory na natutunan din naming dun kasi for example, nung nag actual internship ako, sa blood bank, for example, hindi ka nila pahahawakin ng crossmatching ever, kasi syempre intern ka at sa bloodbank buhay na nakasalalay. Sa Labster kasi kahit magkamali ka wala ka naman mapapatay. Ayun matututo ka talaga, maeexperiene mo. Kahit magkamali ka pwede mong ulitin”

(of course, yes, it enhanced our skills because there are certain things that we do not know in the laboratory but have learned there [labster]. For example, when I was having an actual internship, in the blood bank section for example, they will not let you do the crossmatching ever, because of course I'm only an intern, and there [blood bank section] it is very vital because there is life at stake. So, in the lobster, even though you made a mistake, you cannot really kill someone. So there, you will learn because you will experience it. Even though you make mistakes, you can just do it again [activity].)

The emphasis of this advantage is consistent with what is in the literature regarding studies related to alternative learning modalities, wherein the results of the study of Makransky et al. (2016) show that redesigning medical education curricula with

simulations is therefore effective. In addition, students valued participating within the virtual laboratory context with case stories that resemble a doctor's actual medical work and further enhance their knowledge, enthusiasm, and self-efficacy.

Respondent 10 also shared her experience with ALM's innovative feature, in which ALM helped them to focus on book-based learning.

“Kasi pag nag iinternship ka di mo naapply yung tunay na nakalagay sa book yung naapply mo sa pag iintern is kung ano lang yung nasa hospital, depende sa hospital na mapasukan mo. Bali mas nagiging more on book based.” (R10)

(It is more book-based because during the internship, you will not be able to apply all of the lessons from the book, but you will be able to apply the activities and learning that are already present in the hospital, which will vary depending on the hospital to which you will be assigned.)

Furthermore, respondents also emphasized the innovative feature of ALM that focuses on the assisted learning feature of these alternative learning modalities. When asked about a feature of ALM that helped in addressing the gap for the clinical internship, the respondent explained this specific feature of ALM.

“frequently nagtatanong yung labster na parang nag ququiz ka na rin nun haban nag lalabster ka e kaya kailangan mo talagang basahin talaga yung mga nakalagay dun. Ang maganda kasi sa lobster may parang tab dun tas makikita mo yung theories tas mababasa mo lahat ng explanation, ano ba tong ginagawa ko, ganun. Nalalaman no kung ano yung

purpose nun. Lahat na talaga nandun, ang kailangan mo na lang talaga gawin ay basahin” (R4)

(the “labster” educates you on what you're doing. Labster frequently asks you questions like you have a quiz, so you really need to read what was written there. What made it effective is that, in the labster, there's a tab where it encompasses theories, and you'll be able to read all the explanations, what are you really doing, like that. You'd be able to know what the purpose of it was. Everything was already in there; all you need to do is read)

This statement is also supported by Hofstein (2003), wherein he stated that the instruction to do the laboratory activities plays a vital role since it guides the students on precisely the right thing to do and effectively essential to their learning. It is also stated in the study of Cooper and Higgins (2015) that in ALM using videos, experts exhibit movements that are impeccable and faultless. The procedures can be extensively repeated and evaluated by the student, which would help in strengthening their memory through the movements. Students are also equipped with the capability and time to reflect by pausing the video. This could be described as a means to revolutionize a passive type of learning into a constructivist one. In addition to this, the respondents also emphasized the advantage of ALM, which mainly focuses on interactive communication especially on group activities and cooperative work.

“Sa tulong talaga ng mga friends mo; nagiging guide din minsan yung gawa nila sa ginawa mo; sila din yung tumutulong sayo” (R11)

(Your friends will truly help, Sometimes their works will serve as a guide, and they will help you finish the tasks.)

Cooper and Higgins (2015) also defined these advantages in their study. Wherein it is stated that the beneficial effect of alternative learning modalities is marginally larger than the trivial effect, which signifies that it is beneficial when students are actively engaging as a group.

Furthermore, according to the participants' statements based on their shared experiences about the innovativeness in using alternative learning modalities, they said that it assisted them in improving their abilities and attitudes while using the simulation under the ALM.

“para kang naseself study” (It’s like you’re doing self study) he also added that “ikaw mismo yung magtuturo sa sarili mo” (R3)

(While in ALM, you're going to teach yourself because you don't have staff, teachers, and people to teach you.)

“Sa Labster kasi may problem solving, parang natest din yung patience mo dun sa simulation” (R5)

(Since labster involves problem solving, it puts your patience to the test during simulation.)

Apart from that, it also helps students develop positive traits. For example, one of the respondents explained how ALM helped her develop positive traits by increasing her productivity while using ALM.

“Sa Learning modules naman, feeling ko yung pinapasa namin kay dean, nagiging productive ka kasi talagang mapapagawa ka kasi kailangan updataed si dean sa lahat ng ginagawa mo araw araw. Talagang mapapagawa ka kasi kailangan updated si dean sa mga ginagawa mo araw araw.” (R5)

(In learning modules, we became productive because you truly need to complete the task because our dean needs to be kept up to date on what you do on a daily basis.)

The study of Irwato (2018) emphasized the importance of these findings on improved abilities through the use of ALM in terms of self-improvement, attitude toward learning, and productivity. It is stated that by using ALM, students can develop their problem-solving and critical thinking skills, ingenuity, conceptual understanding, laboratory skills, motivation, interests, and perceptions. According to the research of Breakey, Miller, and Hentges (2008), using ALM in the form of virtual laboratories allows students to engage with technology and prepare more productively for their physical laboratories during the pandemic. In the table below, it gives a rundown on how statements were inspected to find codes regarding the recognized advantages of the utilization of ALM and how it was categorized and transformed into a theme.

Table 2. Summary of the coding process of the extracted statements from the respondents in relation to the recognized advantages with the utilization of ALM

MAIN THEMES EMERGED	CATEGORIES	CODES (NO. OF TIMES MENTIONED)
<p>Innovativeness of ALM in addressing the gap for clinical internship during the pandemic</p>	<p>Benefits of using ALM during pandemic</p>	<ul style="list-style-type: none"> ● Convenience in using ALM (2) ● Aids in the familiarity with the laboratory procedure (2)
	<p>Positive experiences in using ALM</p>	<ul style="list-style-type: none"> ● Flexibility in using ALM in the context of online internship (1) ● Advantage in retaining the knowledge with the use of ALM (1) ● Improvement in technological aspect using ALM ● Assesses one's performance ● Perceived learning in using ALM ● Usefulness of resources in retaining the knowledge with the use of ALM ● Along all subjects are covered ● Aids in the familiarity with the laboratory procedures (4) ● Enhanced ability to understand ● Application of knowledge in the situation given ● Convenience in using ALM (6) ● Skills enhanced while using ALM ● More learnings were attained ● Recognition of good effects on activities under ALM (5) ● Requirement to study broader topic ● Obtained insight for future laboratory work (3) ● Clinical setup for supplying knowledge and skills ● Similarity of ALM to actual clinical internship ● Enhanced critical thinking skills ● Widening of knowledge (2) ● Initiative to understand the topic

Wide range of ideas while using ALM

- Accessibility of other materials using ALM

Skills development while using ALM

- Availability of other skills

Challenges Recognized by The 4th Year Medical Technology Students on the Alternative Learning Modalities.

In assessing the overall challenges recognized by the 4th year medical technology students on the utilization of alternative learning modalities for their clinical internship during a pandemic, one theme has emerged: drawbacks encountered in virtual internship using alternative learning modalities. A total of five drawbacks were established.

Drawbacks in Virtual Internship Using ALM

Respondents described in their narratives the various reasons for the drawbacks they have encountered in their virtual online clinical internship while utilizing the alternative learning modalities. All twelve respondents have recognized each of their drawbacks; therefore, under this theme, a total of 37 codes and 21 categories were generated from the narratives of the respondent. The following statements that described this theme were extracted as follows:

“Medyo nahirapan ako kasi dahil gawa ng yung Mama ko nagwowork sya, so sya lang yung may computer dito, sobrang bagal ng internet namin, lalo na kapag PC pa. Luma na yung PC namin kaya parang ang bagal na gamitin, sobrang nagstruggle ako dun. Nagwowork kasi yung Mama ko, so nag

hihintay pa ako na matapos sya bago ako makagawa, minsan madaling araw na ako nakakagawa.” – R1

(I had a hard time because my mother also has her work and she's the only one with a computer here, our internet is very slow, especially when using a PC. Our PC is outdated; therefore, it already has a decreased performance. I struggled a lot there. My mother is working, and I am waiting for her to finish her work before I can use the computer. Sometimes it is already dawn where I could do my requirements.)

In this statement, in the given statement of the respondent, it can demonstrate struggles in resources, technical aspects, and household environment. Therefore, based on the respondent, the struggles happened due to the limited resources in the household, outdated devices, and problems in internet connection and their household environment.

“Pinaka hindrance dun is yung internet connection, iyun yung pinaka number one for me. Saka equipment mo, kasi hindi lahat ng laptops or PC kayang ihandle ang Labster, kasi meron syang minimum na type ng laptop or PC para magamit kasi mabigat sya na application na iloload.” – R3

(The huge hindrance is the internet connection. It is number one for me. Next is the equipment you have because not all laptops or PCs can handle Labster, for the reason that it requires a minimum type of laptop

or PC to use due to it being a heavy application to load.)

In this statement, problems in internet connection, technical struggles, and the lack of resources to be able to utilize alternative learning modalities are the demonstrated drawbacks identified by the respondent. Moreover, six respondents (R4, R5, R7, R8, R10, and R11) were also able to demonstrate the same struggles that this respondent described, such as problems in internet connection, devices such as laptops or personal computers, and also lack of resources such as electricity or power supply which was explicitly mentioned by R8 and R9.

“Problema lang talaga yung bugs tsaka malag.”- R2

(The program bugs and computer lagging are the problems.) In this statement, the respondent described technical errors in using a specific alternative learning modality which is called the Labster. This struggle that is due to technicality was also recognized as one of the reasons for the drawbacks encountered by the respondents.

The first drawback was the limitations in resources, technical struggles, internet connectivity problems, and the household environment. It was identified that almost all of the respondents had limited resources in their households. In addition, the devices they were using to attend online classes and access a specific alternative learning modality were outdated, which led to a decrease in performance. The respondents also mentioned that in some instances, the power supply in their area was disconnected from time to time, also leading to problems in internet connectivity. These findings can also be seen in a study from De (2020) entitled

"Impacts of the Covid-19 Pandemic on Global Education," wherein it was stated that inadequacy of resources would have a reduction in education and would hinder the students that were part of the substandard population to continue their education.

“Explain ko na lang sa inyo. Eto kasi yung labster, may ano siya instructions. And susunod lang kami sa instructions na iyon. That’s why hindi ko pwedeng masabi na may skills akong natutunan.” – R2

(I'll just explain to you. The application that is Labster has instructions, and we will just follow those instructions. That's why I can't say that I have learned skills.)

In this statement, the respondent explained that skills are hardly developed or learned through this specific alternative learning modality where the only thing that they are doing, based on the respondent, is to follow instructions. Furthermore, two more respondents (R5, R7) also stated the same struggle presented and that lacking skills being developed through this online internship utilizing alternative learning modalities is identified as one of the drawbacks encountered.

The second drawback faced by the respondents is the lack of skills developed or learned in a clinical internship through the utilization of alternative learning modalities. The respondent stated that the way that they only follow instructions given on a specific alternative learning modality would not be able to help them cultivate certain skills necessary for them to thrive in this field. One of the findings of the study conducted by O’Doherty et al. (2018) proved that one of the barriers in online learning is skill deficit or lack of skill development. However, it was opposed in a study of Gormley, Collins, Boohan,

Bickle, and Stevenson (2019), wherein it was stated that a greater number of students considered that e-learning had a conclusive influence on the student's clinical skills learning.

“And syempre kapag sa Alternative Learning lang, ibigsabihin nun nakaprogram ang lahat ng gagawin mo so wala kang iexpect na mali and wala ka ding iexpect na alternate sa anong pinaka tamang sagot kasi precise or iisa yung kailangan mong sagutin doon” – R3

(And, of course, in an alternative learning modality, it means that every activity is already programmed and that there won't be any mistakes to be expected. Moreover, there won't be any alternative answers to questions because there is only one specific and precise answer.)

In this statement, the respondent described the struggle he/she experienced, specifically, on how the limitations of this specific alternative learning modality were recognized as one of the drawbacks encountered in the online clinical internship.

“So iyun yung hindi mo maeexperience kapag nasa harap ka lang ng computer mo na gumagawa ng ganun. And masesearch mo lahat sa google yung mga sagot, so kapag tinatamad ka magsesearch ka, isang pindot lang tapos na.” – R3

(...that is what you cannot experience when you're just in front of your computer doing activities. And also, you can search all the answers in Google, so when you're feeling lazy, you can search, and in just one click, you're already done.)

In this statement, the respondent presented how a student cannot experience a clinical laboratory

through a computer screen. Furthermore, the respondent also illustrated how the reliance of students on search engines for answers in either their examinations or in activities could lead to cheating.

The third drawback encountered was the limitations of alternative learning modalities and reliance of students with the search engines. The latter leads to academic dishonesty; however, this statement was given only as an example by the respondents. In addition, a study administered by Young-Jones and Miller (2013) showed findings that academic dishonesty is more apparent to exist in online classes rather than in a traditional classroom setup. Furthermore, the respondents also expressed that being behind the computer screen will not give them the clinical experience in a laboratory, thus, describing the limits of alternative learning modalities.

“Ang problem dun na yung mahirap mag reach out sa mga professor, for example, we have questions, busy sila, hindi lang naman tayo ang handle nila. Marami kasing question dun na sobrang hirap iinterpret, kapag for example usually kasi ang nangyayari kasi mag uusap kayong magkakaklase, iba iba kayo ng interpretation ang nangyayari kasi iba iba yung dating ng activities na dapat Gawain” – R6

(The problem is that it is difficult to reach out to professors. For example, when we have questions, and they are busy, we cannot blame them because we are not the only ones they handle. There are plenty of questions that are hard to interpret, and what usually happens is that you will talk to your classmates about it and will have different interpretations because the activities are confusing.)

In this statement, the respondent explained that professors/instructors were not available to answer their questions about the given activities in some instances. These incomprehensible questions lead to various interpretations from other students making the activities complicated. Having a lack of communication in this online internship due to various reasons leading to unclear instructions was also mentioned by other respondents (R10) (R11).

“Iba pa rin yung feeling na behind the computer ka tapos nireresearch mo lang or inaaral mo lang yung cases na binibigay sa amin. So ano parang ang sad talaga kasi naexperience ko na mag patient to patient.” – R8

(It's still a disparate feeling to be just behind the computer and to be only researching and studying the cases that are given to us. It is sorrowful because I've experienced being able to assist patient to patient.)

“Kahit ako mismo hindi ko gaano masasabi na naintindihan ko siya by heart. Naintindihan ko sya na ay ganun pala, pero hindi ko sya masyadong naintindihan kung paano yung proseso, naintindihan ko lang kung paano sya ginawa.” – R9

(Even I cannot say that I understood the laboratory process by heart. I understood it in a shallow way, but I did not intricately understand how the process was done; I merely understood how it was done.)

In the first statement, the respondent expressed how being behind the screen of a computer to research and study various cases is not the same experience as being in a clinical internship hospital duty. These kinds of experience, feeling, and barely understanding the laboratory processes were also

mentioned by another respondent (R9) in the second statement.

“Ang hirap kasi most of the time pag sabay-sabayin yung mga requirements tas di lang sya simpleng requirements kailangan talagang basahin kasi mga articles yon,” – R12

(Most of the time, it is hard when there is a mass of requirements that need to be done at the same time. Furthermore, it is not a simple requirement, it is necessary to read the articles earnestly.)

In this statement, the respondent stated how there is a limited time for a large number of requirements that needed an abundant amount of time to understand it further. Therefore, it is recognized as one of the drawbacks of the virtual internship while utilizing alternative learning modalities.

The fourth drawback depicted was the lack of communication between the students and instructors. The respondent mentioned that as the instructors were unable to interact with them to be able to explain a question, other students tend to come up with various interpretations that lead to the misapprehension of the activities. While this was happening, the requirements were also likely to pile up, giving the students only a limited time to finish all of it and to understand it further. The findings stated above were supported by a study conducted by Alawamleh et al. (2020) entitled "The Effect of Online Learning on Communication between Instructors and Students During Covid-19 Pandemic". It was determined that overall, students concurred with the online learning having a negative impact on the student-instructor interaction and that it was also more arduous to communicate in this setup. Further mentioned in the study was that the students

were no longer encouraged in-class participation and that there was a decrease in productivity and poor comprehension of learning material or activity

Iyun yung disadvantage namin na hindi kami nakapag internship, sakin kasi, yung Labster simulation, hindi sya helpful para saakin. Parang hindi mo sineseryoso yung gagawin mo dun, parang ang boring lang kasi.” – R5

(Our disadvantage is that we were not able to experience a clinical internship in the hospital. For me, the Labster simulation is not helpful. It is boring, and that it is difficult to be serious about the activities given in the simulation.)

In this statement, the respondent described how it was a disadvantage to not being able to have a hospital duty for a clinical internship. In addition, the respondent also stated opinions on how a specific alternative learning modality was not helpful and that the activities included in it were uninteresting.

“Parang ang nangyayari dahil online class, parang tinatamad ka na mag aral di ba.” – R5

(What appears to happen is that, because of online classes, it seems like you're too lazy to study, right?)

This statement connotes a negative impact on online clinical internship on the students because of how the respondent expressed how online classes turn students unmotivated and uninspired to study.

The fifth drawback depicted was the disadvantage and negative impact established through the narrative statements of the respondents was that; an alternative learning modality for them was not helpful in the aspect where the respondents found the activities included in that uninteresting. With that, the

negative impact recognized was that the students were unmotivated and uninspired to study due to the online classes. This was also specified in the study of Alawamleh et al. (2020), where the students favored traditional classes over online classes because of the abundant problems that arise in online classes such as students being unmotivated and discouraged, poor understanding of learning materials, lack of student-instructor communication, and students felt more alone in online classes. In table 3, it presents a rundown on how statements were examined to find codes about the recognized challenges of the utilization of ALM and how it was categorized and transformed into a theme.

Soft Skills Developed by The 4th Year Medical Technology Students Through the Use of Alternative Learning Modalities

Given the guidelines given by the IATF and health protocols to the pandemic, the face-to-face internship was not allowed. Hence, according to the statements given by the respondents from the interview conducted, it is clear that the laboratory skills were not developed. On the good side, through the use of ALM, there are soft skills developed. The research objectives have one theme emerging from the narrative of the respondents. Under the theme “Recognizing Soft Skills as a Critical Part in Virtual Internship using Alternative Learning Modalities,” there are categories. The first category consists of twenty codes, and then for the following category with four codes, the next category consists of three codes and the last category with five codes. There are four categories for this theme and a total number of thirty-two codes.

Recognizing Soft Skills as a Critical Part in Virtual Internship Using Alternative Learning Modalities

This theme tackles the development of different soft skills based on the different perspectives and experiences of the respondents while using the alternative learning modality. Soft skills are an important development that can enhance and apply in your current situation. The process of communication attributes in enhancing each and every aspect of an individual (Anju, 2009). Given that we are in a pandemic situation, most of the communication is processed and done in an online setting. With the use of different alternative learning modalities, education continues despite the current pandemic situation we have. The importance of soft skills developed in a virtualizing alternative learning modalities drives the improvement of different soft skills developed. The application of knowledge is based on the soft skills stated by the respondents in dealing with tasks given to them. The soft skills developed to enhance the knowledge and learning strategies while using the alternative learning modality. With the statements of the 12 respondents in answering what the skills they have developed are, none of them stated that they have laboratory skills developed. However, they have noted that ALM helped in the development of their soft skills. Mostly soft skills such as time management, critical thinking skills, problem-solving, etc. Some of the statements of the respondents are the following: Based on the gathered data from the conducted interview sessions of the respondents, an alternative learning modality is indeed a way of enhancing and applying the knowledge with the use of developed soft skills. The interpersonal skills developed in a virtual internship while utilizing ALM answers with the second statement of the problem "The soft skills developed

by the 4th year medical technology students through the use of alternative learning modalities" of this study about the Qualitative Evaluation on the Alternative Learning Modalities Performed Among Medical Technology Interns of Emilio Aguinaldo College. This is supported by the study of S. Vasanthakumari 2019 about the "Soft skills and their application in the workplace." This study pertains to the importance of soft skills in the workplace. Soft skills facilitate human connections in different aspects. It is the people's quality of communication, habits, and attitudes toward others or in a certain situation. Based on the statements of the respondents, soft skills developed by them were time management skills. Some experience difficulty in their schedule and time, so they need to manage it properly and enhance their ability to time management. al internship while

According to the experiences of the respondents, even when they're home, they need to manage their time with seminar 2, their internship, and updating the learning modules. More so, they have discussed how they developed and applied time management skills while using alternative learning modalities in the midst of the pandemic. According to Lay & Schouwenburg, 1993, the time management skills are the same as the behavioral skills and really important for a student in organizing their studies and workloads (Lay & Schouwenburg, 1993).

"Siguro yung nadevelop kong skills is yung time management, time management mo between syempre meron kang seminar two tapos may internship ka. Parang kahit nasa bahay ka nahahati pa din Yung gawain mo of course kailangan everyday nakakapag update ka ng learning modules kay dean. Kailangan

mo mapasa yun agad, kasi kung hindi mo mapapasa agad yun mark as absent ka na agad." (R5)

(Perhaps the skills that I developed is time management, time management that I have seminar two then my internship. Even when we're home, our task is being divided, and of course, we need to update the Dean about the learning modules every day. Need to pass it immediately; if not, you'll mark it as absent)

Respondents also talked about theoretical skills and the topics they learned using the specific alternative learning modalities used to respond to their clinical internship. For most of the respondents' statements, the soft skills developed by them were theoretical skills, drive them to understand and correlate theories with the use of articles and given activities to them. It is evident that theoretical skills were the most yielded soft skills developed by them. Some respondents have shared that the use of ALM helped them to think deeply and broadly. The theory and the practices are correlated and combined as learning experiences in acquiring knowledge and skills that will be developed (Abdulai Salifu 2019).

"Ah marami naman, kunwari gene regulation, for example, natuto kami ano yung gene expression, kung paano yun nareregulate, different levels ng gene regulation, mRNA and proteins, natutunan din naming mag measure ng mRNA levels gamit yung RT-PCR and yung pagkakaalala ko yung protein expression gamit yung western blotting. Natuto rin nga kami ng microscopy dun e." (R4)

(There's a lot, for example, the gene regulation, we learned about the gene expression, how it is being regulated, the different levels of gene regulation, mRNA and proteins, we also learned measuring

mRNA levels with the use of RT-PCR and to my knowledge protein expression with the use of western blotting. Even microscopy we learned there.)

"Siguro mostly yung skills sa theoretical and also pagpractice yung, alam mo yun kasi minsan nasasayo na din kasi na pwede kang magpractice sa bahay... iniimagine ko nalang kasi, mostly imagination, kung paano mag apply ng theoretical skills into clinical practice, importante din naman yun lalo na sa chemistry."(R6)

(Maybe, mostly theoretical skills and also ability to practice [it]. You know, sometimes when you have the means, you can practice inside the house... I just imagine it, mostly imagination on how to apply the theoretical skills [I developed] into clinical practice, it is important especially in chemistry.)

"Pero sa akin, naiintindihan ko sila on a different perspective like ah okay ganito pala, in theory, ganito pala yung nangyayari. Kasi pag ikaw naglalagay sa machine ng blood samples, kunwari for CBC, hindi mo na alam kung ano talaga yung ginagawa ng machine. Pero yung time na nagbabasa kami ng mga articles na binigay nila sa min. Narealized ko na ganito pala yung nangayayri. Nakita ko yung pag process."(R8)

(For me, I understand the theme from a different perspective, likewise theory, this is how it happened. Because if you are the one putting the blood sample in a machine, for example, CBC, you don't know how the machine is processing. But when I read the articles they gave, I realized how it is being processed.)

A respondent said that she developed her problem-solving skills with the use of activities and

practices that she encountered in the alternative learning modality that they used. The problem-solving skill is an ability of a person to do a task in solving a specific problem and can be a practice in doing matters informing organization and personal careers in the future (Anderson & Anderson 1995). And also, problem-solving ability can be used for research purposes and focusing on writing and doing research papers and solving research problems for the improvement of problem-solving skills (Woodman et al., 1993; Scott & Bruce, 1994). Based on the statement of the respondent that problem-solving is developed and enhanced while doing specific activities given by them with the use of alternative learning modality. The process of learning and the idea of solving the problems and activities in their task can improve their ability in problem-solving.

“Problem-solving skills, tas mga ganun kasi kailangan mo ring imemorize agad yung mga nababasa mo dun, kailangan mo agad maipasok sa isip mo, kaya naeexercise na talaga yung brain mo.”
(R4)

(Problem-solving skills, most likely like that because you need to memorize the things you have read there [labster]. You need to grasp the information. That is why it can be a good exercise for your brain.)

One of the respondents talked about active listening as the soft skills that she developed. Mentioned how she uses those soft skills in their alternative learning modality internship. Active listening is being conceptualized with the nonverbal involvement demonstrated in many ways, reflecting on the speaker's message and may include the question-and-answer communication (Lester, D. 2002). By active listening, the respondents gained

knowledge and were able to do tasks and answer the activity given to them based on their experiences using the alternative learning modality.

“Siguro yung skills na naapply ko netong semester ay active listening, syempre kung hindi ka makikinig sa prof mo syempre wala kang maisasagot. Pero every after exams naman namin sa internship nag raratio naman yung prof.” (R5)

(Perhaps, the skill that I applied this semester is active listening; of course, if you will not listen to your professor, you can't answer. But every time after the exam in our internship, the professor makes a rationalization.)

Taking the initiative as a developed soft skill while using alternative learning modality, says one of the respondents. The use of communication and taking the initiative in a particular thing or situation is a factor for a beneficial outcome. It can also be a creative way of conversing with others. The drive people in taking the initiative is a result of being active and self-starting for a certain thing (Brodbeck, 2001). The initiative of the respondents to finish the given task and their positivity while doing each task and learning on assessing or detecting certain problems from the alternative learning modality that they're using because of the current situation that they're home and difficulty communicating with professors. One person's drive to learn by developing a convenient way to absorb the knowledge from their alternative learning modality program. Being initiative and motivated in learning has developed soft skills while doing activities in their internship, as for one of the respondents.

“Siguro ano ang nakuha ko dun like ako kasi tamad ako magbasa pag mga researches siguro yun

nagkaroon ako ng motivation and patience or yung kakayahan ko na magbasa ng madami ang ma-absorb ko sya parang sa dami ng mga binasa ko, naintindihan ko sya halos lahat so before internship, hindi ako ganun I mean mas prefer kong magbasa ng handout kesa libro nung before internship so ngayon parang may nag-iba sakin na mas meron na akong motivation, kaya ko nang basahin, kaya ko nang i-absorb yun nang buo.” (R7)

(Perhaps what I get for that is, like me, I am lazy to read the research. I possess motivation and patience, or the ability to read a lot and absorb it from the many that I have read. I understand almost everything, but before the internship, I preferred to read handouts rather than books. But now, as some changes happened to me that I have motivation, I can read that and absorb the whole one.)

“Nagkaroon ako ng initiative para dun sa task na gagawin or initiative na para makilala kami ni dean kahit nasa bahay lang kami through ALM.” (R5)

(I had the initiative for the task to do or the initiative for Dean to know us even though we're home through ALM.)

Based on the respondent's statement when doing the activities of the alternative learning modality, reading comprehension skills are being developed as their soft skills—the process of doing the activities and how they work with it. An individual's ability in reading comprehension extends their knowledge in gaining details, information, and message from others by understanding the context of the person stating it (May & Rizzardi, 2002). The skills in reading comprehension can be used in academic and nonacademic life, the daily basis of life in gaining knowledge from the context and

information you are reading. The respondent stated that reading comprehension is important when it comes to situational matters, especially to the task given to them while using alternative learning modalities.

“Siguro reading comprehension, kasi ang haba haba ng problems na binibigay nila tapos situational, kapag di mo sya naintindihan hindi mo sya masasagutan lalo na kapag di mo sya nirationalize sa utak mo. kung Hindi ka din nagreeseach dun sa mga sakit, dun sa mga situation na ganun, di mo sya matatapos.” (R9)

(Perhaps reading comprehension, because of the long situational problems that they gave if you don't understand that you can't answer and you can't rationalize it also. If you don't research about that disease, for that specific situation, you can't finish it.)

The ability of a respondent to assess situational activity and problems in the laboratory based on what she has read. Based on the respondent, troubleshooting is the soft skill developed for her because of the situational examples given by their alternative learning modality internship.

“Siguro yung mga for example, yung mga troubleshootings, for example, sa Clinical Chemistry ganyan tapos yung sa mga bawat sections ng laboratory, alam mo yung dapat gawin, mga expiring, mga ganyan para mas lalo syang maalala, may expiring, yung mga dapat gawin kapag may mga ganitong situation. Parang mas lalo ako nahubog sa mga ganong gagawin kapag dumating ka sa point na ganun ka kapag nasa clinical settings ka na.” (R12)

(Perhaps, for example, troubleshooting like in Clinical chemistry and in other sections of the

laboratory, you must know what to do, the expiring, remembering that it has expired, the must-do in this kind of situation. If the time comes in that kind of scenario in clinical settings, I know that I am trained and knowledgeable for that.)

The given alternative learning modality program used as their clinical internship helps one of the respondents to develop soft skills. The ideas of the articles help for their insight and perceptions as for one of the respondents.

“ma-aabsorb mo lang dun is yung pinakaidea nung mga iniisip nung mga nagsulat nun so iintindihan mo sila so kapag turn mo na magsulat ng ganon, meron ka ng mga insights na galling sa mga iba’t-ibang authors, hindi ko sya masasabi na skill parang mas lumawak lang ang perceptions ko, yung interpretations ko sa mga pwede pang gawin ng field natin.” (R7)

(You're going to absorb the idea of the one who wrote that, you'll need to understand them so that you'll have insight from different authors when you write your own one. I can't say that it is a skill, but your perceptions widen, my interpretations on what else can do in our field.)

Based on the statements of the respondents, soft skills developed by them were critical thinking skills. Some of the respondents stated that they developed and enhanced their critical thinking skills in applying and correlating the articles and modules given to them while using the alternative learning modality. According to Irwanto 2018, students are capable of developing their problem-solving and critical thinking skills, ingenuity, understanding conceptually, skills in grasping scientific processes,

laboratory skills, motivation, interests, and perceptions (Irwanto 2018).

“Correlations ng ano signs and symptoms with the result tsaka ano, natutunan ko yung pagdifferentiate ng ano bawat results depending on the symptoms of the patient. For example yung ano sa clinical chem, ano yung possible cause ng low glucose level ng pasyente eh wala naman siyang signs and symptoms, one possible reason of that is yung blood, hindi siya nacentrifuged agad. Nakastand by siya. Yung blood glucose pala nagmiminus siya ng 7 mg/dl per hour if naka standby yung whole blood.” (R2)

(Correlations of signs and symptoms with results and, I also learned to differentiate each result depending on the symptoms of the patient. For example, in clinical chemistry, what is the possible cause of the low glucose level of the patient despite having no signs and symptoms? One possible reason for that is the blood was set aside and wasn't immediately centrifuged, causing a decrease of blood glucose by 7 mg/dL per hour.)

Based on the statements of the respondents, soft skills developed by them were memorization skills. Some of the respondents stated that memorizing the topic and ideas gathered from the activities and articles given to them tend to gain knowledge and learn about the topic. They developed these soft skills while using the specific alternative learning modalities used as their clinical internship. Learning styles can assist educators in identifying and resolving learning difficulties in pupils, allowing them to support their students in becoming more successful learners. Multimodal students tend to receive knowledge in a range of formats. These students can not learn by merely sitting in a classroom and memorizing tasks (Baykan and Nakar

2007), developing and enhancing their soft skills as they encounter situational activities and articles that need to analyze.

“Para sa akin na enhance sa akin yung sa mga situational halimbawa sa hospital kasi diba pag sa hospital ka may nagaassist sayo may nagtuturo sayo pero nung nag online learning na ikaw na mismo yung nag troubleshoot. Natuto akong mag troubleshoot sa mga bagay na ano dati kasi may staff na nagaassess ngayon ikaw mismo yung mag pinpoint out kung anong problema sa bagay na yun.” (R10)

(For me, I enhance the situational part. For example, in a hospital setting, you have the one that can assist you, but in online learning, you're the one that troubleshoots. I learned to troubleshoot things because you are the one who will pinpoint what the problem is.)

“Memorizing skills, kasi to be honest talaga imemorize mo nalang din naman e. So hanggang ngayon kasi hindi ko pa din masagot pa, kasi hindi ko pa naman naaapply into the clinical practice kasi, kaya wala akong masabi sa inyo kung ano talaga yung nadevelop ko kasi ang nangyari namemorize ko lang, nalaman ko lang, naintindihan ko” (R6)

(Memorizing skills, because to be honest, you'll have to memorize it. Even now, I can't answer because I haven't applied it yet in clinical practice. I can't tell you that I develop because the only thing that happens is I memorize, know, and understand it.)

Based on the statements of the respondents, soft skills developed by them were writing skills; some of the respondents stated that in their writing skills, they retained knowledge and were able to remember the topic they learned. And also, the ability to write your

own paper for research purposes is beneficial for the respondents that they know the ideas of writing research—developed and enhanced his research skills as soft skills. He focuses on his research skills on how to write papers, searching articles citing sources, etc. The students developed new ideas and knowledge about the process of building the research with their own style of writing papers. The opportunities in developing the writing skills on building and gaining knowledge on writing assignments and other activities in the course (Cho, K. and Schunn, C.D. 2007).

“Pero at least pwede kang magfocus with your research skills kasi di ba, clinical laboratory scientist tayo, so we also focus on research. Maybe meron may gustong magfocus sa research, mostly kasi parang research or thesis yung mabubuo mo dito on how you write paper, kung paano magsearch ng article talaga na hindi lang yung articles kasi di ba syempre we also require yung talagang publish articles yung kung sino talaga yung totoo, and kung paano mag cite. Yung mga ganun kasi yung mga writing skills ganon” (R6)

(But at least you can focus on your research skills because we are clinical laboratory scientists, and we also focus on research. Maybe there is one who wants to focus on research, mostly for research or thesis you can develop here, like on how you write papers, how to search articles that are published and the real owner of the article, and how to cite sources. Like that, the writing skills.)

In table 4, it demonstrates the summary on how statements were examined to find codes about the soft skills recognized by the respondents that contributed a critical part in their virtual internship

while utilizing ALM and how it was categorized and transform into a theme.

Influences in the learning outcomes

With regarding the positive and negative influences of the alternative learning modalities in addressing the clinical internship's learning outcomes. Thus, from the extracted answers, it underwent thematic analysis; wherein themes regarding their satisfactory experience using the alternative learning modality and the negative experiences of the respondents in addressing the learning outcomes emerged.

Establishment rules should be implemented to observe functional e-learning, to guarantee that module references are put out and adequately meet the expected course objectives and learning goals. Inventive, data based e-instructional method can be upgraded by significant recordings or issue situated ways to deal with cultivate learners' advantage, mindfulness and application, not exclusively to make scholarly progress however to be focused and balanced individuals esteeming the significance of adjusted eating routine, work out, rest, individual cleanliness, relational connections, and community importance. (De, 2020).

Positive Influences: Towards the Realization of Virtual Internship

The data gathered from the respondents ties back to the research question regarding the intended learning outcomes of the clinical internship. With the themes that emerged from the statements, it supports the idea that with the utilization of ALM it bears a positive influence to the respondents on how they were able to grasp the concepts of the given laboratory procedures, how it improved their critical thinking, and most importantly, how they were able

to apply the learnings they have gathered despite of having lack of clinical exposure.

The respondents shared their experiences on how satisfactory was the use of technology-based learning to attain the learning outcomes of the online clinical internship. More so, among the 12 respondents, 7 of them say that the learnings they have obtained through the use of features of ALM paved the way to have the confidence to apply it in real-life situations. Some of the direct statements were quoted as follows:

“paano kapag nasira yung machines ano pwedeng gawin, so parang mas nag ano sakin yung paggamit nung mga machines tsaka sa pag-mamamual kapag nawala yung mga machines kasi importante parin yung manual so kapag binasa ko yung mga yun, yung mga procedures na yun, na-iimagine ko na yung sarili ko na ako yung gumagawa kumbaga dinadala ko yung sarili ko dun sa paper para mas makita ko kung paano talaga yung pagrurun nung mga machines” (R7)

(what if the machines got broken, what are the possible things that can be made. So, somehow it is much more [retained] to me how to use machines and how to do manual [process] if ever the machines malfunction. Because it is still important to do manual [process]. And when I read those [manuals] the procedures there, I imagine myself doing it. It is like I am bringing myself into the paper for a better understanding of how it is really [done] running the machines.)

The study of de Vries and May (2019), entitled Virtual Laboratory Simulation in the Education of Laboratory Technicians – Motivation and Study Intensity, stated that virtual laboratory

simulation seems to help the laboratory technician students connect theory with practice. In addition to this, according to Hofstein (2003), the instruction to do the laboratory activities plays a vital role since it guides the students on precisely the right thing to do and effectively essential to their learning.

It is evident that the respondents tried their very best to find ways to put in real settings everything they have grasped with the help of ALM. one of the respondents shared her experience regarding her utilization of labster - a virtual simulation. Her claim was, she was confident enough to read the laboratory results of her mother. By doing that, she was able to give her proper diagnosis. Take note that this was just experimented by the respondent in order to test whether she is learning or not. On the good side, it turns out she was able to diagnose the results correctly, hence, supports the extracted theme that there were positive impacts in using ALM.

"Ayun kasi, every time na maglalaboratory yung mom ko, for check-up, I tried to read the results din niya. Siguro ano, I kinda understand pero syempre hindi ako pwede magbigay ng diagnosis ko. So, I can just say na elevated yun ganito niya, mataas yung ganito niya, kailangan niya mag baba nang intake niya of like this. Ayun siguro yung pinaka skill or natutunan ko throughout." (R8)

([for example] everytime that my mom has a laboratory schedule for a check-up, I also try to read her [laboratory] results. So maybe, I kinda understand, but, of course, I cannot give my diagnosis [about the result]. So, I can just say that this is elevated [laboratory result], this is high [laboratory result], she needs to lower her intake of this

[whatever causes the laboratory test to get high]. Maybe, that was the skill that I have learned all throughout.)

According to de Jong (2013) and Waldrop (2013), many science courses focus on having laboratory exercises that will prepare the students to perform efficiently clinically. More so, in another study, it was stated that the use of virtual laboratory simulation allows the students to acquire a deeper understanding of the content. Thus, it supports efficient learning of the students specifically, those that are in scientific fields (Hofstein, 2003 and Pellegrino, 2012). According to Bernhard (2010), developing holistic conceptual knowledge is the ultimate purpose of the laboratory.

Another respondent shared that through ALM utilization, it helped retain the knowledge and be confident with the given case-to-case scenarios that if ever it happens in real-life settings, at least the respondent knows what to do.

"Ngayong type of learning parang, dahil dun, nagbigay sila ng mga cases or scenarios na ano gagawin mo ganun so parang dahil dun parang dun, napabasa ko ng mga ganung cases sa online sa mga books and sobrang it's a must nun kasi parang na-open ako na may mga ganitong cases palang nangyayari so alam mo na kung ano nangyayari kasi alam mo na ang gagawin based sa mga nabasa mo" (R12)

(Now, in this type of learning, it is somehow, because of that [online set-up], they gave us cases or scenarios on what will you do as if you were the one on the spot in the given scenario. I read cases online and also in books related to it [given scenario]. It is indeed a must [to read and search for resources]

because it somehow enlightened me that there are really cases happening. So for me, I kind of understand what is happening [in the situation] because I already know what to do based on what I have read.)

Another respondent stated that the perceived benefit of ALM is the familiarization of protocols of the laboratory using ALM. The respondent statement was:

“one advantage kasi ng labster is ano magiging familiar ka sa protocols ng laboratory kasi may mga instructions na sinasabi sila” (R2)

(One advantage of labster is that you will be familiar with the protocols of the laboratory because there were instructions indicated)

Another respondent explained that through the use of a specific ALM, the labster, she was able to experience as if she was doing in real-life laboratory internship with regard to its simulation. The labster helped her to feel that at some point, she was the one doing the procedures inside the virtual laboratory. By that, she stated that she really finds it helpful, and it lets her experience the feeling of accomplishment. It was stated by the respondent this way:

“Pero ang Labster simulation ay helpful sya kasi lahat ng gagawin mo sa internship feeling mo nagawa mo na din sya” (R5)

(but, the labster simulation is helpful because everything that you will be doing in the internship, it feels like you really did it.)

Another study by Polly et. al. (2015), stated that the virtual laboratory is at least as helpful for the students as it is as if they are learning in a real

laboratory especially, in application and methods. Based on the review of Smetana and Bell (2012), it is stated that simulation's effectiveness can be proportional depending on how they are used. Thus, recommending the usage of simulations as a supplement to other instructional methods. More so, according to De Jong et al. (2013), the use of both virtual and physical investigations provides a unique opportunity for the students to observe otherwise unobservable phenomena.

According to one of the respondents, resources are important in helping to retain the knowledge, especially in reaching the learning outcomes. The respondent statement was:

“Siguro, kasi gamit mo na yung lahat ng resources, meron ka ng mga gadgets na magagamit, advantage na yun sa ibang estudyante. Para mareach mo yun gagamitin mo na lahat, katulad ng libro, gumagamit din ako ng libro kapag naglaLabster. Ginagamit ko din yung mga libro ko at mga notes.” (R1)

(Maybe, because you can use all of your resources, [for example] if you have gadgets that you can use, it is an advantage already for some students. In order to reach it [learning outcomes], you need to use everything [resources you have], such as books. I also used a book while using the labster. I am also using my books and notes.)

The majority of the respondents stated that using ALM helped them grasp the knowledge, procedures, and troubleshooting commonly done inside the laboratory. They had several modules, articles, and case-to-case scenarios of the everyday happenings inside the laboratory and those scenarios that are not widely encountered but still happens even once in a million. The respondents are joyfully

sharing their experiences regarding how they were able to understand the process and how it helped them retain the knowledge and are competent enough to say that through the use of ALM, the intended learning outcomes of the clinical internship have good impacts and are still achieved.

One out of the 12 respondents shared personal experiences on how the respondent adopted the ALM to address the intended learning outcome for clinical internship. The respondent stated:

“kailangan mo talaga ng pasensya and kailangan mo talaga ng time management para matapos mo yun”
(R5)

(you really need patience, and you need to have time management to finish it.)

These statements from one of the respondents indicated that patience and time management are vital in terms of achieving the intended learning outcomes of a clinical internship. It is a way of helping oneself in perceiving knowledge.

Negative Influences: Critical Gaps in Virtual Internship

As much as helpful the alternative learning modalities are, these are only limited to the supplying of knowledge on how procedures are performed inside the laboratory with no assurance on the development of skills. 4 out of 12 respondents shared their personal experiences on the inability of the ALM to address the learning outcomes of online clinical internship fully. It consists of six codes and four categories, all of which were analyzed from selected raw statements of transcribed interviews allowing the identification of disadvantages of the alternative learning modalities implemented.

ALM, more specifically Labster, is helpful in giving the information needed to perform laboratory tests effectively. Still, with the lack of opportunity to do it themselves, their capabilities as potential medical technologies are underdeveloped. One respondent stated that:

"But when it comes to practicality, wala talaga. Dexterity." (R2)

(But when it comes to practicality, it's non-existent since it's more on dexterity.)

Online internship under ALM serves as an alternative form of education during the pandemic for graduating students. However, the profession requires actual training, necessitating them to work more. The respondent has these to say

“Yung Labster simulation, hindi sya helpful para saakin”

(The Labster simulation isn't helpful for me)

“Parang ang nangyari dahil online class, parang tinatamad ka na mag aral di ba?”

(Since it's an online class, you're feeling too lazy to study, right?)

"Kasi kapag maghahanap ka ng work after mo mag boards, kailangan pa ng six months to 1-year training sa hospital bago ka magkaroon ng work. Iyun yung disadvantage namin na hindi kami nakapag internship." (R5)

(If you're going to find work after taking the board exams, you'll need additional six months to 1-year training in a hospital before you land a job. That's our

disadvantage since we didn't have a face-to-face internship.)

According to Center for Research on College-Workforce Transitions (2020), The disadvantages of lack of face-to-face internships incorporate the absence of in-person relationship building, inundation in the physical and social spaces of a firm or association, and less freedoms to take part in the specially appointed association that commonly emerge during an on-location experience.

One respondent claimed that she learned to troubleshoot when reading manuals. Still, when it comes to addressing the learning outcomes of the clinical internship, it is only partially effective saying that: "Bali 50/50. Hindi lahat maachieved mo sa online learning lang yung 50 maano mo dapat sa practical." (R10)

(So it's 50/50. You cannot achieve all the learning outcomes in an online internship, and the other 50 should be practical.)

According to this respondent, reading articles did not achieve the learning outcomes of the online clinical internship.

"Actually hindi, kung magiging honest ako wala akong experience na nakatulong siya sa articles na yun nagka-idea ka na "ahh may ganto palang procedure" na ginagawa pala sa case na 'to." (R11)

(Actually, no, if I'm going, to be honest, I have no experience that the articles achieved the learning outcomes, which would actually give you an idea like "Ahh, so this procedure exists" in the case being worked on.)

The intended learning outcomes of the clinical internship were regarded for this matter to determine what it could not address, especially when it comes to the development of skills needed in the clinical laboratory. Based on the answers of the respondents, some have shared positive impacts in regards to learning outcomes intended for the clinical internship, but few stated opposing the good impacts. One of the respondents stated that Labster is effective in terms of theoretical knowledge since it provides instructions but falls short when it comes to practicality, with the other respondents sharing similar thoughts. Additionally, when it comes to addressing the learning outcomes, they were divided, with some saying that it was addressed moderately while the other saying it did not.

One discovery proposed that the essential boundaries which influence the turn of events and execution of web-based learning in clinical instruction incorporate time requirements, helpless specialized abilities, insufficient foundation, nonappearance of institutional systems, and backing and negative perspectives of all included. Answers for these incorporate improved teacher abilities, impetuses, and prize for the time associated with advancement and conveyance of online substance improved institutional procedures, and backing and uplifting outlook among each one of those engaged with the turn of events and conveyance of online substance (O'Doherty et al., 2018). In the table below, it summarizes how the statements were inspected to find codes about the learning outcomes of clinical internship while utilizing ALM and how it was categorized and transformed into a theme.

Additional Emerged Theme: Coping Strategies

Given that we are in a pandemic situation, there are challenges that need to be faced. In order to determine how the respondents cope with their difficulties encountered, the researchers asked them during the interview regarding their strategies. The researchers gathered different information and statements from the respondents on how they faced the challenges in their internship and in this pandemic situation while using alternative learning modalities. Various methods and strategies were obtained from the respondents in coping up with the problem they have.

The first theme is "Adaptive strategies to withstand challenges of ALM," in which there are categories; the first category consists of 11 codes, the following category with three codes, then the next category consists of 1 code, the next category consists of 1 code, next category with two codes and last category with one code. For the next theme, "Adaptation strategies in using ALM in addressing learning outcomes during pandemic," there are also categories; the first one consists of 5 codes, the next category with one code. The next category with one code, for the next category with one code also, the next category consists of 1 code and for the last category with three codes.

The coping strategies of the respondents are not initially part of the research questions. This theme emerged based on the responses of the respondents during the interviews that were conducted. The researchers perceived that this was also relevant to the study, thus, making an addendum.

Adaptive Strategies to Withstand Challenges of ALM

With the strategies given by the respondents, it is an adaptive one to withstand the challenges while using the alternative learning modality—the development of knowledge and self-improvement in perceiving knowledge in the task and activities that they do. The adjustment and strategies to address some problems while using the alternative learning modality for their internship are their coping strategies in facing each of the challenges.

Based on the statement of one respondent, the way she adjusted to address issues or concerns in ALM was to wait for the availability of their computer at home. The strategies of each student are a way of adjustment while using the specific alternative learning modality used for the clinical internship. The respondent statement was:

“Yung coping strategy ko, kasi siguro yung kapag naghihintay ako sa Mom ko, iniisip ko na baka hindi ko masagutan ng maayos. Baka kasi yung susunod na activity baka mahirap ganyan, baka hindi ko masagutan, may ibang activities kasi na hindi related sa internship like additional activity. So medyo kinakabahan ako baka hindi ko matama yung sagot ko iyun yung naging struggle ko din. Yung coping strategy ko din siguro, waiting ganyan, natuto lang ako maghintay kahit super late na siguro.” (R1)

(My coping strategy, because when I wait for my mom, I think that I might not be able to answer properly. Maybe my next activity might be difficult. I may not be able to answer because there are other activities not related to the internship, like additional activities. So, I'm quite nervous because I might not be able to correct my answer; that's also what I

struggle with. My coping strategy would also be waiting, and I learned to wait even though it's super late.

" According to Cole et al. (2011), the ability to wait is an important aspect of self-regulation. Another study done by Rymanowicz (2015) stated that the ability to wait is a form of self-control, or the ability to control one's own actions. While waiting may appear to be a passive pastime, it is, in fact, an active endeavor. Because we manage urges and self-regulate our thoughts, behaviors, and actions, waiting takes energy and control.

Based on the statement of the respondents, they need to have self-reliance in using the alternative learning modality. The adjustment they made to adapt to the new way of learning for self-improvement in attaining knowledge with the way of self-learning.

"This pandemic kasi, sa online set-up na ito, may synchronous at asynchronous yung classes diba. Sa tingin ko yung natutunan ko yung ano, self-study. Yung study skills ko naimprove ko this pandemic. Kasi ano, unlike sa face-to-face kasi, ikaw yung mag aadjust. This pandemic naman, pwede niyong iadjust yung schedule niyo. Paminsan kasi yung prof, 3 pm yung sabi niya, pero kasi yung body clock niya, nakaset sa gabi, sasabihin niya na 6 pm na lang tayong. Parang pwede niya iadjust yung oras niyo, hindi katulad noong face-to-face na delayed agad ng isang araw kasi next day na lang. So, parang nag aadjust ng schedule sa online setting." (R2)

(This pandemic, since it is an online set-up, there are synchronous and asynchronous classes. I think what I learned was to self-study. My study skills have improved this pandemic. Because, unlike face-to-face, you will be the one to adjust. During

this pandemic, you can adjust your schedule. Sometimes the professor will say 3 pm, but because his body clock is set at night, he would say that we should reschedule to 6 pm. He can adjust your time, unlike face-to-face when you're delayed by one day so that it will be moved the next day. So, it's like adjusting the schedule in an online setting)

Most of the statements gathered from the respondents on how they coped up were to self-study and to cope by doing the task. They stated that in order to withstand the challenges of ALM, they rely on themselves by self-studying and just push through to do the task. One respondent said that she needs to be specific on what needs to be done that day to finish and submit her requirements. These statements can be supported by Pinnegar (1998) that defines self-study as "a methodology for studying professional practice settings" with the following characteristics: it is self-directed and focused; it is improvement-oriented; it is interactive; it includes multiple, primarily qualitative methods; and it defines validity as a validation process based on trustworthiness (Mishler, 1990).

Perseverance is also one strategy to achieve what they need as a student using alternative learning modality. With the statement given by the respondents, it is one of their ways of coping strategies in gaining knowledge and information while using alternative learning modalities.

"With regards naman sa prof yung communication sa prof siguro, mangungulit ka lang talaga ng mangungulit hanggang sa mapansin ka nila. And pwede naman kausapin mo yung iba mong classmate, magkaroon kayo ng cooperation pero wag naman sa exams. Na parang ang mangyayari, pagdesisyonan nyo, pag usapan nyo baka meron naman na may mas

nakakaintindi kesa sa inyo. Ganun, tulong tulong lang.” (R6)

(With regards to the prof, the communication with the prof is probably-- you just have to keep on contacting them until they notice you. And you can talk to your other classmates, have cooperation but not in exams. Like what will happen is, you will decide, talk about maybe if someone understands it better. Helping each other.)

This statement can be supported by the study done by Brodbeck (2001) that states that the use of communication and taking the initiative in a certain thing or situation is a factor for a beneficial outcome and can also be a creative way of conversing with others, the drive people in taking the initiative is a result of being active and self-starting approach for a certain thing.

Coping strategy with the help of time management. Based on the respondents' statement, they need to make a schedule and allot time for the certain activities that need to be done. They need to organize their schedule and activities to finish all the tasks given to them while using alternative learning modalities.

“Ang hirap sabihin na nakapag cope up agad kasi until now, ang hirap pa rin. Kasi syempre diba kapag nasa computer ka magdamag and maraming other pwedeng gawin sa loob ng bahay, hindi lang naman nakafocus ka school, di kagaya nung dati na nasa hospital ka ayun lang yung iniisip mo. Ngayon kasi parang marami kang distractions. Ah nakacope up naman ako in a way na I have to allot time talaga for intemrship articles na ginagawa namin. I have to allot time, yun yung way for coping up ko siguro. Parang kailangan ko mag-allot ng time, kailangan ko maging

specific na ito dapat yung magawa ko for this day para matapos ko siya and masubmit ko yung mga requirements.” (R8)

(It's hard to say that you were able to cope up immediately because until now, it's still hard. Because, of course, when you're on the computer all night, and there are many other things that can be done inside the house, you're not just focused on school, unlike when you were in the hospital, that's just what you were thinking. Now we have a lot of distractions. I coped up in a way that I really have to allot time for internship articles that we do. I have to allot time; that's probably the way for me coping up. I need to allot time, and I need to be specific that this is what I should be able to do for this day so that I can finish it and submit the requirements.)

With the help of time management, the respondents were able to cope up with the challenges of ALM. They stated that they must create a schedule and assign time for the various tasks that must be completed. They must plan their time and activities in order to complete all of the tasks assigned to them while utilizing ALM. This statement can be supported by the study done by Lay & Schouwenburg (1993) that states that time management skills are the same as the behavioral skills and really important for a student in organizing their studies and workloads.

Three of the respondents stated that they overcame the difficulties they had encountered while utilizing the ALM with the help/support of others. The assistance of those who may be familiar with the activity or task at hand. Furthermore, sources such as lectures, papers, and other similar materials aided their research coping skills.

“Sa tulong talaga ng mga friends mo. Minsan nacocompare mo yung gawa, nagiging guide din minsan yung gawa nila sa ginawa mo. Minsan sila din yung tumutulong sayo. Tsaka yung mga source talaga na pwede mong makita nakakatulong sa research mo.” (R11)

(With the help of your friends. Sometimes you compare the work, and sometimes their work also becomes a guide to what you did. Sometimes they also help you. Also, the sources that you can find really help your research)

This statement can be supported by the study done by Shah & Meisenberg (2012) that states that apart from lectures, media sites, textbooks, and handouts, there is an alternative learning model called active learning modalities. Active learning modalities are developed, which give significance to improving both the knowledge and routine clinical skills and reasoning and communication skills. These could be executed through smallgroup discussions that complement self-learning and active participation. Precisely, these two are termed problem-based learning and team-based learning as part of the active learning modalities.

Another respondent stated that her coping strategy was to have a preventive measure due to difficulty with her internet provider and other internet issues she has while using the alternative learning modality. According to the respondent's statement, she should prepare for the possibility of an internet outage by having a data connection as a backup.

“Usually talaga kailangan may back up ka na data kasi kung wala ayun, hindi ka talaga pwede umasa sa ano niyo lang internet provider niyo lang sa bahay. Kailangan talaga may back up ka na data.” (R4)

(Usually, you really need to have backed-up data because if you don't have that, you really can't rely on your internet provider at home. You really need to have backed-up data.

The adjustment of the respondents in using alternative learning modality by making ways for the problem in the resources that need for the specific alternative learning modality they used. It is based on the experiences of the respondents and how they faced and addressed the challenges they have.

“Bali yung sa pag eexam,kasi diba nagbibigay din sila ng mga exams nahihirapan ako. Nung una talaga iniisip ko paanong set up gagawin, paano ako mag aano, saan ako mag aano. Ayun nanghiram ako ng laptop bukod dun yung sa internet ang laki talaga ng problema ko sa internet so ang ginagawa ko parang nasanay na din ako na kahit sobrang bagal ng internet ko ” (R10)

(With the exam, since they give out exams, I have a hard time. At first, I was really thinking about how the set-up would be, how to do it, where to do it. So I borrowed a laptop. Aside from that, my problem with the internet is really significant, so it's like I'm used to it, even though my internet is very slow.)

The communication between the student and the professor is one of the coping strategies that the respondents stated from their experiences. The communication and discussion to the professor on the situation of a student while using the alternative learning modalities.

“sa tuwing nag eexam kami lagi din akong nakikipag communicate sa prof para malaman nila na mabagal talaga internet ko kasi sa exam limited yung time and binibigay lang nilang time halimbawa 100 items 1 ½

hour lang paglipat ko pa lang ng ano number umaabot ng 2-3 minutes babasahin ko pa so per question umaabot ako ng 5 minutes. So sa kahulihulihan nasanay na lang din ako.” (R10)

(Every time we take the exam, I always communicate with the professor so that they know that my internet is really slow because the time is limited in the exam and they only give me time, for example, 100 items, only one and a half hour are given. When I just go to the next number, it already takes 2-3 minutes. I will also read, so per question; I take 5 minutes. So in the end, I just got used to it.)

This can also be seen in the study done by Gamage et al. (2020) that states that the post-COVID-19 conflict in the distance learning component is not limited to the constraints of resources or the application of instructional methodologies. The primary issue is learners' or students' access to learning resources that can only be obtained via the internet, necessitating a fast internet connection.

Adaptation Strategies in Using ALM in Addressing Learning Outcomes During Pandemic

The drive of each respondent based on their statements on how they faced and made their own coping strategies while using the alternative learning modalities for their clinical internship. Boosting the urge to self-study and encouraging themselves with a positive mindset and self-motivation. Different strategies and alternative ways and options in addressing the learning outcomes with the given specific alternative modalities.

Based on the statement from the respondents, they're coping by having a positive mindset and thinking of positive aspects of what

they're doing in an alternative learning modality—encouraging themselves and converting negative thoughts to positive ones. The futuristic thought of achieving their goals gives them more factors to strive more to finish the task they need to do.

“Syempre motivation nalang din na para matapos na, kapag ginawa mo to, tapos na. Makakagraduate ka na, wala ka ng proproblemahin lalo na sinabayan pa ng pandemic mas tumaas yung drive mo na, ay kailangan mo na tong matapos kailangan ka ng bansa parang ganun. Kasi tayo talaga ang need ng bansa natin, yung pag ayos din ng healthcare system natin, kasi kapag nandun ka, namulat kami sa kung ano talaga yung field natin. Sobrang iba sya sa kung ano yung tinuturo lang, kaya iyun yung parang kailangan mong matapos na talaga.” (R9)

(Motivation in order to finish, once you do it, you're done. You will graduate, you won't have any problems, especially because of the pandemic, your drive has increased, you need to finish this, the country needs you. Because our country needs us to repair our healthcare system because when you are there, we become aware of what our field really is. It's very different from what's just being taught, so that's what you really need to finish.)

Another respondent stated his adaptation strategy was to enjoy the process. According to the respondent, this serves as a motivation in using ALM to address the learning outcomes despite the pandemic. The respondent statement was:

“Ineenjoy ko lang yung process. Kasi parang video games kasi eh, ayun yung nagpapaano sa akin e continue lang. Kasi realltalk, ang boring lang kasi hindi actual. Pero since ano siya parang video game

type, iniimagine ko na lang na parang ano to games tapos may mga achievements achievements na nakasulat like oh you got 88 out of 100, na momotivate lang ako na magproceed to the next activity. Kasi may mga scoring system din siya eh, para siyang ano, video game, para siyang app. Iniimagine ko isa itong computer game.” (R2)

(I just enjoy the process. Because it's like video games, that's what makes me just continue. Because real talk, it's boring because it's not actual. But since he's like a video game type, I just imagine games, and then there are achievements written like, oh, you got 88 out of 100, which just motivates me to proceed to the next activity. Because it also has scoring systems, it's like, video game; it's like an app. I imagine this is a computer game .)

According to the respondents' statements, they cope or adapt by maintaining a positive mindset/attitude. Despite the limitations and challenges they encounter while using ALM, they think about positive/encouraging thoughts. One respondent mentioned that his adaptation strategy was to simply enjoy the process as this serves as a motivation for him. The study of Hwayoung J. (2011) supports the respondent's statement as a person's characteristics, behaviors, and attitudes toward another person or particular situations. Soft talents, it is also argued, are similar to the traits of aspirations and are not dependent on learned knowledge. It also incorporates common sense as a soft skill, or the ability to think about and comprehend the world around us—the ability of a person to interact with others and sustain positive attitudes about them.

Even if the respondents experience challenges while using the alternative learning modality, there are alternative sources in order to

continue learning given by the professors and other sources. The alternative option available in addressing the learning outcome of the clinical internship is the Dean's encouragement for the available ways to learn while using the alternative learning modality.

"Yung challenges ng pandemic ngayon, isa na kapag sa internship talaga hindi ka pwedeng lumabas so hindi mo din makikita personally kung ano yung problem talaga na hinaharap ng hospital. Sa ALM kasi since hindi kami masyadong nakapag discuss since super late yung pag-ano samin nung course na yun, limited yung time na nakakapag usap usap kami or nakakapag meet kami with our prof so yung time na yun talaga, self-study tapos in encourage kami ni Dean to attend seminars kasi iyun lang yung pwede nating gawin ngayon, webinars/seminars na

nagtataackle about COVID yung cause ng pandemic. So kahit nasa bahay lang after mag ALM/after mag Labster, may ibibigay na webinar. Dun lang kami nakakakuha ng idea and dun namin natututunan kung ano ba talaga yung nangyayari behind dun sa COVID." (R3)

(The challenges of today's pandemic, one that when in the internship you really can't go out so you also can't see personally what the problem really is that the hospital is facing. In ALM, since we haven't been able to discuss much since it was super late, we had limited time to talk or meet with our professor, so that was really the time [to] self-study, and then Dean encouraged us to attend seminars because that's all we can do now, webinars/seminars that tackle about COVID the cause of the pandemic. So even if you are at home after ALM/after Labster, there will be a webinar. Only then do we get an idea, and only then do we learn what is really going on behind COVID)

The coping strategies from the information given by the specific alternative learning modality used. The idea of the articles given to them shows the correlation between the hospital setting, patient results, and theories. The knowledge attained by reading and understanding the said topic and may be used in actual hospital-based settings. This is how the respondents stated her experiences for her coping strategies in facing the challenges.

“Sa amin, yung nag fit ay yung articles which are about hospital settings or machines or yung mga patients results ganyan. So ayun siguro, they did try to find ways kasi yung time na yun ang dami ding nangyari. Hindi lang naman kami yung iniisip, meron ding other students. So, nung time na yun, yun yung nag fit, ngayon kasi diba may iba na silang ginagawa, nag level up sa kung ano yung meron sa amin.” (R8)

(For us, the ones that fit are the articles which are about hospital settings or machines or the patient results like that. So maybe, they did try to find ways because, at that time, a lot also happened. We are not the only ones being thought of; there are also other students. So, at that time, they were the ones who fit. Now they are doing something else, and they are leveling up with what we have.)

This statement can be supported by the study done by McLean (2016). He found that case-based learning is a method of correlating clinical situations in the field of healthcare to current knowledge in that discipline. It aids in the enhancement of clinical competence, clinical skills, and behavioral practice on patient outcomes, which can be linked to improved performance, attitudes, and teamwork. In table 6, it shows how the statements were inspected to find

codes about the coping strategies of the student in addressing the challenges of their clinical internship in utilizing ALM and how it was categorized and transformed into a theme.

CONCLUSIONS

Based on the findings formulated from this study, the following conclusions were drawn:

1. It has been identified that there are advantages and challenges which commensurate with the utilization of alternative learning modalities. It was identified in this study that there was only one theme that emerged; Innovativeness of ALM in addressing the gap for the clinical internship during the pandemic in which the respondents have shared the convenience of having ALM because it is online. So, respondents have easy access anywhere and anytime. In addition to this, due to its features, especially the simulation, it helps them understand the procedures because there were given questions right after each laboratory task. In addition to this, respondents noted that ALM utilization helps them be more familiar with the laboratory procedures. Especially the respondents who had a clinical internship in the hospital settings stated that with the help of ALM, they had knowledge about procedures that they were not yet allowed to do in the hospitals and some procedures that are not commonly done here in the Philippines. Lastly, the respondents have shared how they were able to enhance their skills given the fact that they need to cope with the online set-up of the clinical internship. Some respondents have shared that they were able to improve their patience towards problem-solving skills. In addition to this, they were able to grasp the learnings in being self-reliant and doing self-study. On the other hand, another theme has emerged to answer our research problem number

one regarding challenges with ALM. The theme is Drawbacks in virtual internship using ALM. Most of the respondents encountered problems in using ALM in terms of the slow internet connection that is the culprit for them not being able to finish the tasks on time and hassle for the activities, simulation, and exams.

2. Due to the saturation of statements of the respondents, the researchers can now conclude that with the utilization of ALM, there are no laboratory skills acquired and developed. But on the brighter side, even though there are limitations in an online internship in terms of gaining laboratory skills, the respondents perceive soft skills. More so, only one theme has emerged to answer research problem number two. The theme is Recognizing Soft Skills as a Critical Part in Virtual Internship Using Alternative Learning Modalities. The researchers have carefully extracted and analyzed each respondent's statements. Hence, the researchers have now identified that only soft skills were developed with the utilization of ALM. Nevertheless, most soft skills that have been developed were theoretical thinking skills, time management, critical thinking skills, and problem-solving skills.

3. Therefore, the positive and negative influences in utilizing the alternative learning modalities in addressing the intended learning outcomes of clinical internship during pandemic. It ties back with the third research problem in terms of addressing the learning outcomes intended for the clinical internship. For the positive influences, there was only one main theme that emerged. It is the Positive Influences: Towards the Realization of Virtual Internship. With regards to the theme developed, the utilization of ALM as a substitute for the absence of face-to-face internship

had satisfied the respondents. Most of the respondents have personally shared experiences where they apply the learnings they have obtained from using ALM. Thus, this supports that even though using ALM is far from doing the actual internship, some of the respondents still had positive experiences regarding the learning process. More than half of the respondents were able to enhance skills through the use of ALM with regard to their clinical diagnosis skills. However, aside from having a positive impact, it also has negative influences. The theme that emerged from the data analysis of negative impact was Negative Influences: Critical Gaps in Virtual Internship. Respondents have shared that they could not totally say that intended learning outcomes were achieved because there is a lack of practical skills. Based on the data analysis utilizing ALM will still not replace the importance of having a face-to-face clinical internship.

The coping strategies of the respondents are not initially part of the research questions. This theme emerged based on the responses of the respondents during the interviews that were conducted. The researchers perceived that this was also relevant to the study, thus, making an addendum.

In order to determine how the respondents cope with their encountered challenges, the researchers asked them during the interview regarding their strategies. There are two themes that emerged during the thematic analysis. These are Adaptive strategies to withstand the challenges of ALM and Adaptation strategies in using ALM in addressing learning outcomes during the pandemic.

RECOMMENDATIONS

While study findings reveal variation in the experiences of the 4th year medical technology

interns on utilizing alternative learning modalities, after a thorough analysis of the data, the experiences shared by the study participants also indicate several immediate actions that can be taken to improve alternative learning modalities.

Expand the participating respondents

To further elaborate and assess the evaluation of alternative learning modalities of student interns in bridging the gap between pedagogy and practice in the midst of pandemic, the researchers recommend an additional variable such as expanding the respondents involved in the study including different allied medical students such as nursing, physical therapy, dentistry and other allied medical student/interns. The researchers also strongly propose that other skilled based courses be included, apart from the above mentioned medical courses. In the way of expanding the participating respondents for the evaluation of the different alternative learning modalities with the help of different perspectives and experiences of the other respondents using their specific alternative learning modality.

A different approach in evaluating ALM

It is suggested that a different approach should be considered to evaluate these alternative learning modalities fully. Wherein future researchers should evaluate other alternative learning modalities aside from the ALM used in this research. It is also recommended that to assess the different learning modalities used by the students entirely, future researchers should group them based on the ALM used by the intern students and the date of time of the deployment of their clinical internship. In addition to a different approach in evaluating the alternative learning modalities, new variables should be taken into consideration by future researchers in order to

fully bridge the gap between pedagogy and practice of student interns in order to address the learning outcomes.

Improve Alternative Learning Modalities

If the coronavirus pandemic persists, specific alternative learning modalities should be improved to be able to cater to the learning needs of the students and interns. The educational administration and educational managers, including the staff, should know and learn the actual experiences of students and interns who use alternative learning modalities as a substitute for face to face learning in order to develop a systematic model for innovative methods in teaching not only the introductory courses but also in skill-based courses. Specific alternative learning modalities should be user-friendly and accessible without the need for special equipment and sophisticated requirements. They should also offer a variety of alternative learning modalities that meet all the different learning styles of students. Ensuring the capability of the students in using the alternative learning modality, their easy access to the system and the technological aspect of the alternative learning modalities. The assessment of each learners in their technological literacy with the correlation to the development of new approach and improvement of the alternative learning modalities

Ensure the learner's success

When developing a new approach to learning modalities, the researchers strongly propose that they should ensure the learner's success in using alternative learning modalities. They should also include opportunities for learners to reflect on their learning and possibly adjust or modify assignments, which could raise learner awareness of the value of the learning process. They should ensure that

institutions and students, in particular, have ample time to adapt to the process of learning while using these alternative learning modalities. In addition to the development of a new approach of alternative learning modalities, the consideration of technological aspects of each student and the capability of the learners to adapt and learn the process of the new approach of alternative learning modality. Evaluating the situation of the learners in adapting and using the new approach of the alternative learning modalities in ensuring the learners individual success in their learnings

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