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PHENOMENOLOGICAL ANALYSIS OF THE LIVED EXPERIENCES OF SCIENCE TEACHERS AMIDST THE PANDEMIC ERA IN PUBLIC SECONDARY SCHOOLS IN CAMALIG, ALBAY

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ABSTRACT

This paper examined the lived experiences of twenty-nine (29) secondary Science Teachers amidst the pandemic era in Camalig, Albay. It aimed to identify the learning modality used in teaching Science during the pandemic; determine the teaching-learning practices utilized by Science Teachers; analyze the challenges met and their coping mechanisms; and develop a Manual of Best Practices in Science teaching amidst pandemic era. This study utilized the phenomenological approach through the conduct of focused group discussion to probe meanings from the perspective of Science Teachers. Based on the data gathered, the following conclusions were recognized: (1) majority of Science teachers utilized Modular Distance Learning (MDL), while some adopted Blended Learning (BL); (2) the teaching strategies practices practiced by Science teachers were utilization of online platforms in delivering instruction, contextualization of instructional materials and utilization of varied assessment. (3) The challenges encountered were difficulty in delivering instruction, insufficiency of learning resources, validity concerns in assessment of learning; and (4) their coping mechanism was adapting to new norms in education. This implied that interventions must be implemented not just for learners but also for teachers to address learning gaps brought by the restrictions of distance learning.

KEYWORDS: Phenomenological research lived experiences, pandemic, distance learning, Science teaching.

1. INTRODUCTION

Education's paradigm shift in response to the corona virus (COVID-19) epidemic profoundly altered the learning environment for every Filipino learner. In an article published in Frontiers in Education, "Teaching and Learning Continuity Amid and Beyond the Pandemic," teachers and students expressed their concerns about continuing to conduct classes, the learning modality, appropriate assessment, and access to learning materials. According to the results of the Philippine Program for International Student Assessment (PISA) in 2018, science literacy students in the Philippines show the following main points: a) Filipino students score 357 points in Science Literacy, significantly lower than average of Organization for Economic Co-operation and Development (OECD) which is 489 points; b) Students from private schools score 399 points in Science Literacy, significantly higher than public school students, who average 347 points; b) The average performance of students in urban areas was 370 points, which was significantly higher than their average performance in rural areas (333 points), d) Senior high school students (439 points) have better performance than Junior high school students (356 points).

As part of its emergency remote education response after COVID-19, the Philippines adopted the Basic Education Learning Continuity Plan (BELCP) as mandated by the Department of Education Order No. 012 series of 2020. This plan was developed collaboratively with stakeholders to make education available to all students nationwide. Additionally, the plan considers the community's resources and capabilities. Equity considerations, urging schools to adopt the most appropriate modes of instruction based on the community's structural capacity, are considered (Department of Education, 2020). As per a report, among the various modes of remote learning available, modular distance learning in print format has been the most popular mode of instruction for most students this school year (Magsambol, 2020).

This study examined the phenomenological perspective of the lived experiences of Science Teachers amidst the Pandemic Era in the Public Secondary School in Camalig, Albay. It aimed to identify the teaching-learning practices and challenges met in teaching Science as experienced by teachers in light of the pandemic's limits. Based on the data, the researcher anticipated helping teachers, learners, and other education stakeholders identify and address learning needs and achievements by developing a manual featuring the Best Practices used in teaching Science during the pandemic. In the long run, this will contribute to the development of flexible and globally competitive Filipino lifelong learners, despite future adversities such as the COVID-19 pandemic.

1.2 Objectives of the Study

This research aimed to probe a phenomenological analysis of the lived experiences of Science Teachers amidst the Pandemic Era in Public Secondary schools in Camalig, Albay.

Specifically, this research aimed to attain the following objectives:

1. Determine the learning modality used in teaching Science;
2. Determine the instructional practices utilized by Science Teachers along
   a. Instructional Delivery
   b. Instructional Materials
   c. Assessment of Learning;

3. Identify the challenges met and their coping mechanisms along with the abovementioned variables.
4. Develop a Manual of Best Practices in Science Teaching amidst Pandemic Era.

2. METHODOLOGY

Research Design

This study utilized a phenomenological approach, which is qualitative research that aims to explain a phenomenon's universal nature. This research examined the lived experience of teachers in distance learning during the COVID-19 crisis in order to acquire a better understanding of how people interpret events.

Research Site

The study was undertaken in public secondary schools in Camalig, Albay. Camalig, as one of the municipalities under the Department of Education Albay Division, is divided into two districts- Camalig North and Camalig South. Camalig North District includes Pariaan National High School, Bariw National High School, and Caguiba National High School. At the same time, Camalig South comprises Camalig National High School, Cotmon National High School, and Panoypoy High School.

Respondents of the Study

A total enumeration of the twenty-seven (27) secondary school Science teacher-respondents of Camalig North and South District includes ten(10)teacher-respondents from Camalig National High School, three (3) from Bariw National High School, two (2) from Caguiba National High School, three (3) from Pariaan National High School, six (6) from Cotmon National High School, and three (3) from Panoypoy High School. The FGD was conducted in their respective schools following minimum health protocols.

Research Instrument

The primary tool utilized together data on the teachers 'lived experiences of Science teachers was the interview through a focus group discussion (FGD). The instrument was content validated by five teacher experts who have taught Science forat least five years. The item-content Validity Index (I-CVI) of the questions included in the research instrument is one (1), which is the acceptable CVI value involving five experts (Polit & Beck, 2006).

Research Ethics Protocol

Focus Group Discussion with the teacher-respondents was conducted upon approval of the Communication Letter from the Schools Division Office (SDO) Albay. With the Endorsement Letter from the Schools Division Superintendent, the researcher coordinated with the School Heads of Camalig North and South Districts to schedule the Focus Group Discussion (FGD) regarding the availability of Science Teachers. The FGD is secured to adhere to the conditions specified in the Endorsement Letter. Responses were tape- recorded and were assured to be treated with the utmost confidentiality.

3. RESULTSANDDISCUSSION

Learning Modality Used in Teaching Science

DepEd embarked on advancing the BE-LCP to enable learners of primary education to continue learning. Also, it aimed to help teachers deliver the teaching-learning process in a safe work and learning environment amid the threat of COVID-19. Secondary school Science teachers in Camalig North and South District, Division of Albay, adopted Modular Distance Learning to ensure learning continuity despite the health restrictions implemented. Regarding the situation Camalig, nineteen (19) out of 27 respondents have mentioned adopting pure Modular Distance Learning, and eight (8) teachers adopted blended modality while considering the resources available and the learners' readiness.

Modular Distance Learning

Different countries have formulated educational policies that support flexible learning modalities to reduce the distressing consequences of the COVID-19 pandemic (Agaton & Cueto, 2021). The educational sector in the Philippines has also implemented varied strategies to adopt new teaching approaches while considering a limited-resource environment. COVID-19 pandemic restrictions forced schools to adopt appropriate learning modalities in their respective areas. Quoting respondent number 2, 7, and 16, respectively,

(2) "Modular, others are sending their activities through Messenger."

(7) "Modular and using Facebook Classroom, Is end the activity sheets and the students will answer through Messenger."

(16) "Modular because there's no internet access in This area."

More information is required regarding what should be taught, how it should be taught, how the environment influences educational equity, and how to guarantee everyone anequalopportunitytolearn.Manyteachersandlecturershaveneverhadofficialtrainingorpreviousexperienceteaching online(Pedroso&Herbuela,2022).Some have chosen it based on what was required, while others have stated that they chose modular distance learning due to the lack of resources. Respondent number 9 said,

(9) "The teachers are having a demanding time since the lessons aren't being followed as scheduled, since there are modules that are delayed. In alternative, the teachers are trying to find it on the Internet to supplement the lack of modules given by DepEd."

Students of financially disadvantaged or low socioeconomic status encounter various barriers and risks, including digital exclusion, long-term educational disengagement, poor technology management, and increased psychosocial challenges (Agaton & Cueto, 2021). Quoting respondent number 3's statement from the interview,

(3) "It is disadvantage ous to those kids who need a proper place to study, such as having messy and noisy study areas.

An indication that the adoption of appropriate learning modality should also be based on the socioeconomic capacity of the learner. Moreover, another factor in choosing learning modality appropriateness is students' efficiency in learning in a disadvantaged setup and there sources available in the area. Furthermore, to supplement the Self-Learning Modules (SLMs) crafted and provided by the Department of Education, teachers adopted other methods, such as video lessons and online learning platforms, to easily reach distant learners without compromising their health and safety.

Blended Learning

The appropriateness of the learning modality can also depend on which platform these students prevalently use and can be easily accessible for everybody in the class. When used daily, technology is a plat form that is readily taken for granted. Nevertheless, the requirement for greater financial rewards for access prevents its widespread use (Rawashdeh et al., 2021). Online knowledge is growing by giving students more access to computers and other electronic devices (Hussain et al., 2020). A response from teacher number 19 said,

(19)"Yes, the children learned independently, but some students didn't absorb what they read entirely. Now, that it was face-to-face when students are asked for recitation, you can see them searching the Internet. But we cannot blame them since they got used to it."

A study by (Ahmadi et al., 2020) showed that, blended learning (BL) is used more frequently in schools due to its benefits over conventional and online teaching methods. Findings from prior studies by (2022) and Ghazal et al. (2018) indicated that the BL approach enhances students' learning engagement and experience by creating a significant influence on students' awareness of the teaching modality and learning background. Some representations of implementing blended learning were shown from the responses such as teacher- respondent number 5 said,

(5)"We used modular distance learning, and online classes using Google Meet."

However, one good thing about learning delivery modalities in today's setup is the ability to practice self- sufficiency, as shown in the responses of teachers number 1, 8, and 26, respectively,

(1)"The advantage is they can practice self-Learning,"
(8)"The advantage is the kids are learning through their discovery,"
(26)"For met head vantages, for students, though still has a specific timeline to finish their modules, learning is self-phased, they can decide on what time of the day they will

These responses have shown that blended learning modalities can do well and teach suitable studying mechanisms for students. According to earlier studies, using e- learning tools in education has several benefits (Raspopovic et al.,2017).E-learning has been described as having the capacity to concentrate on the needs of specific learners. For instance, focusing on the requirements of individual students rather than the needs of educational institutions or teachers might efficiently provide knowledge in the digital age (Rawashdeh et al., 2021). Additionally, computer and

composition experts have argued that using computers in the writing classroom has the advantage of decent ring the teacher and encouraging students to participate in the construction of knowledge (Terzi & Elik, 2005).

The quality of learning outcomes have been the main concern as the educational system adopted distance learning modalities. Respondent number 15 stated,

(15) *"Modular's advantage is its activities are self-directed. However, it's disadvantage to those kids that experience low level of comprehension since they aren't learning."*

andrespondentnumber20,

(20) *"Same, it's more of a disadvantage at my end,someofthemodule'sactivitieshaveanswerkeys,sosometimes,students do not read it anymore and they just copy the answer key turning them into lazy ones."*

Lack of self-regulation among learners sometimes results in poorly done assignments, submitted late, or given insufficient time. Learners who lack self-regulation tend to not assign sufficient time for completing assignments, switching to poor-quality work or late assignments. Overall, successful students are more confident that they will succeed, have better access to technical knowledge, are more responsible, and are better at organizing their affairs (Rawashdeh et al., 2021).

Teaching-Learning Practices Utilized in Distance Learning

Given the epidemiological picture, the direction of the overall government response, and the directive of the DepEd Secretary to find ways for learning to continue in a safe and healthyenvironmentamidCOVID-19.Amatrixofthelearning delivery modalities, considerations, and strategies is stipulated in the BE-LCP. Due to certain health restrictions, Science teachers utilized various types of techniques and strategies in order to supplement learning aside from the given Self-learning Modules. Among the respondents, two (2) utilized the ready- made SLMs and LAS, sixteen (16) teachers used modified supplementary learning materials and nine (9) teachers used online resources and platforms in Instructional Delivery and Instructional Materials. Regarding assessment, two (2) teachers used the Progress Report Chart assessment, and twenty-five (25) teachers used teacher-made summative tests.

Utilization of Online Platforms in Delivering Instruction

In distance learning, teachers require more immediate access to verbal and nonverbal input from their pupils. The instructor in a traditional learning setting can use this feedback to modify the teaching process in real-time to fit the needs of their students by using verbal and nonverbal cues (Kara,2022).Instructional delivery was mainly done through text messaging, social media, and online educational platforms such as Google Classroom, Facebook, and Messenger. Respondent's number 17, 18, and 20 said,

(17) "We can do everything in Google Classroom, as it allows us to create PowerPoint presentations and upload them later there. After the students read the materials, I can upload exams through Google Forms, and the instructions are to be sent in group chat in Messenger."

(18) "I'm instructing them and sending them Power Point presentations through messaging apps. In doing assessments, I based them on modules for me to see if they followed what's in the presentation or if they had other ways."

(20) "I'm posting and sending them instructions for the activities through the Facebook group since if it's in Messenger, it's mostly overshadowed by other messages. In online learning, Irely on online apps and use Google Forms to assess them."

Thus, it is also crucial for teachers to adapt certain learning practices—especially in new setups, for better implementation of distance learning. The respondents from the survey have stated different mediums in providing lessons and assessments to the students.

Contextualization of Instructional Materials

Students' motivation, retention, and learning can all be enhanced by contextualizing the course's material and ideas (Simuja 2016, et.al). The respondents have catered their instructional materials depending on the mental capacity of their constituents. In the responses of teacher numbers 24, 10, and 11, respectively,

(24) "We're simplifying modules to help students understand them better."

(10) "Simplifying the module so that the child can understand it more easily. Also, sending videos too."

(11) "Make activities aligned to the topic so that the slow learners could understand more."

The increased popularity and use of the Internet have been coupled with increasing online information that students and educators can access to improve learning outcomes. Now, more than ever, students can surf resources on the Internet that they once could only find in libraries or via expensive subscriptions. Teachers also locate relevant websites for students to review while searching the Internet for information on a specific topic (Distance Education Models and Best Practices, 2011). Instructional materials used were mainly Self-Learning Modules and Learning Activity Sheets. Some teachers modify the modules based on learners' capacity and availability of materials. Materials such as PowerPoint presentations, Educational Videos/Video Lessons, and related links were also used to guide learners in answering modules. Respondent's number 9, 18, and 20 said, respectively,

(9) "Provide videos online, but it's disadvantage ours to those who have no access to the Internet and gadgets. We also encouraged home visitation."

(18) "I'm instructing them and sending them PowerPoint presentations through messaging apps. In doing assessments, I based them on modules for me to see if they followed what's in the presentation or if they had other ways."

(20) "The instructions are already indicated in modules, and I sent the link to the instructional materials through our group chat." In terms of assessment, it is already in them odule.

Teacher-learning practices have also evolved to maximize the provided supplementary materials for the students. To provide a more efficient twist, teachers have tweaked it to suit the learning readiness and styles of the learners.

Utilization of Varied Assessment Tools

Assessment during the pandemic has been a great challenge to Science teachers. Modular distance learning requires learners to accomplish learning activities over a certain period. However, not all learners were able to submit their outputs on time. Making assessment difficult for teachers because it is their primary tool for assessing learners. Aside from submitted outputs, teacher-made Summative Assessment was administered to learners as reflected in the responses of teachers number 3 and 16,

(3)"We are creating summative tests in Google Forms, and we can see who submitted them; still, there are somere servations about the validity of their works since some of them use Google engines to answer."

(16)"The teacher will adapt their methods of teaching in different ways and can use the most efficient materials in order for the learners to learn. In assessing the learning of the students, the teacher needs to encourage and support the learner's learning. Teachers can assess based on the outputs and performance of the students."

Some teachers also used a teacher-made monitoring tool to track the learner's progress as they completed the given modules. They could log their daily routines and keep track of their learning status based on respondent number 5.

(5)"Through the progress report, we can see if there is really progress in the student's learning."

However, the majority of the responses presented several negative implications to learners based on the statements of respondent numbers 4,6 and 7, respectively,

(4)"The negative thing is that sometimes the students are piled up by the activities because they are doing them at the last minute when the submission is nearby. Because of that, they are prone to searching for answers to finish immediately, so the context of learning is gradually missing because they based their answers only on the Internet."

(6)"We are short on resources. Sometimes, we do not have modules, so we're just providing activity sheets."

(7)"It's difficult to check since there are plenty, to the point that it confuses us whose activity we are checking."

The ability to deliver education in a virtual environment using various devices, including smart phones, laptops, and tablets, is a significant advantage of e-learning (Salloum & Al-Emran, 2018; Salloum et al., 2019). This virtual learning approach benefits professors and students by giving them access to digital course material and sharing knowledge. It also improves learning effectiveness by encouraging greater engagement between educators and students through online discussion boards, knowledge sharing, and content sharing. Thus, in implementing better teaching

mechanisms in a distance learning setup, teachers must practice different styles that could encourage and engage students in learning efficiently despite the lack of face-to-face setups.

Challenges Met and Coping Mechanisms

For all educators, the COVID-19 pandemic's limits have created several difficulties. These were also apparent in the responses of Science teachers in Camalig. Out of 27 respondents, thirteen (13) teachers experienced difficulty in delivering instruction, five (5) complained of insufficiency of instructional materials, and nine (9) showed validity issues in assessing the learner's performance. All the respondents have agreed that a significant learning gap is apparent as education transitions back to normal.

Difficulty in Delivering instruction

When the COVID-19 pandemic hit its peak, all educators much more than encountered the need to change familiar unit plans, incorporates new learning platforms, solve technological challenges, and shift instructional goals. Overall, the significant challenges in the quality of PMDL imply that teachers need to improve the appropriateness of outputs of summative tests, activities, and post-tests given to the learners (Talimodao & Madrigal, 2021). Various challenges came to light as they went through the distance learning scheme. Nevertheless, teachers were challenged by the clarity of instructions in SLMs. It indicates that simple language and easy-to-follow instructions are provided for the learners. Furthermore, results revealed that teachers' challenges in modular distance learning include time-consuming, incomplete, and unanswered modules, inadequate parental support, and insufficient teacher training (Cabardo, 2022).

The unavailability of learning materials, reliability of assessment tools, and incomplete outputs are the three main challenges encountered by most Science Teachers, as reflected in the responses of teacher numbers 2,12,and13,respectively,

(2)"We have poor internet connection, lack of gadget difficulty in getting the modules and difficulty in collaboration with the parents for some reason."

(12)"In terms of assessment, we need standardized tests to gauge if the students have gained knowledge."

(13)"One of the challenges that I've met during the pandemic is that all of us have a hard time distributing modules since the instructions are only to be sent in group chats. It's tiring on our end because we have different classes, so our Messenger is bombarded with it, and it's stressful.Sometimeswerelaytheinstructionstoparentswhoaregettingthe modules, but they aren't delivered as detailed as we do. It's already challenging to pick activities since some of the modules given by DepEd do have answer keys, and students are most likely to copy them. Hence, we're choosing activities that test if the students' gained knowledge. Nowadays, students are hard to reprehend because they brought their attitude from modular learning."

These challenges may damage the quality of the modality, for these factors must provide learners with independent practice and self-regulation. Lastly, this also challenges module writers and their quality assurance team to reevaluate standards in publishing SLMs with adequate assessment strategies. According to Lara (2019), research on parental involvement in children's education has

consistently shown positive correlation between parent a involvement and student outcomes. It means that parents' involvement and knowledge of a particular subject, such as Science, helps motivate the students to learn and increases their avenue of learning in school and at home. Aside from the lack of knowledge from parents, Participant Number 3 stated that,

(3)*"We lacked equipment such as a printer, especially in the first year of modular."*

The lack of materials and updated equipment in teaching could ensure student learning and keep them caught up among other students who use advanced technology and updated resources and learning materials. Mupa (2015) stated in their study that Teachers' instructional materials are limited to textbooks and online resources.

When the participants were asked about the best practices to improve the teaching of Science further, teachers mentioned that the lessons should be anchored in Most Essential Learning Competencies and should be by the DEPED's prescribed MELCS, quoting respondent number 7,

(7)*"In accordance to the DepEd prescribed MELCS contextualization is a must since students are learning at home, learning activities must be suited in the local setting."*

Furthermore, adding substance to the teaching, such as trying different teaching techniques, is also suggested by the participants since students have different types of learning that can be effective for them to retain better the learning's they had in school. Wegner (2013) suggested that learning strategies are necessary for students to foster their application of results in education. Respondent number 10 stated,

(10)*"There is multiple intelligence among the learners; there are students who are visual learners, and there are also kinesthetic learners who love to draw."*

Thus, applying learning strategies in child's capacity will help them better understand the described concepts.

Insufficiency of Learning Resources

`Challenges are inevitable to teaching and learning, especially when a significant adjustment was made for teachers and students back when modular and online learning was implemented due to the pandemic. Based on the answers and interviews with the participants, some challenges and problems they have experienced are primarily technical problems with learning resources, quoting respondent's number13and16,
Respectively,

(13)*"There were simple experimentation to bed one in*
Some of the slms/las, but only a few learners have conducted those activities. The slms also were not always available to the teacher have to provide copies to the learners by reproducing them. There should be enough and in time supply of the SlMs
/l as to the teachers."

(16)"We have poor internet connection, lack of gadget difficulty in getting the modules and difficulty in collaboration with the parents for some reason."

And stressful and confusing to both teachers and students, quoting teacher numbers 12 and 17, respectively,

(12)"Back in modular, it is very stressful on the student's end."

(17)"Sometimes we relay the instructions to parents who are getting the modules, but they aren't delivered as detailed as we do. It's already challenging to pick activities since some of the modules given by DepEd do have answer keys, and students are most likely to copy them. Hence, we're choosing activities that if the students' gained knowledge. Nowadays, students are hard to reprehend because they brought their attitude from modular learning."

It cannot be denied how distance learning affected the country's education system, especially with its underlying problems, such as internet connection and lack of materials. Internet connection is essential, especially to learning, because that is where resources are primarily found conveniently. The lack of internet connection also means losing communication between a teacher and the student, which is very important in the learning modality practiced during the pandemic. Apart from that, the stress that the bewilderment caught up by adjusting and learning about self-learning modules is also very chaotic. In fact, not only students and teachers felt the stress but also parents who tried their very best to teach their children. Apart from that, the general impact of the pandemic, which added to more mental health stress, also added to the burden experienced by students and teachers, which then affected the quality of learning experienced by the students?

Validity Concerns in Assessment of Learning

Assessment during the pandemic has been a great challenge to Science teachers. Modular distance learning requires learners to accomplish learning activities over a certain period. However, not all learners were able to submit their outputs on time. Making assessment difficult for teachers because it is their primary tool for assessing learners. Aside from submitted outputs, teacher-made Summative Assessment was administered to learners as reflected in the responses of teachers number 3and 16,

(3)"We are creating summative tests in Google Forms, and we can see who submitted them; still, there are some reservations about the validity of their works since some of them use Google engines to answer."

(16)"The teacher will adapt their method so teaching in different ways and can use the most efficient materials in order for the learners to learn. In assessing the learning of the students, the teacher needs to encourage and support the learner's learning. Teachers can assess based on the outputs and performance of the students."

These teaching practices had both positive and negative impacts on learners. Responses showed that the positive side of the coin lies mainly in favour of fast learners. Furthermore, most responses presented negative implications to learners based on respondents' 4, 6, and 7 statements,

(4)"The negative thing is that sometimes the students are piled up by the activities because they are doing them at thelastminutewhenthesubmissionisnearby.Becauseofthat,theyarepronetosearching for answers to finish immediately, so the context of learning is gradually missing because they based their answers only on the Internet."

(6)"We are short on resources. Sometimes, we do not have modules, so we're just providing activity sheets."

(7) "It's difficult to check since there are plenty, to the point that it confuses us whose activity we are checking."

Due to the pandemic, traditional learning or face-to- face classes have been suspended for almost two years. The reason behind this is to prevent the mutation of viruses in people, especially in crowded places like schools. However, the significant and quick adjustment that students and teachers have to under goes created a significant change and effect on their learning. The change in the mode of learning also changed the practices of how teachers deliver their lessons and activities to students. The response of the participants on the effect was mixed. Some of them answered that it is positive, such as respondent number 3,

(3)"The positive side is their development of self-paced learning; the negative side is that no matter what activity we ask the student to do, if he does not develop independent learning, we will have a really difficult time."

Apart from that, because there are no teachers to check and observe what they do with their activities, students' answers become unreliable because the Internet answers the activities instead of the learning's they had while self-studying. Korolkov (2020) stated that the lack of personal contact with the teacher and their classmates affected their learning as most students turn to cheating and laziness at the end of the day.

Adapting to New Norms in Education

As previously mentioned, Science is a very complex subject, and student needs practical learning, such as experiments and hands-on activity that they need to incorporate into their learning for lessons to be more effective and fun. In the pandemic, Science teaching has changed because of the pandemic, and teachers have approached how to make Science teaching more efficient and effective. Based on teacher- respondents' statements, a significant learning gap exists as the educational system transitions back to the usual setup. They have noticed that there is an apparent decline.

in the different Science process skills and concepts, including the basics such as reading, writing, and problem-solving, as evident in the statement ofrespondents'numbers9,10,and11, respectively,

(9)"There are nonreaders, and if you give them plenty of tasks, they tend to get overwhelmed. Nowadays, I notice that students brought their attitude from modular learning; that's why they're having a hard time."

(10)"Thereare7thgradestudentsthatdonotknowhowto multiply; sometimes in science, there are problem-solving exercises, so the teachers tend to repeat that lesson for the student to understand."

(11)"It seems like they don't have problem-solving skills; some time sit requires us to translate in Bicol translation for them to have understanding."

Based on the following inferences of the teachers, concerns they brought is the reading comprehension and understanding of the students, especially in English, because Science is taught in the English language, as stated by respondents' numbers 4, 7, and 12, respectively.

(4)"Students should learn how to read first, especially in English, for a better understanding."
(7)"Practice reading and writing. It's a must to pay attention to the slow learners."
(12)"I think the general concern that must be given attention is the establishing effort on learners in times of emergencies. We must give attention to bring a sense of vulnerability to the learners and to give attention to the needs of the students as their priority needs, especially in the learning process."

Many teachers have brought attention to how it will be helpful for the students to learn how to read words correctly so that they can catch up and better understand the topics being discussed in Science. Researchers say reading comprehension is crucial for learning Science and developing scientificliteracy(Yoreetal.,2004).Sciencecanonlybeformed,altered, and transmitted through language (Neri, 2019).

Furthermore, assistance from parents is crucial, especially in this new normal. Parental communication is a potent mechanism to ensure teachers can gauge how well the children are doing. Pascual (2021) stated that educators could assist in parenting by advocating a change to a child's daily schedule and encouraging a child's literacy development at home. Parents can act as their children's guides, tutors, and mentors to learners. Quoting the statement from respondent number 10,

(10) "Encouraging students to accomplish their modules honestly and orienting parents on their roles and limitations in helping their children. Asking for pictures/documentations as proofs that students are really the ones doing the work."

Pentang (2021) showed how cautious assistance, instruction, and mentoring can enhance the performance of homeschooled pupils and study with their modules with no oversight. Even with the difficulties identified, Science teachers could handle modular instruction, like De Manalo and Villa (2020). These difficulties exhibit the instructors' innovation, pliability, and adaptability, as shown in the response of the teacher Number 2,

(2)"As time went by, we could cope with the situation; we learned time management, and we became resilient as well as the students."

Teachers must develop strategies to get learning ready, specifically printed modules and materials. None the less, Tagupa (2018) pointed out that educators must manage these ratings to drop. Money does not, in fact, matter, for Teachers may spend their own money, but they must serve. One example is the response of teacher number 11,

(11) *"For the incomplete LAS, I reproduced the LA Susing my own printer at home. It would have been easier if they designated the printing of as materials to the school level since we have resources also instead of waiting for the supply from them".*

According to Guiamalon et al. (2021), educators should create and use the right strategy and keep doing so to meet the demand for new typical education, for example, by making their modules or activities when needed. Hodges et al. (2020) added that several educators had quickly created online learning solutions due to the current health crisis. Educators discover solutions in all situations, exposing themselves to and anticipatingwhatisneeded.Accordingtorespondentnumber8,

(8) *"We cope with that by decreasing activities so the students have time to relax. Last Christmas break, we didn't give modules, as we wanted them to enjoy their breaks. On the teacher's end, we are doubling the effort for them to understand the information or lesson that the students do not understand well back in modular."*

Resiliency and innovation of teachers were hugely manifested among teachers in distance learning settings. The abrupt change required teachers to update themselves on the new trends in education in a short period. Adapting to the new norms is inevitable, and using available resources was significantly optimized to bridge students' learning needs. However, despite the teacher's efforts, significant learning gaps emerged as schools returned to normal. It prompted the need for appropriate interventions for learners and teachers.

4. Conclusions And Recommendations

The study's findings showed that most secondary school Science teachers in Camalig, Albay, utilized Modular Distance Learning, and some adapted blended learning to supplement learning needs at the onset of the pandemic. Varied learning practices were employed in Science Teaching, which include the use of online media platforms, text messaging, and other educational sites in Instructional Delivery, Self-Learning Modules (SLMs) and Learning Activity Sheets (LAS), Video Lessons, and Google Classroom in Instructional Materials and teacher-made summative tests in Assessment of Student Learning. Challenges encountered by Science teachers in distance learning include difficulty in delivering instruction, insufficient learning materials, and reliability concerns in assessment, which prompted teachers to exhibit adaptability to new norms in education. This implied that there is a need to implement learning interventions to address the learning gap brought about by the restrictions of distance learning.

Considering the result of the study, the researcher recommends that Science Teachers utilize appropriate Distance Learning Modalities to cater to learners during pandemic or other class disruptions, considering the schools' geographical location, the learners' readiness, and the availability of learning materials. Curriculum designers and implementers may design programs for teachers to equip up-to-date skills and teaching strategies focused on those learners transitioning from distance learning to the usual classroom setting and those unable to report in school physically. Furthermore, a manual of the Best Practices in Teaching Science that aims to bridge the learning gap as the educational system transitions back to a normal setting may be developed, and a database of distance learning instructional materials and assessment tools accessible to Science

teachers may be created. Also, related studies may be conducted to improve Science teaching further to recover learning losses during the pandemic, and the study may serve as a reference for researchers who deemed to conduct similar under takings.

REFERENCES

1) Agaton, Casper & Cueto, Lavinia. (2021). learning at home: Parents' lived experiences on distance learning during COVID-19pandemic in the Philippines. International Journal of Evaluation and Research in Education (IJERE).10.901- 911. 10.11591/ijere.v10i3.21136.
2) Aleksey, Korolkov & Germanov, Gennady & Langueva, Olga & Shevyakova, Arina & Poskrebysheva, Natalia. (2020). Advantages and disadvantages of distance learning on students' and teachers' of the physical culture faculty opinion.BIO Web of Conferences. 26. 00058. 10.1051/bioconf/20202600058.
3) Amelia, R & Kadarisma, G & Fitriani, N & Ahmadi, Yafi. (2020). the effect of online mathematics learning on junior high school mathematic resilience during the COVID-19pandemic. Journal of Physics: Conference Series. 1657.012011. 10.1088/1742-6596/1657/1/012011.
4) Anthony Jnr, Bokolo & Kamaludin, Adzhar & Romli, Awanis & Mat Raffei, Anis Farihan & Phon, Danakorn & Abdullah, Aziman & Ming, Gan. (2022). Blended Learning Adoption and Implementation in Higher Education: A Theoretical and Systematic Review. Technology, Knowledge, and Learning. 10.1007/s10758-020-09477-z.
5) Cabardo, Jimmy Rey & Cabardo, Cristy & Cabardo-Mabida, Sheila. (2022). Challenges and mechanisms of teachers in implementing modular distance learning in the Philippines: a phenomenological study. Sapienza: International Journal of Interdisciplinary Studies. 3. 169-182. 10.51798/sijis.v3i1.223.
6) Cahapay, Michael & Labrador, Mark G. (2021). Experiments Gone Wrong? Lived Experience of Filipino Teachers in Remote Science Education amid COVID-19 Crisis. Asian Journal of Science Education. 3. 10.24815/ajse.v3i2.20981.
7) Department of Education (2020). DepEd Basic Education Learning Continuity Plan in the time of COVID-19. Author. Retrieved from https://www.teacherph.com.
8) Ghazal, Samar & Al-Samarraie, Hosam & Aldowah, Hanan. (2018). "I am Still Learning": Modeling LMS Critical Success Factors for Promoting Students' Experience and Satisfaction in a Blended Learning Environment. IEEE Access. 6.77201.10.1109/ACCESS.2018.2879677.
9) Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The Difference between Emergency Remote Teaching and Online Learning. EDUCAUSE Review.
10) 10https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning
11) https://www.oecd.org/pisa/publications/pisa-2018-results.htm
12) Hussain, I. & Saeed, R. & Syed, A. (2020). A Study on Effectiveness of Online Learning System during COVID-19 in Sargodha. International Journal of Language and Literary Studies. 2. 122–137. 10.36892/ijlls.v2i4.404.
13) Kara,M.(2022).School culture as the predictor of teacher leadership. Journal of Innovative Research in Teacher Education.3.209–225.10.29329/jirte.2022.464.10.
14) Magsambol, B. (2020) 8.8 Million Parents Prefer Modular Learning for Students—DepEd [Web Log Post]. https://www.rappler.com/nation/deped-says-parents-prefer-modular-learning-students
15) Manalo, Franz & Villa, Jennilou. (2020). Secondary Teachers' Preparation, Challenges, and Coping Mechanism in Implementing Distance Learning in the New Normal. International Multidisciplinary Research Journal. 2. 144-154. 10.5281/zenodo.4072845.
16) Pascual,E.(2021).Parent-Teacher-LearnerCollaborationinModularDistanceLearning.83.

10.47119/IJRP100831820212196.
17) Pentang, Jupeth&Agayon, Aina&Agayon, Angel.(2022). Teachersin The New Normal: Challenges and Coping Mechanisms in Secondary Schools. Journal of Humanities and Education Development. 4. 10.22161/jhed.4.1.8.
18) Raspopovic, Miroslava&Cvetanovic, Svetlana&Medan, Ivana&Ljubojević, Danijela.(2017).The Effects of Integrating Social Learning Environment with Online Learning. The International Review of Research in Open and Distributed Learning. 18. 10.19173/irrodl.v18i1.2645.
19) Rawashdeh, Alaa & Youssef, Enaam & Alarab, Asma & Alarab, Mahmoud & Al-Rawashdeh, Butheyna. (2021). Advantages and Disadvantages of Using e-Learning in University Education: Analyzing Students' Perspectives. Electronic Journal of e-Learning. 19. 107-117. 10.34190/ejel.19.3.2168.
20) Salloum, Said & Alhamad, Ahmad Qasim & Al-Emran, Mostafa & Monem, Azza & Shaalan, Khaled. (2019). Exploring Students' Acceptance of E-Learning Through Developing a Comprehensive Technology Acceptance Model. IEEE Access. PP. 1–1. 10.1109/ACCESS.2019.2939467.
21) Simuja, Clement; Krauss, Kirstin; and Conger, Sue, "Achieving inclusive and transformative ICT education practices in rural schools in marginalized communities" (2016). CONF-IRM 2016 Proceedings. 68. Stanford Encyclopedia of Philosophy. Retrieved from Asian Journal of Science Education
22) Talimodao, A.J.S.,&Madrigal, D.V.(2021).Printed Modular Distance Learning in Philippine Public Elementary Schools in Time of COVID 19 Pandemic: Quality, Implementation, and Challenges. Philippine Social Science Journal, 4(3), 19-29. https://doi.org/10.52006/main.v4i3.391
23) Yore, Larry& Hand, Brian& Goldman, Susan &Hildebrand, G.M.&Osborne, J.&Treagust, D.&Wallace, C...(2004). New directions in language and science education research. Reading Research Quarterly. 39. 347–352. 10.1598/RRQ.3

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