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Challenges in Teaching Science and Its Transition to Post-Pandemic Education

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ABSTRACT

The COVID-19 pandemic has had a significant impact on the education sector globally, with over one billion students being held out of school as a result of quarantine measures. In response, education systems had to quickly shift to online learning to ensure that students could continue their education. The sudden shift to online learning has resulted in educators having to adapt to the use of technology in education rapidly. The COVID-19 pandemic has highlighted the importance of digital literacy for educators and the need for ongoing training in digital skills. The pandemic has served as an example of emerging, more creative methods of teaching methods, and technology use in education will continue to evolve. Hybrid learning will be critical to delivering realistic educational experiences, and teachers must adapt to become facilitators instead of teachers. The pandemic experience will affect educators' attitudes towards integrating information and communication technology (ICT) in education, resulting in a rise in the proportion of people who have a favorable opinion of integrating ICT to education. Ongoing training in digital abilities is necessary to gain a viable education. This paper highlights the need for educators to embrace digital literacy and adapt to emerging technologies to provide a quality education in the post-vaccine world.

INTRODUCTION

Our elders have always stressed the value of education with one's existence, despite how dreadful one's circumstances in life are. There is an adage that goes, "Education is the only inheritance that nobody can take away from you." It is valued highly in our culture as a way to improve one's quality of life. This adage has never been more accurate than it was during the COVID-19 outbreak that hit the nation. Despite the pandemic's financial and physical effects, learners kept up with their education (Palis, 2022). The emergence of the coronavirus disease (COVID-19) is extremely concerning for worldwide educational establishments. More than 100 countries worldwide had to unexpectedly suspend their schools due to COVID-19 quarantine efforts. Over one billion learners were held out of school as a result of COVID-19 restrictions. The recent Coronavirus outbreak widened existing inadequacies in the worldwide education system. Despite the fact that the coronavirus pandemic is emerging, humanity is already suffering from its negative repercussions.

The COVID-19 outbreak has generated difficulties in education and raised issues with global health that have been exceedingly challenging for international health institutions to resolve. Although the decision to shut down schools due to the global coronavirus outbreak may be upsetting, it makes sense given the pandemic's risks and rapidity of spread. The unexpected Coronavirus-related education cuts serve as a lesson and a reminder to the whole learning institution, especially those who have not yet integrated or implemented emerging educational tools that help digital or distance learning (Onyema et al., 2020).

Education systems had to come up with ways to keep students learning because COVID-19 was unpredictable and it was unclear if face-to-face instruction would be able to continue. Online learning was able to offer a temporary fix at the time when on-campus education was permanently ceasing to exist. Due to an urgent shift in learning, teachers were compelled to entirely relocate face-to-face training online, regardless of their level of technological expertise. As online learning remains a key answer in the post-vaccine world, this will enable reflection on how the emergency transition to online learning occurred and what should be implemented to enhance teaching and learning methods. COVID-19 has undoubtedly served as a working example for emerging, more creative methods of teaching methods. Technology use in education will absolutely develop.

The methods and techniques that have been employed in conventional face-to-face education may no longer be effective. In order to make more efficient use of learning websites, educators must be aware that blended and hybrid learning can be just as effective as on-campus instruction. Certain learning needs, like labs and clinical experiences in some programs, will always be vital, but it's also important to go outside the box when it comes to how to offer these experiences. For instance, simulation and virtual reality will be crucial to delivering realistic educational experiences as both major instructional methods and as backup plans in the event that in-person learning is once again interrupted. Instead of turning into teachers, teacher members should take on the role of facilitator. With a move toward competency-based

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education and a lessening in the importance of time-oriented learning, there should be a greater emphasis placed on learning flexibility. As a result, teachers will need to devote more time to creating learning activities that demand in-depth study (Singh et al., 2021). In response to educational expectations and requirements, where digital knowledge and skills concepts are being revolutionized to be part of the education, digital learning was measured on the effectiveness of teaching mode. Education has been acknowledged to have an environment that stimulates digitalization, and educators who possess digital competences and skills are essential. After educating learners about digital competencies, teachers educate learners for digital literacy since digital competencies are not just abilities but also the future of many teachers who will be ready to handle similar or other circumstances such as the COVID-19 outbreak. Therefore, the development of technology in education should be continuous.

The COVID 19 outbreak was not foreseen, and the global community struggled to adapt. As a result of necessities and the demands of the outside world, education has shifted into a sort of grand social experiment. Educators acted hurriedly, inconsistently, and informal in the face of the new circumstances, especially when they had to deal with their own digital illiteracy and were unable to instantly adapt to the shifting of education because educators were unfamiliar with the necessary tools. Rationally speaking, it makes sense to assume that the pandemic experience will affect educators' attitudes toward utilizing online resources since, in effect, every educator had to enhance their digital literacy in order to survive. Furthermore, it ought to cause a rise in the proportion of people who have a favorable opinion of integrating ICT to education (Aleksander Kobylarek, 2021). Many educators will possess the necessary quality of 21st century skills such as digital learning because of the requirement to continue with virtual education and learning due to Covid-19 and the unclear future of hybrid education to post Covid-19. Although it wasn't first accepted, digital learning is now successfully implemented through a teaching development plan for learners. This, together with the continual training teachers are gaining, results in a constant enhancement in the quality of teachers. All of these things are done with the express goal of increasing each learner's level of competency in the reflective growth process and achieving a high standard of learning. In order to gain a viable education, it is advised to keep up the ongoing training in digital abilities (Huamán-Romaní et al., 2022).

Shifting all teaching and learning digitally is an emerging approach best described as "building a house without a blueprint" or what we call emergency remote teaching. The researchers use a qualitative research paradigm where two lecturers reflected on their teaching practices. The analysis of the narratives revealed two dominant themes: 1) addressing the socio-emotional needs of the students while 2) fostering self-regulation and reflexivity.

With attention to students' socio-emotional needs, both lecturers showed preferences for a pedagogy of care and desired to maintain a high degree of interaction and connection with students. These lecturers were aware of the interconnection of the affective and cognitive domains in the learning process. Additionally, the lecturers were able to describe how creating a safe and encouraging environment allowed students to express their feelings (Brodie et al., 2022).

Based on the study teachers have different challenges during the Covid 19 situation which greatly affects the educational sector. It is found out that there were different areas where teachers have greatly challenged, especially on the delivery of basic education services in the country. The paper reveals that in terms of modular instruction, modules were left untouched and some of the activities were not done wisely because the students cannot understand well the instructions provided. One reason maybe is the inability of some students who can't read and unable to comprehend the texts or modules he/she is reading. Power interruption and internet connectivity issues are a major problem during distance learning. It also showed that most teachers are maximizing the use of mobile devices, computer assisted technologies to deliver quality education services to the remote areas of the country but when internet connection and power outage interrupt the teacher also is affected, online classes are affected.

As they say teachers/educators are resilient and whatever difficulty and challenge he/she is capable of adjusting and accepting what is the reality. Some displayed innovativeness, adaptability, and flexibility. Teachers devise many strategies to solve many issues and concerns in their classroom and in school (D. Agayon et al., 2022). Through interviews of the different higher education professors, it emerged that challenges cover the theme, changes, challenges, and chances. There is a dominant problem along the teaching-learning process from instruction to assessment.

This study challenged the universities to craft an institutional framework to follow in cases of emergency remote teaching. To motivate teachers towards their instruction it is suggested that upskilling of teachers should be part of the framework, promote the overall welfare of students and teachers in terms of resiliency and the most important of all to address learning adequacy (Mananay et al., 2022). To address these challenges, it is important for educators to be proactive and flexible in their approach to teaching science. This may involve incorporating different teaching strategies, such as using technology and multimedia resources to engage students and providing hands-on activities and experiments that can be completed remotely or in a hybrid setting. It may also involve working closely with students to identify and address their individual needs, and seeking out resources and support to help them succeed.

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and the demands of the outside world, education has shifted into a sort of grand social experiment. Educators acted hurriedly, inconsistently, and informal in the face of the new circumstances.

The purpose of this research is to know the challenges in Teaching Science and its Transition to Post-Pandemic Education at the different schools in the division of Ilocos Norte.

Specifically, this study seeks to answer the following questions:

1. What are the challenges in teaching science?
2. How do these challenges affect the science teacher?
3. What are the coping strategies of the teacher in teaching science for the post-pandemic?

This study focused on the challenges in teaching science and its transition to post-pandemic education. The respondents of the study will be the teachers of Sarrat National High School, San Nicolas National High School, Bacarra National Comprehensive High School who are teaching Science. The results of this study can be further analyzed to not only determine the challenges faced by the respondents, but also with the other Science teachers in the province.

The researchers considered working on this study to find out the following factors only: (a) socio-demographic profile of the respondents; (b) the challenges faced in teaching Science and its transition to post-pandemic education; and (c) coping mechanisms of Science teachers.

LITERATURE REVIEW

The COVID-19 pandemic has disrupted the world in unprecedented ways, including the education sector. The pandemic has forced educators to adapt to remote learning and digital classrooms, including science teachers. The shift in teaching science poses significant challenges in the delivery of effective and engaging science education. This paper aims to explore the challenges in teaching science and its transition to post-pandemic education.

Science education has always been a complex and challenging subject to teach. According to Schreiner and Sjøberg (2017), the challenges in teaching science include the following: abstract concepts, practical issues, and insufficient teacher training. Science concepts can be abstract and challenging for students to comprehend, leading to frustration and disinterest in the subject. The practical issues involve the availability of resources, equipment, and laboratories, which can affect the quality of science education. Finally, teachers' inadequate training in teaching science can lead to the ineffective delivery of content, lack of motivation, and difficulty in keeping students engaged in the subject.

The transition to remote learning and digital classrooms has further exacerbated the challenges in teaching science. A study by Lee et al. (2020) found that teachers faced several challenges in delivering effective science education during the pandemic. These challenges included limited student engagement, the inability to conduct hands-on experiments, and the need for technological skills.

Additionally, the lack of face-to-face interaction and support from colleagues and administrators has made it difficult for teachers to adapt to the changes in teaching methods.

The post-pandemic education landscape presents further challenges for science teachers. According to Crawford et al. (2020), teachers will need to consider changes to the curriculum and pedagogy to address the impact of the pandemic on student learning. Furthermore, teachers will need to adjust their teaching methods to accommodate the diverse learning needs of students who may have experienced significant learning losses during the pandemic.

The challenges in teaching science and its transition to post-pandemic education are complex and multifaceted. The delivery of effective and engaging science education requires innovative teaching methods, sufficient resources, and ongoing teacher training. The transition to remote learning and digital classrooms has highlighted the need for digital skills and the importance of face-to-face interaction and support. The post-pandemic education landscape presents a new set of challenges for science teachers, which will require creativity, flexibility, and adaptability. Addressing these challenges will be critical to ensuring that students receive quality science education that prepares them for the future.

MATERIALS AND METHODS

In order to realize this study, descriptive research design, particularly qualitative research methodology, was employed as it was the most appropriate method to enable the researchers to describe and assess the challenges in teaching science and its transition to post-pandemic education.

To gather sufficient and relevant data for the study, thirty (30) Junior High School Science Teachers in the Schools Division of Ilocos Norte were selected to be the respondents. The respondents were from the large schools of the central district who teach at Bacarra National Comprehensive High School, Sarrat National High School, and San Nicolas National High School.

In order to gather the necessary data, a survey Checklist was distributed to the respondents via a Google Form. The Survey will be analyzed using Likert scale. The questionnaire contains fifteen (20) statements that are commonly experienced and faced by junior high school science teachers. For the interview, respondents will be selected through convenience sampling or accidental sampling to undergo one-to-one interview on the different challenges faced by the science teachers and their coping mechanisms toward post-pandemic education.

In this study, letters of permission (See Appendices) will be sent to the admin, schools of the participants, and the participants. The researchers will conduct a survey and interview as complete observers or interviewers without participating. The interviews consist of a limited number of structured and typically open-ended questions designed to elicit ideas and opinions from the participants.

To analyze the data gathered, frequency counts, percentage, and mean were used to describe the profile of respondents. Meanwhile, weighted mean was used to quantify the data gathered in the challenges of science teachers. The researchers were guided by the following formula:

Weighted Mean. The weighted mean is similar to an arithmetic mean (the most common type of average), where instead of each of the data points contributing equally to the final average, some data points contribute more than others. The notion of weighted mean plays a role in descriptive statistics. To compute for the weighted mean, the equation below was used:

$$\bar{x}_w = \frac{\sum_{i=1}^n f_i x_i}{\sum_{i=1}^n f_i}$$

where x_w is the weighted mean, f_i is the frequency in each item, and x_i is the value for each item.

In scoring the responses to the items in the content validation checklist, the scale developed by Tuckman (1978) that was used by Lasaten (2008) and Digap (2010) was employed, thus the following:

Scale	Descriptive Interpretation
5	Strongly Agree
4	Agree
3	Undecided
2	Disagree
1	Strongly Disagree

The computed means were interpreted using the range of point scores used by Lasaten (2008) and Digap (2010) shown as follows:

Scale	Range Interval	Descriptive Interpretation
5	4.51 - 5.00	Strongly Agree
4	3.51 - 4.50	Agree
3	2.51 – 3.50	Undecided
2	1.51 - 2.50	Disagree
1	1.00 – 1.50	Strongly Disagree

The computed mean is then interpreted by comparing it to a researcher prepared matrix of value ranges, each range pointing to a quality or description.

Responses of the interview will be properly transcribed, coded and translated.

RESULTS

Table 1 shows the socio-demographic profile of the respondents. The table shows the school where the respondents are teaching, sex, length of service in the public school, and the subjects they taught during the pandemic. Nine (9) of the respondents are males while twenty-one (21) of the total number of respondents are females.

Also, the respondents came from sixteen (16) secondary schools in the province wherein nine (9) respondents came from San Nicolas National High School, four (4) of the respondents came from Bacarra National Comprehensive School, two (2) respondents each from Florentino Camaquin Integrated School and Sarrat National High School, and one (1) respondent each from Banna National High School, Bingao National High School, Burgos-Agro Industrial School, Dingras National High School, Gabu National High School, Ilocos Norte National High School, Ilocos Norte College of Arts and Trades, Pinili National High School, San Marcelino National High School, San Mateo Integrated School, Uguis Integrated School, and Bagbag Solsona National High School.

The table also shows the length of service of the respondents. Four (4) of the respondents are already in the public school for more than 20 years, another four (4) respondents are already there for 11-15 years, six (6) respondents stated that they are already there for 6-10 years, seven (7) respondents also said that they are already in the public school for 3-5 years and lastly, nine (9) of the respondents stated that they are already in the public school for 1-2 years.

Moreover, the subjects taught by the respondents during the pandemic were all junior high school science subjects.

Table 1: Socio-demographic profile of the respondents

	School	Sex	Length of Service	Subjects you teach from pandemic to post-pandemic
Teacher 1	Bacarra National Comprehensive High School	Male	1-2	Science 7, Science 9, Science 10
Teacher 2	Bacarra National Comprehensive High School	Female	3-5	Science 8
Teacher 3	Bacarra National Comprehensive High School	Male	1-2	Science 8, Science 9
Teacher 4	Bacarra National Comprehensive High School	Female	1-2	Science 8, Science 10
Techer 5	Bagbag Solsona National High School	Male	6-10	Science 8
Teacher 6	Banna National High School	Female	3-5	Science 7, Science 8, Science 9
Teacher 7	Bingao National High School	Female	1-2	Science 7

Teacher 8	Burgos Agro-Industrial School	Female	1-2	Science 8
Teacher 9	Dingras National High School	Male	1-2	Science 8
Teacher 10	Florentino Camaquin Integrated School	Male	3-5	Science 8
Teacher 11	Florentino Camaquin Integrated School	Female	3-5	Science 7, Science 10
Teacher 12	Gabu National High School	Male	6-10	Science 7, Science 10
Teacher 13	Ilocos Norte College of Arts and Trades	Female	11-15	Science 10
Teacher 14	Ilocos Norte National High School	Female	6-10	Science 10
Teacher 15	Ilocos Norte Regional School of Fisheries	Male	3-5	Science 7, Science 8
Teacher 16	Pinili National High School	Male	3-5	Science 7, Science 8, Science 9, Science 10
Teacher 17	San Marcelino National High School	Female	1-2	Science 7
Teacher 18	San Mateo Integrated School	Female	1-2	Science 7, Science 8, Science 9, Science 10
Teacher 19	San Nicolas National High School	Female	11-15	Science 7
Teacher 20	San Nicolas National High School	Female	11-15	Science 8, Science 9
Teacher 21	San Nicolas National High School	Female	6-10	Science 8, Science 10
Teacher 22	San Nicolas National High School	Female	more than 20 years	Science 8, Science 9, Science 10
Teacher 23	San Nicolas National High School	Female	more than 20 years	Science 9, Science 10
Teacher 24	San Nicolas National High School	Female	6-10	Science 9, Science 10
Teacher 25	San Nicolas National High School	Male	more than 20 years	Science 10
Teacher 26	San Nicolas National High School	Female	more than 20 years	Science 8, Science 9, Science 10
Teacher 27	San Nicolas National High School	Female	11-15	Science 7
Teacher 28	Sarrat National High School	Female	3-5	Science 9
Teacher 29	Sarrat National High School	Female	6-10	Science 7
Teacher 30	Uguis Integrated School	Female	1-2	Science 7, Science 8, Science 9, Science 10

Table 2: Lack of Time for Planning the Teaching (n=30)

Item	Indicators	Likert Scale					Weighted Mean	Interpretation
		5	4	3	2	1		
1	I have too much material to cover in class.	0	10	13	4	3	3.00	Undecided
2	I have too many teaching loads.	3	10	7	6	4	3.066	Undecided
3	I need more time to prepare for class.	3	17	7	2	1	3.633	Agree
4	I have difficulty keeping up with all the changes to the curriculum.	2	9	10	8	1	3.10	Undecided
5	I have too many administrative tasks.	5	4	10	9	2	3.033	Undecided
6	I attend a lot of trainings/seminars/workshops.	1	8	14	5	2	3.033	Undecided
		Composite Mean					**3.144**	Undecided

As gleaned from the data presented in the table 2, it shows that as a whole, the level of lack of time for planning the teaching gained a composite mean of 3.144 which is interpreted as "Undecided." The table suggests that all of the activities under lack of time for planning the teaching indicated in the survey resulted in "Undecided."

As gleaned from the data presented in the table 3, it shows that as a whole, the level of balancing diverse learning modes gained a composite mean of 4.025 which is interpreted as "Agree." The table suggests that all of the activities under balancing diverse learning modes indicated in the survey resulted in "Agree."

Table 3: Balancing Diverse Learning Modes (n=30)

Item	Indicators	Likert Scale					Weighted Mean	Interpretation
		5	4	3	2	1		
1	I have difficulty in inspiring students to learn Science.	4	6	6	13	1	2.966	Undecided
2	I can explain Science concepts or principles by doing Science experiments.	9	19	1	1	0	4.20	Agree
3	I provide challenging tasks for the highest achieving students.	8	18	3	0	1	4.066	Agree
4	I enhance my teaching strategies to engage students' interest.	15	15	0	0	0	4.50	Strongly Agree
5	I help my students appreciate the value of learning Science.	23	6	1	0	0	4.73	Strongly Agree
6	I find it difficult to assess students' comprehension of Science.	4	13	7	5	1	3.466	Agree
7	I am challenged to improve the understanding of struggling students.	12	15	2	1	0	4.266	Strongly Agree
8	It's an easy task for me to explain the relevance of Science to students.	6	13	9	1	1	3.73	Agree
9	I use inquiry methods in teaching Science.	12	15	3	0	0	4.30	Strongly Agree
		Composite Mean					**4.025**	Agree

Table 4: Availability of Learning Resources (n=30)

Item	Indicators	Likert Scale					Weighted Mean	Interpretation
		5	4	3	2	1		
1	Our school has inadequate laboratory apparatuses and facilities for our laboratory experiments.	0	12	8	8	3	2.94	Undecided
2	Our school has insufficient learner's materials such as books, modules and other reference materials.	1	4	13	11	2	2.71	Undecided
3	Our school lacks support in the purchase of instructional resources in Science.	0	3	13	11	4	2.48	Disagree
4	My classroom has inadequate ICT Tools (television, projector, printer, internet, etc.) to facilitate learning.	3	9	4	9	6	2.8	Undecided
5	I have limited access to online sites where I can download additional learning resources	2	12	4	5	9	2.87	Undecided
		Composite Mean					**2.76**	Undecided

As gleaned from the data presented in the table 4, it shows that as a whole, the level of availability of learning resources gained a composite mean of 2.76 which is interpreted as "Undecided." The table suggests that all of the activities under availability of learning resources indicated in the survey resulted in "Undecided"

In the first interview question, there were five (5) main themes identified from the respondents' answers a) Study Habits of Students for Better Comprehension, b) Students' Attitudes and Behaviors, c) Internet connectivity and infrastructure issues d) Teachers' Lesson Preparations, and e) Learning Delivery Modality.

From the thirty secondary science teachers, fourteen (14) of them said that their major concern or challenge for them as they return in school is poor academic performances of students and their study habits towards science. The shifting from distance education to face to face learning is a big adjustment among teachers and students. It is mentioned in the answers that, "teachers are repeating the basic concepts in Science" which are added burden on the part of teachers.

Meanwhile, ten (10) of the respondents said that students' attitudes and behaviors and conduct is another challenge as they transition to post pandemic.

Whereas, two (2) of the respondents are challenged in terms of internet connectivity of teachers and students. The same as through with Teachers' Lesson Preparations and Learning Delivery Modality.

In the second interview question, there were six (6) identified negative effects from these challenges a.) Students' learning gaps due to pandemic, b.) Internet Connectivity, c.) Time span in crafting activities, d.) Imploring discipline in the classroom, e.) Dealing with slow learners and f.)Setting the tone from online class to face-to-face class.

There were also two (2) positive effects from these challenges a.)These challenges makes them a better teacher, and b.) Teachers become motivated for they have to think of various educational tools, assessments and strategies for the students to engage in the classroom discussions and activities.

From the thirty secondary science teachers, ten (10) stated that they needed to fill in the learning gaps in Science for the past two years of distance learning where they needed to teach again the basic concepts that students do not understand. They needed to suffice those learning gaps by repeating the lessons all over again for students to be able to understand the lesson. As a result, they also need more time to fill in these gaps and devise engaging and worthwhile activities to let students grasp the lesson as well as to arouse the interests of those students.

Whereas, two (2) of the respondents are challenged in terms of internet connectivity of teachers and students since internet connectivity was such a determining factor on how the teaching will go through. Also, three (3) of the respondents have concerns on the time needed to craft activities for they needed more time to help learners understand the concepts. In addendum, two (2) also have concerns in dealing with disrespectful students for they lack discipline which affects their teaching.

Moreover, two (2) have problems in dealing with slow learners for they can't cope up and catch up easily with the topics being discussed. With this, they needed to adjust to the level of students so they will appreciate and understand each and every lesson discussed. In addition, one (1) respondent is strengthened to set the tone of students who have already forgotten the values of face to face classes. Lastly, five (5) respondents viewed these challenges in a positive manner for these makes them a better teacher in the long run for it motivates them to think of various engaging activities, educational tools and teaching strategies. It also makes them more innovative, understanding, and creative. In the third interview question, the 30 secondary science teachers gave different coping strategies in teaching science for the post-pandemic. Their responses were consolidated and came up with similar coping mechanisms.

There are six (6) respondents who expressed that giving hands-on activities and experiment can give a better teaching-learning outcomes for the post pandemic. Whereas, six (6) respondents believed that ICT integration is a key in motivating students cope in their lessons. Also,

six (6) respondents used several teaching approaches in teaching. Some uses the constructivist approach, inquiry-based, problem-based, peer teaching, differentiated instruction and gamification.

Other six (6) respondents believed that understanding student's weaknesses and adjusting to the capacity level students can help in adjusting the needs of students. In addition, four (4) respondents used materials like video lesson, SIM's, modules, and other online learning support (OLS) to supplement what is not taught during the pandemic. Lastly, two (2) respondents attended seminars/ webinars on coping the transformation for the post pandemic.

DISCUSSION
Students' Participation In-Classes and Internet Infrastructure
After a period of remote or hybrid learning, some students may have difficulty adjusting to in-person instruction and may struggle to re-engage with the material. Teachers may need to find ways to re-engage these students and help them get back on track. The use of technology is fun in the classroom considering different educational software/tools to be applied in teaching and learning. However, some teachers have encountered problems in terms of internet connectivity.

Supporting Students Who are Left Behind and Students' Motivation
Some students may have fallen behind academically during the pandemic, and teachers may need to find ways to support these students and help them catch up. Moreover, students' motivation and habits to learn is continuously declining in the beginning of in person classes which resulted to low performance in the administered tests/ examinations. Further, teachers have to repeat teaching the basic concepts which are already taken in the previous grade levels.

Teachers' Preparation
The pandemic may have resulted in changes to class sizes and teacher-student ratios, which could present challenges in terms of managing the classroom and providing individualized support to students. Moreover, teachers' preparations and designations has also a problem to some teachers. Their time in other activities such as programs, coordinatorship and other activities occupy most of their time.

Overall, the COVID-19 pandemic has presented numerous challenges for education, and teachers and educators have had to be flexible and adaptable in order to continue providing high-quality instruction to their students.

Result also showed that these challenges posed both positive and negative impacts on teaching. These challenges make the teachers better and resilient in times of crises. Moreover, these give them motivation to learn and think various educational tools, assessment and

strategies for the students to engage in the classroom. But in spite of that, there are negative effects of these challenges to the teachers. The problems identified affect science teachers to address students' learning gaps due to pandemic/ distance education, dealing with activities, classroom management, learners' diversity and setting the tone from online class to face-to-face classes. Further findings result that despite of the different challenges and struggles of teachers as post pandemic era is transitioning, several coping strategies and mechanisms come out.

Teachers' Coping Strategies
Results indicated a wide variety of strategies that teachers for the post-pandemic. There were teachers who gave hands-on activities and experiments, ICT integration as a key in motivating the students, the use of several teaching approaches, and the use of video lessons, SIM's, modules and other online learning support.

CONCLUSION
The COVID-19 pandemic has had a significant impact on education, with many schools and universities transitioning to remote or hybrid learning to reduce the spread of the virus. As the COVID-19 pandemic begins to subside and schools start to return to in-person instruction, teachers may face several challenges as they transition back to more traditional modes of teaching. In fact, study show that there are several challenges of teachers in the post pandemic era. Findings suggest that Science Teachers has faced great challenges and issues. Considering numbers of years in the service and their employment status/ title. Also, it manifested in the interviews that, several teachers have specific problems in terms of; a) students' participation in classes and internet structure, b) supporting students who are left behind and students motivation and c) Teachers' Preparation. However these teachers were able to cope up with the challenges they have encountered and as the education transitioned to post pandemic era. There were teachers who gave hands-on activities and experiments, ICT integration as a key in motivating the students, the use of several teaching approaches, and the use of video lessons, SIM's, modules and other online learning support.

RECOMMENDATIONS
The following are the recommendations of the study:
1. A more comprehensive and detailed research instrument should be used to identify the challenges of teachers.
2. A wider scope of the study should be done to better identify a more comprehensive discussion on the challenges in teaching Science and its transition to post-pandemic education
3. The research can be restructured to become an action research.
4. The school administrators and leaders should address these challenges of teachers gearing towards a quality education transitioning to post pandemic.
5. The results of the study should be cascaded to the school levels for focus group discussion.

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