



## Experiences and adjustments of elementary teachers after the covid-19 pandemic

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### Abstract

The main objective of this study is to know and understand the experiences and adjustments of elementary teachers after the COVID-19 pandemic. This study incorporated a qualitative-descriptive design to describe the elementary teachers' experiences and adjustments after the COVID-19 pandemic. A simple random sampling technique was integrated in this study to effectively conduct interviews with fifteen (15) randomly selected elementary teachers from the selected schools within Cebu, Philippines. Data collected were analyzed using Braun and Clarke's six-step thematic analysis, resulting in four main themes: (1) Struggles in teaching, (2) Learning gap, (3) Teaching Strategy, and (4) Behavior towards learning. The researchers found that even after the pandemic, the teachers had significantly faced problems regarding students' learning and academic progress. The researchers suggest that teachers should develop reinforcements for the enhancement of their teaching pedagogies, strategies, and techniques through active participation in educational seminars and training that are highly beneficial for the advancement and effectiveness of their teaching and to give an efficient and effective remedy to the issues and problems they are continuously facing after the COVID-19 pandemic.

**Keywords:** Adjustments, Experiences, Elementary Teachers, Learning, Pandemic

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### 1. Introduction

The COVID-19 epidemic significantly affected people's lives throughout the world. Has an adverse impact on numerous facets of humanity, including education (Pino & Merin, 2021) <sup>[23]</sup>. Consequently, elementary school teachers play a critical role in supporting schools as they adapt to the new normal and in assuring the academic progress and welfare of students. At the same time, they face the difficulties brought on by the epidemic. The pandemic accelerated technology implementation in schools, highlighted the need for mental health and wellbeing, and underscored the necessity for adaptability and flexibility in teaching strategies. The role of the teacher in the post-COVID-19 would be that of organizer, counselor, motivator, and manager of learning activities and not instructor or the sole commander of content (Oranga & Matere, 2022).

Although teacher modifications are essential for students' learning, technology, and various alternatives are used and seen in classrooms. At the outbreak of the pandemic, there was a bimodal mode, when some students attended classes physically and others online. It was frequently done without the necessary training or abilities to adjust to online education before moving on to face-to-face instruction using COVID-19 safe protocols. Digital technology is important in enabling teachers to implement online education using various digital platforms and tools (Starkey *et al.*, 2021) <sup>[27]</sup>. This would require technological skills and resiliency to adapt to the new normal (Iradel *et al.*, 2021) <sup>[16]</sup>.

A modified and alternative instructional approach, a different learning style, and the use of technology are all improved in the contemporary learning environment. Many online learning activities were constantly introduced for teachers to transmit their message online through their channels, platforms, or digital social networks. This phenomenon has inspired and motivated thousands of other teachers to create their instructional performance online despite their social isolation or lack of visibility up until this point (Ferdig *et al.*, 2020) <sup>[13]</sup>.

Instructors live to reinforce that our connected homes are places for teaching and learning. In this way, instructors and students in courses previously taken in person have transitioned to online learning (Crawford *et al.*, 2020) <sup>[18]</sup>.

In late 2019, the pandemic began to emerge and has brought enormous problems to education worldwide. Elementary teachers, who are in charge of laying the educational foundation for young students, faced a tough challenge since they had to adjust to a quickly changing educational setting. High absenteeism and attrition rates have been associated with a negative school atmosphere (Grayson & Alvarez 2008) mostly when staff members feel devalued and unconsulted (Ainsworth & Oldfield 2019) <sup>[11]</sup>. With little time to prepare, the pandemic pushed them to rapidly change from traditional in-person education to remote or blended modes. The teachers also ensure to maintain constant track and attention to the needs of both learners and their parents through open communication.

However, it cannot be denied that teaching in the new normal has weaknesses and threats. Physically distributing and retrieving modules from the parents or guardians, frontline teachers' health is at risk (Jamon *et al.*, 2021) <sup>[17]</sup>. The extra challenges presented by the COVID-19 pandemic are household barriers and communal barriers (Habibi *et al.*, 2021) <sup>[15]</sup>. Challenges in the context of education, technology, finances, and their personal lives. The home and community draw attention to the need for organized, based-on-evidence solutions that may help educators and learners achieve their personal and professional goals enabling the quick integration of contemporary educational technologies in a variety of learning environment.

This study aims to inscribe the preceding gap by providing valuable and relevant insights for enhancing teachers' teaching performance in this fast-paced world. The main objective of this study is to know and understand the experiences and adjustments of elementary teachers after the COVID-19 pandemic. By knowing and understanding the experiences and adjustments of elementary teachers after the COVID-19 pandemic, this research study aims to give awareness and enlightenment to elementary teachers, especially those incoming ones who could not experience teaching amidst the COVID-19 pandemic. Furthermore, this study may contribute to existing literature aligning with teachers' experiences and adjustments after the COVID-19 pandemic. The results of this study will present valuable information and essential suggestions that are imperative in the enhancement and betterment of not only the teachers' teaching performance but also the Philippine education system.

## 2. Methodology

### 2.1. Research Design

The researchers incorporated a qualitative-descriptive design to describe the elementary teachers' experiences and adjustments after the COVID-19 pandemic (Creswell, 1994). Qualitative-descriptive design in research is collecting data about present existing phenomena. Creswell (2012) discussed that the qualitative-descriptive method's objective is to systematically find a detailed description and explanation of a particular phenomenon. By this design, the researchers gathered relevant information using qualitative methods and interpreted the data to present valuable results.

### 2.2. Sampling Design, Respondents, and Environment

Simple random sampling is to randomly select individuals to be the respondents who represent the whole population. In simple random sampling, each individual in a specific population has an equal opportunity to be selected (Thomas, 2023). Hence, a simple random sampling technique was integrated in this study to effectively conduct interviews with fifteen (15) randomly selected elementary teachers from the selected schools within Cebu, Philippines.

### 2.3. Research Instrument

The researchers incorporated unstructured interviews in conducting this study. Unstructured interviews were the natural way of conversing with respondents. This type of interview was generally informal, flexible, and best used for qualitative-descriptive research design (Patton, 2002). Consequently, the researchers provided one open-ended question for the respondents. However, when the researchers are not satisfied with the answers given by the respondents, they may give follow-up questions during the interview process. The unstructured interview was done physically, and the respondents' answers were recorded.

### 2.4. Data Gathering Procedure

The randomly selected respondents were asked open-ended questions. The researchers recorded their answers using a smartphone to gather and collate the answers from the respondents. After the interview process, the data and information were gathered. Finally, the researchers wrote verbatim recorded answers in the results and discussion section.

### 2.5. Data Analysis

The researchers integrated thematic analysis to analyze and interpret the relevant data and information gathered. With the help of thematic analysis, the researchers were able to determine the significance of the findings in enhancing and improving the teachers' teaching performance. Thematic analysis is primarily utilized in analyzing qualitative data. This method is commonly integrated with words or texts such as interviews and written questionnaires (Caulfield, 2019). The researchers utilized this while examining the data and information to primarily distinguish the common themes-ideas and patterns of meanings that had been recurring. Furthermore, it simply means studying patterns to disclose their meaning (Crosley, 2021). Alternatively, it determines the underlying meaning of the collected data and information by analyzing the patterns and themes. Hence, this study utilized thematic analysis with consideration provided to the presumptions and proper interpretation of the results.

### 2.7. Ethical Considerations

Any study effort must examine ethical issues to protect the safety and well-being of participants. Participants were asked to express informed consent, focusing on the voluntary nature of participation, the objective of the study, and the protection of their privacy and rights. Participants' privacy and anonymity had been protected by giving them unique identifiers rather than using their data. Additionally, to ensure that the research procedures and interventions were carried out ethically and responsibly, the study would abide by the ethical standards and laws of pertinent institutions or regulatory authorities. Moreover, participants would receive meals as a gratitude for giving their time. To ensure that the

research protocol complies with ethical standards and that the rights and welfare of the participants were protected, it was sent to the appropriate ethics committee for review and approval.

### 3. Results and Discussions

This presents the findings, analysis, and interpretation of the

responses gathered from the interviews done with the participants of this study, the main objective of which is to know and understand the experiences and adjustments of elementary teachers after the COVID-19 pandemic. The results of this study were elaborated and discussed throughout this section.

### Results

**Table 1:** Presents the codes, sample verbatim responses, categories, and themes identified to support the study's findings.

Codes, Sample Verbatim Responses, Categories, and Clustering Themes			
Codes and Sample Verbatim Responses	Categories	Themes	Description of Themes
<ul style="list-style-type: none"> <li>▪ <b>Stressful</b>  <i>"Today, it is more stressful because the student's behavior is very descriptive, and there are no delays in terms of speech."</i> (P1)</li> <li>▪ <b>Teaching Difficulty</b>  <i>"The child is not ready, and they just want to write, you will be weary by encouraging the child because absenteeism is a common problem."</i> (P12)</li> </ul>	Experience in teaching	<i>Theme 1. Struggles in Teaching</i>	This theme focuses on the struggles teachers experienced teaching after the pandemic
<ul style="list-style-type: none"> <li>▪ <b>Learning Difficulty</b>  <i>"Whereas last year after the pandemic, if you ask the lesson, they cannot answer because there is nothing (learned) and they don't know."</i> (P10)  <i>"Because of modular the pupils learning did not progress because mostly the mothers are the ones who answer unlike before."</i> (P8)  <i>"Their learning stopped to the grade level where they last had, their skills never leveled up, especially their reading comprehension and numeracy skills."</i> (P9)</li> <li>▪ <b>Change in Learning</b>  <i>"After the pandemic their learning changed."</i> (P2)  <i>"Now, it's better but there's a difference in (learning) not that well"</i> (P7)</li> <li>▪ <b>Inattentive</b>  <i>"Karun, first week pa gani, unruly sila, dili attentive."</i> (P6)</li> </ul>	Deterioration of learning	<i>Theme 2. Learning Gap</i>	This theme reveals the problems that teachers encounter in teaching
<ul style="list-style-type: none"> <li>▪ <b>Teaching Strategy</b>  <i>"Conduct remedial teaching."</i> (P4)  <i>"I used a different strategy because the learners' learning is different according to their ability, what they have learned."</i> (P11)  <i>"So now, sa current na situation we still have that problem in literacy and numeracy though, we are trying as teachers, we are trying to solve that one by initiating remedial instructions."</i> (P13)</li> <li>▪ <b>Back to Basic</b>  <i>"We double our efforts since the students are back to one."</i> (P8)  <i>"It is difficult for the teacher to cater to the needs of the students because there are so many things to do. So my teaching is not at the right level, we need to go back to the basics because they have not yet deepened their understanding."</i> (P10)  <i>"We will start from the beginning.."</i>(P11)</li> <li>▪ <b>Use of technology</b>  <i>"So, after determining what level they are or those needing help, we conduct remedial intervention."</i> (P10)</li> <li>▪ <b>Patience</b>  <i>"We have a lot of non-readers, they don't know how to write and they don't know how to read. We have to go back to basics because they cannot understand."</i> (P12)</li> </ul>	Reinforcement of learning	<i>Theme 3. Teaching strategy</i>	This theme emphasizes the intervention done by the teachers to address the needs of the pupils.
<ul style="list-style-type: none"> <li>• <b>Active</b></li> </ul>	Active	<i>Theme 4.</i>	This theme shows the

<p><i>"Now that we are back to the face-to-face setup, they are much more active" (P1)</i></p> <p><i>"As of now, they have adjusted and the children are no longer struggling in learning. At least with the help of the other teachers and the school with their assistance the children passed." (P10)</i></p>		<p>Behavior towards learning</p>	<p>changes seen in the pupils after pandemic.</p>
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Seventy-seven (77) significant statements were obtained from the interview transcripts of the 15 elementary teachers participants. There were seventy (70) codes, generating forty-four (44) formulated meanings. The 70 codes were then grouped into sixteen (16) categories, which emerged as four (4) themes. The responses provided by each of the participants reflected the conditions and scenarios they experienced while teaching after the COVID-19 pandemic, including their concerns about the alarming numbers of learning losses of the pupils and how they were able to provide an intervention program such as remedial measures to address the problem that arose in the teaching-learning process.

## Discussions

### Theme 1. Struggles in Teaching

The result revealed that teachers are still struggling with the impact of COVID-19 and are continually trying to find ways to re-engage with their students (Williams, 2023). The result was expressed through the following responses from Elementary teachers:

*"Today, it is more stressful because the student's behavior is very disruptive, and there are no delays in terms of speech". - Informant 1*

*"The child is not ready, and they just want to write, you will be weary by encouraging the child because absenteeism is a common problem". - Informant 12*

This means that in dealing with students' attitudes and learning after the pandemic, teachers have to deal with various concerns since the pandemic directly affects children and every student worldwide regarding their mental and physical well-being (Origenes & Alejandro, 2023) [22]. Barnum (2023) agreed that since the beginning of the pandemic, teachers have been dealing with increased stress and low morale due to the pandemic's effects on behavioral issues among pupils, disruptions in class, and struggling with what they feel has a growing workload. Due to the disruptions caused by the pandemic, teachers experienced stress, and students exhibited learning gaps across multiple subjects. Some of them are disengaged as a result of their academic failures. In many children's lives, the loss of a classroom and face-to-face interaction has led to behavioral concerns that educators must address. The researchers suggest establishing teacher-parent collaboration to frequently exchange feedback and brainstorm alternative and practical solutions to the said problem.

### Theme 2. Learning Gap

The findings showed that teachers had concerns about their student's learning loss while not achieving grade-level expectations (Shannon, 2023). The result was expressed through the following responses from Elementary teachers:

*"Now we are in the face-to-face, the child is not like the previous years."-Informant 3*

*"Because of modular the pupils' learning did not progress because mostly the mothers are the ones who answer unlike before."-Informant 8*

*"Their learning stopped to the grade level where they last had, their skills never leveled up, especially their reading comprehension and numeracy skills." -Informant 9*

*"Whereas last year after the pandemic, if you ask the lesson, they cannot answer because there is nothing (learned) and they don't know." - Informant 10*

*"So the status of the child, their ability is like Kinder, there is no improvement." - Informant 11*

*"In my class, there are students that cannot identify (words) when we do spelling, they cannot understand. It is tough; we must double or triple our efforts to help the students." - Informant 15*

*"After the pandemic, their learnings changed." - Informant 2*

*"Now, it's better but there's a difference in (learning) not that well." - Informant 7*

*"Yes. There is little (learning), unlike in the modular, there is no learning." - Informant 14*

The pandemic affects children's education when they return to the classroom. In fact, a few of the students did not meet expectations in their academic performance, as seen by their grades (Carredo *et al.*, 2022) [8]. Also, their current state does not meet grade-level standards because they need to develop their skills, resulting in a learning gap that requires teachers to work effectively in the classroom. This was agreed by the study of Shen-Berro (2023) [26], who found that most children had difficulties engaging with their classmates or participating in class. Aguaded *et al.* (2023) [3] also agreed that significant learning losses were created in the first half of 2020, particularly those about the growth of cognitive skills. Education, especially the essential foundation years, during the pandemic, had faced a massive shift in the mode of learning, from the traditional way of learning, where students learn inside the four corners of the classroom, to distance learning, either modular or online. Educators have gone through considerable adjustments to cater to the needs of learners. With this occurrence, educators may have to deal with more severe repercussions for creating educational techniques (Chipdza & Leidner, 2019).

Consequently, this has greatly affected the learners' learning and academic performance. During the peak of the pandemic, the diminishment of authentic learning was evident even after the pandemic. The researchers suggest having alternate and effective interventions that greatly help in aiding the gaps in learning.

### Theme 3. Teaching strategy

The results indicated that teachers had implemented classroom-based remediation focusing on gaps in learning and the potential risks of such problems to the students' learning since the return to in-person classrooms (Ondras, 2023) [21]. The result was expressed through the following responses from Elementary teachers:



"We have to adjust our different strategies. Differentiated instruction we did after the pandemic." - Informant 2

"..we did conduct remedial teaching " - Informant 4

"We double our efforts since the students are back to one." - Informant 8

"It is difficult for the teacher to cater to the needs of the students because there are so many things to do. So my teaching is not at the right level, we need to go back to the basics because they have not yet deepened their understanding." - Informant 10

"So, after determining what level they are or those needing help, we conduct remedial intervention." - Informant 10

"I used a different strategy because the learners' learning is different according to their ability, what they have learned." - Informant 11

"We have a lot of non-readers, they don't know how to write and they don't know how to read. We have to go back to basics because they cannot understand." - Informant 12

"During PTA, we let the parents know and we also have parents permit for the learners to take remedial classes." - Informant 14

"We really start from the basics, since it's difficult to conduct and continue classes." - Informant 15

As the school year 2020-2021 began, various challenges became apparent, particularly for teachers and students. The pandemic has affected students' learning since the return of in-person classes, which made the teachers prioritize learning recovery, aiming to supplement learning gaps among students through implementing remediation. This confirms by Torres (2021) [28] that teachers are working hard and exerting their efforts to address students' learning gaps by facilitating a practical implementation of intervention programs. The remedial teaching strategy is designed to help students performing poorly academically improve their basic skills to keep up with their peers. It is effective at many levels, such as recognizing or assessing their specific learning difficulties to help students who are significantly behind compared to other students in academic performance or with their basic academic skills. The learning process will be incomplete without recognizing the students' weaknesses, problems, and needs. No new learning will occur until deficient learning has been changed and corrected in a specific area. As a result, suitable and appropriate strategies are utilized and designed based on the types of problems and needs of the students that must be addressed (Abraham, 2019).

#### **Theme 4. Behavior towards Learning**

The behavior toward learning encompasses the various ways individuals engage with and respond to acquiring knowledge, skills, and understanding. This theme delves into the attitude that individual's exhibit in the educational setting. Bandura's Social Theory emphasizes the reciprocal relationship between attitudes and behavior (Bandura, 1986) [4].

The result was expressed through the following responses from Elementary teachers:

"Now that we are back to the face-to-face set up, they are much more active " - Informant 1

"As of now, they have adjusted and the children are no longer struggling in learning. At least with the help of the

other teachers and the school with their assistance the children passed " -Informant 10

"So this year is better because the last school year was face to face, the grade 2 passed grade 1 so they are prepared. The number of students who cannot read is lesser, and some are frustrated, thus even that they can produce syllabic sound." - Informant 12

This means that student involvement and academic achievement have benefited from reintroducing in-person instruction. Teachers credit the school's assistance and their joint efforts for these improvements. Also, it emphasizes a positive learning environment more than the difficulties encountered during the pandemic. It is true that both during and after the COVID-19 pandemic, students' attitudes about learning experienced substantial changes. The remote learning experience during the pandemic required students to assume greater responsibility for their education. Means *et al.* (2010) agreed that students are now more proactive in directing how they learn, which has encouraged a sense of self-direction and independence. Many students would desire to return to conventional, in-person educational environments following the pandemic. Students in a face-to-face setting have more active participation and engagement than in distance learning. They may like the social connection and close contact with teachers and peers that face-to-face learning offers. Students' behavior and attitudes in the new standard setup influence their learning process. The changes displayed the behavior and attitude in acquiring knowledge from traditional learning and engaging in the present environment. Researchers suggest that teachers support positive behavior, identify different learning styles, and create a flexible learning environment. Develop more dynamic and captivating teaching strategies, generate constructive feedback, and promote lifelong learning.

#### **4. Conclusion and Recommendations**

Teachers encountered significant challenges in students' learning and academic progress, as reflected in the main themes from elementary teachers' statements, which encompasses their experiences and adjustments to the post-COVID-19 pandemic, struggles in teaching, addressing learning gaps, adapting teaching strategies, and managing students' behavior towards learning. Even after the COVID-19 pandemic hit and shifted its entirety, its effects are still evident, especially in education. It is recommended that comprehensive reading intervention should be implemented as part of an academic recovery strategy, including assessing students' reading levels, allocating time for reading, and developing reading materials. Reinforcements for enhancing teaching pedagogies, strategies, and techniques through active participation in educational seminars and training are highly recommended.

#### **5. References**

1. Ainsworth S, Oldfield J. Quantifying teacher resilience: Context matters. *Teaching and Teacher Education*. 2019; 82:117-28.
2. Abraham B. Effective strategies in remedial instruction. *Journal for Research Scholars and Professionals of English Language Teaching*, 2019, 15(3).
3. Aguaded I, Vizcaíno-Verdú A, García-Prieto V, de-Casas-Moreno P. The Impact of Post-Pandemic Learning Loss on Education Development: A Systematic

- Review. Review of Communication Research. 2023; 11:172.
4. Bandura A. Social foundations of thought and action. Englewood Cliffs, NJ, 1986.
  5. Barnum M. The teaching profession faces big post-pandemic challenges - Chalkbeat. Chalkbeat. Available from: <https://www.chalkbeat.org/2023/6/27/23774375/teacher-s-turnover-attrition-quitting-morale-burnout-pandemic-crisis-covid>
  6. Bugnos JD, Protacio AV, Billanes EP, Caman KE, Diego SS, Formacion CP, *et al.* Traditionalist to progressivist: lived experiences of generation x teachers in the new normal. *Globus Journal of Progressive Education*, 2022, 12(1).
  7. Bruce B, Yunus Eryaman M. Introduction: The Progressive Impulse in Education. *International Handbook of Progressive Education*.
  8. Carredo G, Delgado MJ, Dragas F, Rasco AM, Derasin LM. Effect of Learners' Level of Motivation in Developing Their Study Habits Amid the Pandemic. *International Journal of Science and Management Studies*, 2022, 5(4).
  9. Caulfield J. How to do thematic analysis | Step-by-Step Guide & Examples. Scribbr. Available from: <https://www.scribbr.com/methodology/thematic-analysis/>
  10. Chipidza W, Leidner D. A review of the ICT-enabled development literature: Towards a power parity theory of ICT4D. *The Journal of Strategic Information Systems*. 2019; 28(2):145-174.
  11. Conner CJ, Bohan CH. The Second World War's impact on the progressive educational movement: Assessing its role. *The Journal of Social Studies Research*. 2014; 38(2):91-102.
  12. Crosley J. What (Exactly) is thematic analysis? *Grad Coach*. Available from: <https://gradcoach.com/what-is-thematic-analysis/>
  13. Ferdig RE, Baumgartner E, Hartshorne R, Kaplan-Rakowski R, Mouza C, editors. *Teaching, technology, and teacher education during the COVID-19 pandemic: Stories from the field*. Waynesville, NC: Association for the Advancement of Computing in Education, 2020.
  14. Gray C, Wilcox G, Nordstokke D. Teacher mental health, school climate, inclusive education, and student learning: A review. *Canadian Psychology*. 2017; 58(3):203-210.
  15. Habibi A, Mukminin A, Yaqin LN, Parhanuddin L, Razak RA, Nazry NNM, *et al.* Mapping instructional barriers during COVID-19 Outbreak: Islamic education context. *Religions*. 2021; 12(1):50.
  16. Iradel CM, Cadosales MNQ, Perez N. Lived experience of teaching interns during the COVID-19 Pandemic. *Journal of Research, Policy & Practice of Teachers and Teacher Education*. 2021; 11(2):74-87.
  17. Jamon BEV, Boholano HB, Cabanes-Jamon MG, Pardillo MF. Teachers lived experiences in the new normal in Philippine public schools: A phenomenology. *International Journal of Research*. 2021; 8(02):773-782.
  18. Crawford J, *et al.* COVID-19: 20 countries' higher education intra-period digital pedagogy responses. *Journal of Applied Learning & Teaching*. 2020; 3(1):1-20.
  19. Means BM, Toyama Y, Murphy R, Planning E a P D U D O E O O. Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning. ResearchGate. Available from: [https://www.researchgate.net/publication/44840198\\_Evaluation\\_of\\_Evidence-Based\\_Practices\\_in\\_Online\\_Learning\\_A\\_Meta-Analysis\\_and\\_Review\\_of\\_Online\\_Learning\\_Studies](https://www.researchgate.net/publication/44840198_Evaluation_of_Evidence-Based_Practices_in_Online_Learning_A_Meta-Analysis_and_Review_of_Online_Learning_Studies)
  20. National Education Association (NEA). *Education Support Professionals: Meeting the Needs of Students During and After the Pandemic*. Available from: <https://www.nea.org/resource-library/education-support-professionals-meeting-needs-students-during-and-after-pandemic>
  21. Ondras LB. Post-pandemic challenges in Addressing learning gaps: Experiences of teachers in public elementary and secondary schools. Available from: <https://deliverypdf.ssrn.com/delivery.php?ID=633098025092000031096108007091101113028078052014017010096086113031084092005068011121006013001017037121004127126091109020126094030002028047082020103106068031118125112035012004118101071023001124070122112004081101029023004101117022124126010068012028079110&EXT=pdf&INDEX=TRUE&fbclid=IwAR1P7UyqZO94nvPwnuZPFiIE7VVJ303TwmLnGKto58DVRoqgsXKpH5FvTvE>
  22. Origenes R, Alejandro BA. Students' COVID-19 experiences: Integrating Knowledge, attitude, and practices strategies for teaching science. *JPBI (Jurnal Pendidikan Biologi Indonesia)*. 2023; 9(2):225-235.
  23. Pino ZaN, Merin JA. Educators' adversity quotient: rising above challenges in the time of pandemic. *Education Journal*. 2021; 10(4):119.
  24. Reyes C, Valmorida FM, Alayon M, Tantog AJ, Telos J, Cabalog A. Teachers' Strategies, Challenges and Coping Mechanisms in Helping Struggling Readers during the Pandemic. *International Journal of Academic Multidisciplinary Research*. 2023; 7(2):296-304.
  25. Shannon JV. 7 biggest challenges for teachers: according to teachers. *TeacherVision*. Available from: <https://www.teachervision.com/blog/morning-announcements/biggest-challenges-for-teachers>
  26. Shen-Berro J. Students still struggling to adjust to life in the classroom, educators say - Chalkbeat. Available from: <https://www.chalkbeat.org/2023/3/7/23628032/student-behavior-covid-school-classroom-survey>
  27. Starkey L, Shonfeld M, Prestridge S, Cervera MG. Special issue: Covid-19 and the role of technology and pedagogy on school education during a pandemic. *Technol Pedagog Educ*. 2021; 30:1-5.
  28. Torres RC. Addressing the learning gaps in the distance learning modalities. *Int J Acad Appl Res*. 2021; 5:76-79.
  29. UNESCO. COVID-19 Educational Disruption and Response. Available from: <https://en.unesco.org/covid19/educationresponse>
  30. Williams CP. Covid Changed Student Behavior-How are schools responding? *Edutopia*. Available from: <https://www.edutopia.org/article/covid-changed-student-behavior-how-are-schools-responding/>