

CHALLENGES OF THE NOVICE PUBLIC SCHOOL TEACHERS IN DISTANCE EDUCATION AMIDST THE PANDEMIC

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ABSTRACT

The transition to distance learning created massive changes in different aspects which brought challenges and problems to the educational sector, specifically teachers who are on the frontline of the delivery of learning. The current study explored the challenges experienced by novice public school teachers in the implementation of distance education during the pandemic that are still happening today. The scope is limited to six (6) novice public elementary school teachers from New Quezon, Hagonoy, Davao del Sur, Philippines with less than three years of teaching experience in the public school. Data were collected by conducting a semi-structured interview using an interview guide. The findings of the study revealed that novice teachers encountered different challenges such as workload, assessment and evaluation, communication, and teaching and learning process. The coping mechanism was also identified as follows: support from colleagues and superiors, having a positive outlook, attending faculty meetings, webinars, and Learning Activity Cell. It also showed that novice teachers experienced difficulties in transitioning to the new setup of education but they are very positive in dealing with them. The support that they received from their colleagues and superiors inspired them to do their responsibilities despite the difficulties brought on by the pandemic. Moreover, most of the teachers perceived these challenges as motivation.

Keywords: Novice teachers, challenges, coping, pandemic, distance education

1. INTRODUCTION

Alternative learning was advised by the World Health Organization (WHO) to educational institutions in response to the Covid-19 pandemic. Asian Development Bank (2020), reported that since March 2020, a combination of distance learning modalities has been used in many parts of the world to continue learning despite the pandemic. In Turkey, educational institutions migrated to distance learning on March 12, 2020, cause of the threat of the Covid-19 pandemic (Bayram, 2021). Peru, which has limited capacity and experience with distance education has adapted external resources from partners with TV channels, radio broadcasters, content producers, technology companies, and telecommunication operators to come up with a national multi-channel remote learning program. The government of Sierra Leone and Kenya has intensified their radio learning program implementation across the country (Coboalberto, Najarinaki & Ciarrusta, 2021). In Bangalore, BYJU'S an educational technology and online tutoring firm conducted free live classes on the Think and Learn application. In Los Angeles, partnerships have been established between The Los Angeles Unified School and PBS SoCal/KCET which offer broadcasts on education (Li and Lalani, 2020). The Italian government announced its support for distance learning in March 2020 in response to the pandemic by providing digital platforms and tools and training school personnel in pedagogies for distance learning (Republic of Italy, 2020).

In the Philippines, the Department of Education adheres to the use of alternative learning modalities in compliance with "Guidelines on the Risk-Based Public Health Standards for COVID-19 Mitigation" provided by the Department of Health. The Department of Education developed a Basic Education Learning Continuity Plan (BE-LCP) in response to the challenges brought by COVID-19. The BE-LCP promotes the continuation of teaching and learning processes amidst the pandemic. This response is in consonant with DepEd's commitment to realizing its Vision Mission and Mandate which is to protect and promote the right of every Filipino to quality, equitable, culture-based, and complete basic education. The education sector took the opportunity to reshape the way teachers deliver learning to learners.

Former Secretary Leonor Magtolis Briones clearly pointed out that education will be delivered through distance learning. (Department of Education, 2020). Keegan (2022), defines distance education as an educational experience where teachers and learners are physically separated in space and time and using technical media. Its main objective is to bring education despite any circumstances for those who have no access, lack no resources, unreachable and less-privileged learners (Biana, 2019). Moore & Kearsley (2018), describes distance education as a "process of planned teaching-learning that occurs in a different place from the normal learning setting and requires communication and a special corporate organization via technologies".

In this type of education learners, teachers and resources are connected through interactive telecommunications systems (Kim, 2020). It is a learning delivery modality where instructions are given to learners who are geographically remote. Distance learning is divided into three types namely: Online Distance Learning (ODL), Modular Distance Learning (MDL), and television (TV)/Radio-Based Instruction.

In Online Distance Learning, teachers use different technologies and the internet in facilitating the learning-teaching process. It conducts synchronous instruction where both teachers and learners live on an online platform and see each other in real time. Online learning uses technology applications such as web-based learning, digital collaboration, and computer-based learning virtual classrooms in mixed synchronous and asynchronous class meetings (Urdan & Weggen, 2019).

On the other hand, Modular Distance Learning allows asynchronous instructions where content is delivered through the use of printed or digital learning materials. Learning materials may include activity sheets, modules, or textbooks available in printed or digital format. Learners will access these materials at their most convenient time. Teachers will give assistance to the learners using different communication modalities such as text message, instant messaging, telephone, email, or dropbox in designated areas, and will do home visitation when needed. TV/Radio-Based Instruction uses learning materials that are converted into video lessons available on radio and television channels (Department of Education, 2020).

Several educational resources have been used by the educational sector to continuously facilitate learning through distance learning amidst pandemics. The United Nations Educational, Scientific and Cultural Organization (UNESCO, n.d.), enumerated distance learning solutions which are classified into educational applications, platforms, and resources. These distance learning solutions aim to help learners, parents, teachers, and school administrators in the continuity of education in times of pandemics. Some of these distance learning solutions are: resources that provide psychosocial support are UNICEF guidance on “how teachers should talk to children about COVID-19”, “WHO mental health and psychosocial guidance during the COVID-19 outbreak” and UNICEF guidance on “how parents and caregivers can talk children about COVID-19; digital learning management systems such as Edmodo, ClassDojo, Google Classroom, Moodle, Schoology, and Seesaw; Systems built for use on basic mobile phones like Cell-Ed, Funzi, Ubongo, KaiOS, and Ustad Mobile; Massive Open Online Course (MOOC) Platform such as Canvas, Coursera, EdX, iCourse, TED-Ed Earth School, and Udemy; Collaboration platforms that support live-video communication are DingTalk, Hangouts Meet or Google Meet, Microsoft Teams, Lark, Skype, Zoom, and WeChat Work; and Tools for teachers to create digital learning content such as Buncee, EdPuzzle, EduCaixa, Thinglink, Kaltura, Nearpod, Pear Deck, Squigl, and Trello. Moreover, Remote or distance learning gave opportunities for different technology and digital learning resources. Several technological tools were used to cater the largest proportion of learners. Among these tools, online platforms were identified as the most popular tool used during a pandemic (Schleicher, 2020).

In the Philippines, the Department of Education, (2020), mentioned that teachers use DepEd Commons, DepEd Radio and TV channels, DepEd youtube Channel, DepEd Learning Resource Portal, ICT4ALS application by UNICEF and AralMuna Application. Bautista, Bleza, and Buhain (2021), explain that the classroom was transformed into online platforms such as Google Meet, Discord, Zoom, and Microsoft Teams. Also, social media sites like Facebook and Youtube were also utilized to reach students with limited internet access. In addition, Self-learning modules were created by each region from Kindergarten up to Grade 12 for Alternative Delivery Mode (ADM).

Migration to distance learning has also changed the role of teachers. Barron, Cobo, Najjar & Ciarrusta (2021), elaborated on the two factors that shifted the role of teachers due to the pandemic: First, adapting teachers' practices to remote learning environments. This means that teachers need to be more creative in increasing the number of students' engagement even when they are physically apart. In Sierra Leone, since the content is delivered through radio teachers are expected to have an open communication line where students can easily call them when they have queries or clarifications. Second, recalibrating teachers' time for teaching, interaction with learners, and doing administrative tasks. This means that teachers need to be more flexible in performing their tasks. In Estonia, Teachers are free to adjust the time allocation, curriculum, and lesson plans.

Aside from the mode of teaching, the COVID-19 pandemic also changed school operations and guidelines. These policy guidelines include mandatory wearing of facemasks when entering school/office premises, regular conduct of disinfection of school, regular monitoring of the health of students, teachers, and school personnel, restrictions on mass gatherings, implementation of any or a combination of the skeleton, physical reporting, work from home or other alternative work arrangements and provision of a mixture of various learning modalities to avoid exposure of teachers and learners to various (Department of Education, 2020).

Similarly, Tria (2020) emphasized the strict implementation of safety and health protocols when going to school like wearing a face mask, maintaining physical distance, washing hands, and filling out contact tracing. The transition to distance learning created massive changes in different aspects which brought challenges and problems to the educational sector, specifically teachers who are on the frontline of the delivery of learning (Robosa, Paras, Perante, & Alvez, & Tus, 2021).

The sudden change affected teachers – both in public and private schools, in all levels. This study explored the experiences of novice elementary public schools in the implementation of distance education. What their experiences? What are their challenges? How did the novice teachers cope with the challenges? These questions prodded the researcher to conduct the study?

The current study explored the challenges experienced by novice public elementary school teachers in the implementation of distance education during the COVID-19 pandemic that still is happening today. The scope is delimited to five (5) novice public secondary school teachers from New Quezon, Hagonoy, Davao del Sur with less than three years of teaching experience in the public school.

Considering the current study, it is critical for novice public school teachers to have an in-depth understanding of the challenges they have encountered in the implementation of distance education during the COVID-19 pandemic. Specifically, the study sought to answer the following questions:

1. What are the challenges for novice public elementary teachers during the implementation of distance education amidst the pandemic?
2. What are the coping mechanisms of novice public elementary teachers in the challenges brought by the implementation of distance education amidst the pandemic?
3. What insights of novice elementary grade teachers were generated by their experiences of the implementation of distance education amidst the pandemic?

Studies focusing on the challenges experienced by novice teachers have provided significant information to the current study. Miulescu (2020) defined “novice” teachers as beginning teachers who are not yet experienced in teaching and who are at the start of his/her teaching career. Likewise, Ngang & Chan (2019) described novice teachers as new teachers with one to three years of teaching experience. Novice teachers are confronted with additional challenges and face the new normal under the high demands of the educational change brought by the Covid-19 pandemic crisis.

Novice teachers are just starting their teaching career in which their entrance is in a time of crisis which affected their professional self-efficacy (Redman, 2019). Yee & Hassan (2019), mentioned that novice teachers are considered to have a “survival” or “sink-or-swim” mentality because of the high expectations and responsibilities, emotional and physical problems, and adaptation to the new environment.

Ahmed, Faizi, & Akbar (2020), explained that novice teachers often experienced difficulties when they transitioned from pre-service training to actual teaching practice in the field. They have trouble with the application of the concepts and beliefs they have learned in large classes with student centered pedagogies. It was found from the results of a study that these challenges faced by novice teachers are the main reason why they cannot reach a satisfactory level of performance and some of them decided to quit their job.

Dvir & Oppenheimer (2020), revealed in their study that the challenges and opportunities encountered by the thirty-two novice teachers are related to three central categories: pedagogical, technological, and educational system. It was found that the majority of the participants considered the changes in teaching circumstances and teaching from their homes as a big challenge. Working from home causes them tension in setting boundaries between school and home responsibilities. Also, the participants revealed that the migration to distance learning forced them to use meeting apps like zoom and caused them uncertainty and frustration. The grounded theory of qualitative research analysis conducted by Dias-Lacy & Guirguis (2019), indicated that a novice teacher who is in her first year in the teaching profession experienced stress felt the lack of appropriate support, and was unprepared in dealing with the academic and behavioral problems of her students.

Furthermore, novice teachers in Qatar government school's classroom management, the large number of classes assigned to them, the amount of workload by the school administration, and the extra workload given to them which is not directly related to their main teaching responsibilities are considered as the major challenge they have encountered which gave them stress and pressure (AL-Naimi, Romanowski, & Du, 2020). Lack of pedagogical skills, a conducive environment, disruptive behavior of learners, and non-supportive superiors hinders novice teachers to perform satisfactorily (Ahmed, Faizi, & Akbar, 2020)

Studies conducted in the Philippines focused on the challenges encountered by novice teachers indicate that Filipino teachers' problems in ICT-related competencies, infrastructure, professional development, and managing students remotely remained to be their concern (Bautista, Bleza, & Buhain, 2021). Dela Rosa (2016), found out that since novice language teachers had less training and seminars on ICT they need to capitalize on their own resources by downloading videos, audio clippings, activities, and other digital materials. Based on the results of the study conducted by Aguinaldo (2021), teachers experienced difficulties in online classes due to unstable internet connection, lack of space and necessary equipment, most students showed less eagerness to participate, only a few students can comply with the criteria given, and difficulties in giving instant feedback.

Similarly, Tria (2020) mentioned that subjects that require laboratory activities and skills demonstration became limited to paper and pen tests since most students have limited internet access and some have no gadgets, which became a big challenge since it compromised the quality of assessment and evaluation. On the contrary, the study by Valdez, & Dominado (2020), claimed that the challenges encountered by novice teachers like planning the lesson, implementing the lesson, and assessment of learning have no significant relationship between the years in service.

Studies by Sakai (2019), Bautista, Bleza, and Buhain (2021), Coboalberto, & Ciarrusta (2021), Gül Özüdoğru (2021), Kim, J. (2020), Robosa, Paras, Perante, & Alvez, & Tus, (2021), Schleicher, A. (2020), Tria (2020) and Urdan, & Weggen (2019) has not specifically explored the challenges by novice teachers during Covid-19 pandemic which is the main focus of the current study. Limitation in the studies relevant to the challenges of novice public school teachers in the Philippines is very evident which led to the conduct of the current study. Moreover, only a few research on the challenges encountered by novice teachers in the implementation of distance learning is one of the main concerns of the current study. Most of the past studies directed to ICT related as the main challenges experienced by novice teachers during the pandemic while the present study will try to explore other factors. Also, there are limitations in the exploration of other modalities of distance learning since the majority of the studies focus on online distance learning.

In the context of the health threat caused by the pandemic, educational institutions have turned to distance learning as the only way of ensuring the continuity of education. This unexpected and abrupt move to emergency distance instruction has created considerable challenges for teachers and reduced the extent to which students can engage in learning (Hew et al., 2020; Kraft & Simon, 2020). Teachers are finding it difficult to balance their work and personal life during the pandemic, for instance responding to students' academic, physical, and emotional needs, as well as rapidly planning instruction to embrace the constantly changing situation (Jones & Kessler, 2020). Time is crucial for planning, designing, implementing, and improving educational programs. However, educators lack time as they have to move everything online rapidly. The pandemic has not allowed for a gradual and balanced approach to distance education.

On the other hand, the nature of teachers' work has changed completely and moved into an unknown space where there are no guidelines and where much of what works in traditional classrooms settings may not work online (Winter et al., 2021). In other words, teachers have a narrow preparation window and are unable to meaningfully engage their students. Incidentally, this move is having a profound effect on student learning (Salmons, 2020). Furthermore, the logic of legitimacy appears to drive the stigma that online or distance learning is not a better option as it cannot provide quality education as compared to in-person face-to-face learning (Hodges et al., 2020). It is hoped this stigma may end as the pandemic rages on (Kraft & Simon, 2020).

The physical separation between students and instructors is claimed to result in a psychological-communication gap or lead to transactional distance creating a sense of danger, frustration, or students' misunderstandings about themselves and about the learning process (Zilka, Cohen, & Rahimi, 2019). Teacher's social presence can encourage meaningful communication; create a climate of cooperation and public discourse through feedback (Zilka et al., 2019). According to Poth (2019) an individual's social presence within the learning environment may not only promote a more engaging and supportive educational experience but also motivate students. Thus, social presence is a "critical affective component" and "one of the more important constructs in determining the level of interaction and effectiveness of learning in an online environment" (Mykota, 2019).

Dialogue between students and teachers as well as support for the learners and their needs may increase students' sense of social presence. This requires teachers to actively partake in the discussion to encourage student participation (Zilka et al., 2018). However, establishing and maintaining a 'presence' online as depicted by Garrison (2019) is not easy when lockdowns are in place as much of the learning is completed asynchronously, for example pre-recorded lessons or lectures. Most importantly, students participating in asynchronous learning environments have to be extremely self-motivated and have a high level of self-discipline as teachers are not virtually present (Ferraro et al., 2020).

In order to learn about teachers' experiences in the rapid transition to online teaching, it is essential to examine how prepared teachers are for online teaching. Social distancing and lockdowns have significantly disturbed traditional educational practices, but teachers are continuing to rely on traditional teaching pedagogies when delivering instruction in the distance learning environment (Pokhrel & Chhetri, 2021; Armstrong-Mensah et al., 2020). Some of the challenges facing teachers are spending a considerable amount of time on familiarizing with the online teaching environment, using new approaches, for example organizing virtual teaching related activities, virtual meetings, and group discussions, to engage with students (Cavanaugh & DeWeese, 2020; Scull et al., 2020). This suggests that teacher preparedness continues to be an issue across most contexts (Howard et al., 2020).

One of the requirements for teachers in the situation they are in today is to adapt to the new teaching environment. Adaptability here refers to the potential of the teachers to adjust their psycho-behavioral mechanism to cope with the changes and uncertainties (Collie & Martin, 2019). It is claimed to comprise three dimensions, namely behavior adjustment, emotional adaptation, and change in mindset (Collie et al., 2019). Adaptability is different from teachers' resilience or having the perseverance to deal with challenges.

The quick move to emergency remote teaching has frustrated teachers who were unable to decipher how to use digital tools, online resources, and apps for distance education. In other words, the educators were used to conventional teaching delivery and were obliged to embrace technology although they were not prepared for this sudden shift to teaching remotely (Barrot, Llenares, & del Rosario, 2021; Winter et al., 2021). Skills, knowledge, and competencies are required for online teaching and teachers must know how and when to use technology appropriately (Winter et al., 2021). Previous studies have highlighted that teachers must believe in the use of technology and be willing to use it in their daily practice (Ertmer, 2018; Tondeur et al., 2017). Overall, the technological challenges are mainly related to teacher digital competence (Ferri et al., 2020).

Teachers' pedagogical orientation is another challenge. Researchers have argued that shaping a teachers' pedagogical orientation involves fundamentally changing the role of the teacher from that of a sage-on-the-stage to that of a guide-on-the-side (Tarling & Ng'ambi, 2019). However, in distance learning environments, teachers' pedagogical orientation must align with their technological competence (Carmo & Franco, 2019). The pedagogical challenges are principally associated with teachers' lack of digital skills and lack of social and cognitive presence or the ability to construct meaning through sustained communication within a community of inquiry (Ferri et al., 2020).

Technology is increasingly being used not only to deliver instruction, but also to support and assist learners and to assess students in innovative ways, for example using analytics to assess the quality and practicality of online resources and track student involvement in online activities (Martin & Ndoeye, 2019). However, aligning pedagogy, content, assessment, and appropriate use of technologies, and online strategies is a challenge especially in distance education (Zhang et al., 2020). Assessing students during a pandemic is even more challenging. A recent study from Kuwait found that summative assessments are still being used to assess final examinations and also used as an evaluation tool for curriculum, teacher performance, and school performance (Alhashem & Agha, 2020). Another study from the Middle East found that the main challenges of remote assessment were academic dishonesty, infrastructure, and commitment of students to submit assessments (Guangul et al., 2020). These results suggest that the recent return to distance education has exposed the lack of preparedness of teachers in Kuwait to formatively assess students.

Teachers' frustration and the reliance on conventional pedagogies indicates that there is the need for thoughtfully planning distance education and engaging teachers in online professional development programs (Richter & Idleman, 2017). Professional development opportunities are required so that teachers can adapt to distance education more easily (Hebebcı et al., 2020). Workshops or training for teachers can improve their technological and pedagogical competencies in online learning, for example to develop interactive learning approaches, improve communication, and mitigate challenges associated with student motivation and engagement (Cardullo et al., 2021; Ferri et al., 2020). This suggests that a lack of support from policy makers may result in poor participation in distance education.

The self-efficacy theory of Albert Bandura was utilized to have an in-depth understanding of the challenges experienced by novice teachers in the fieldwork. Self-Efficacy theory explained that people with a strong sense of efficacy have the capacity to perform demanding tasks because they see them as a challenge rather than a threat. With this perspective, novice teachers will be improved their competencies through the challenges they encountered. Teachers with high self-efficacy set challenging goals for themselves and maintain their strong commitment to their profession.

Self-efficacy is a person's belief in their ability to complete a task or achieve a goal. It encompasses a person's confidence in themselves to control their behavior, exert an influence over their environment, and stay motivated in the pursuit of their goal. People can have self-efficacy in different situations and domains, such as school, work, relationships, and other important areas.

When facing a challenge, do you feel like you can rise up and accomplish your goal, or do you give up in defeat? Are you like the little train engine from the classic children's book ("I think I can, I think I can!"), or do you doubt your own abilities to rise up and overcome the difficulties that life throws your way? If you tend to keep going in the face of obstacles, you probably have a high degree of self-efficacy.

Self-efficacy is important because it plays a role in how you feel about yourself and whether or not you successfully achieve your goals in life. The concept of self-efficacy is central to Albert Bandura's social cognitive theory, which

emphasizes the role of observational learning, social experience, and reciprocal determinism in personality development. According to Bandura, self-efficacy is part of the self-system comprised of a person's attitudes, abilities, and cognitive skills. This system plays a major role in how we perceive and respond to different situations. Self-efficacy is an essential part of this self-system. According to Albert Bandura, self-efficacy is "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations." Self-efficacy is a person's belief in their ability to succeed in a particular situation. Such beliefs play a role in determining how people think, behave, and feel. Since Bandura published his seminal 1977 paper, "Self-Efficacy: Toward a Unifying Theory of Behavioral Change," the subject has become one of the most studied topics in psychology. Why has self-efficacy become such an important topic among psychologists and educators?

As Bandura and other researchers have demonstrated, self-efficacy can impact everything from psychological states to behavior to motivation. Self-efficacy determines what goals we pursue, how we accomplish those goals, and how we reflect upon our own performance.

2. METHODOLOGY

In this study, a qualitative research design was utilized specifically in the phenomenological approach (Robosa, Paras, Perante, & Alvez, & Tus, 2021). Qualitative research is an approach to exploring and understanding the meaning individuals or groups ascribe to a social or human problem (Creswell, 2019). It involves emerging questions and procedures, data typically collected in the participant's setting, data analysis inductively building from particulars to general themes, and making interpretations of the meaning of the data collected.

Purposive sampling technique (Patton, 2018) was used in selecting the teacher-participants. Purposive sampling is a non-probability sampling technique that occurs when elements selected for the sample are chosen according to the judgment of the researcher based on the set criteria (Black, 2020). The participants of this study were five novice elementary school teachers in a public elementary school in the Province of Hagonoy, Davao del Sur, Philippines.

"Novice" teachers are beginning teachers who are not yet experienced in teaching and who are at the start of his/her teaching career. Locally, in the current study, novice teachers refer to teachers with three and below teaching experience in public schools (Robosa, Paras, Perante, Lhyza & Alvez, & Tus, 2021). The novice teacher teachers have been teaching in the said school for less than three years. Six (6) novice teachers were interviewed for this study.

Interviews were used to explain, better understand, and explore the teachers' opinions and experiences by further exploring the issues arising from the survey (McGrath, Palmgren, & Liljedahl, 2019). The open-ended interview questions developed from literature and the study objectives (e.g., novice teachers' perceptions of the challenges presented by distance learning and the strategies used to overcome the challenges). A semi-structured interview guide was used with questions pertaining to novice teachers' opinions about the transition to distance learning, the pedagogical strategies adopted by them, the challenges they experienced when providing instruction to their students, as well as the difficulties they believed their students experienced, the support they received from school administrators, and how they coped with the situation.

Interviews were conducted. Eight teachers agreed to be interviewed. The unique communication and multimedia features offered by WhatsApp were exploited. The researcher was able to effectively communicate with the teachers because of the ease of use of the laptop keyboard compared to the small smartphone touchscreen. The interviews, which were recorded, were transcribed by the researcher using Microsoft Word. The use of a laptop allowed for easily copying and pasting the transcripts into the word-processing program. Thematic analysis was carried out using the framework suggested by Braun and Clark (2013).

Interviews were done according to the preferred schedule of the participants. Interviews were recorded throughout the interview process after obtaining permission from the participants. Additional questions were asked to obtain an in-depth understanding of their current situation. Transcription and analysis were conducted to make sense of the gathered data. The interview data was thematically analyzed, and the 6 steps used were reading the text and familiarizing with the data, coding, exploring themes, reviewing themes, naming themes, and producing or finalizing the report (Braun & Clarke, 2019). Finally, the data was triangulated. Methodological triangulation was used to triangulate data from the interviews: school interviews, resident interviews, and out-of-school interviews.

Thematic analyses were used to analyze the recorded and transcribed responses of the participants. It requires more involvement and interpretation from the researcher. Thematic analyses move beyond counting explicit words or phrases and focus on identifying and describing both implicit and explicit ideas within the data, that is, themes. Codes are then typically developed to represent the identified themes and applied or linked to raw data as summary markers for later analysis. Such analyses may or may not include the following: comparing code frequencies, identifying code co-occurrence, and graphically displaying relationships between codes within the data set.

Generally speaking, reliability is of greater concern with thematic analysis than with word-based analyses because more interpretation goes into defining the data items (i.e., codes) as well as applying the codes to chunks of text. This issue is even more pronounced when working in teams with multiple analysts. To maintain rigor, strategies for monitoring and improving inter-coder agreement, and therefore reliability, should be implemented in the analytic process. Despite these few issues related to reliability, we feel that a thematic analysis is still the most useful in capturing the complexities of meaning within a textual data set. It is also the most commonly used method of analysis in qualitative research.

Thematic analysis focuses on identifiable themes and patterns of living and/or behavior. The first step is to collect the data. Audiotapes should be collected to study the talk of a session interview (Spradley, 2019). From the transcribed conversations, patterns of experiences can be listed. These can come from direct quotes or paraphrasing common ideas.

The next step to a thematic analysis is to identify all data that relate to the already classified patterns. The identified patterns are then expounded on. All of the talk that fits under the specific pattern is identified and placed with the corresponding pattern. For example, each family member somehow named their "attitude" while they were speaking. The father stated that he is "anti-statist," the mother said that she is "protective," and the son stated that "felt bad for what he had done" (Aronson, 2022).

The next step to a thematic analysis is to combine and catalogue related patterns into sub-themes. Themes are defined as units derived from patterns such as "conversation topics, vocabulary, recurring activities, meanings, feelings, or folk sayings and proverbs" (Taylor & Bogdan, 2019). Themes are identified by "bringing together components or fragments of ideas or experiences, which often are meaningless when viewed alone" (Leininger, 2019). Themes that emerge from the informants' stories are pieced together to form a comprehensive picture of their collective experience. The "coherence of ideas rests with the analyst who has rigorously studied how different ideas or components fit together in a meaningful way when linked together" (Leininger, 2019). Constan (2022) reiterates this point and states that the "interpretative approach should be considered as a distinct point of origination."

When gathering sub-themes to obtain a comprehensive view of the information, it is easy to see a pattern emerging. When patterns emerge it is best to obtain feedback from the informants about them. This can be done as the interview is taking place or by asking the informants to give feedback from the transcribed conversations. In the former, the interviewer uses the informants' feedback to establish the next questions in the interview. In the latter, the interviewer transcribes the interview or the session, and asks the informants to provide feedback that is then incorporated in the theme analysis.

The next step is to build a valid argument for choosing the themes. This is done by reading the related literature. By referring back to the literature, the interviewer gains information that allows him or herself to make inferences from the interview or therapy session. Once the themes have been collected and the literature has been studied, the researcher is ready to formulate theme statements to develop a story line. When the literature is interwoven with the findings, the story that the interviewer constructs is one that stands with merit. A developed story line helps the reader to comprehend the process, understanding, and motivation of the interviewer. These steps were followed in given order and organization to the identified participants of this study.

3. RESULT

Challenges of novice public elementary teachers during the implementation of distance education amidst the pandemic As they have narrated, the teachers shared their challenges during the implementation of the distance education: work-related, communication-related, assessment and evaluation, and teaching-related.

Coping mechanisms of Novice public elementary teachers in the implementation of distance education amidst the pandemic

The study shows that novice teachers' coping mechanism in dealing difficulties they have encountered in distance education amidst pandemic includes: support from colleagues and superior, having positive outlook, attending faculty meetings, webinar, and Learning Activity Cell.

Insights generated by novice elementary teachers experiences on the implementation of distance education amidst the pandemic Looking back at their own experiences provided opportunities for teachers to reflect and examine their own experiences. Their reflections expressed their realizations and insights, which they referred to as daghan jud 'ko natunan (I realised a lot) and hinaot pa (I am hopeful).

Analysis

The findings of this study is in consonance with the study conducted by Robosa, Paras, Perante, Lhyza & Alvez, and Tus (2021), which pointed out that the submission and workloads are the main contributor to stress and burnout of

teachers during pandemic. Moreover, Alson, Jollie (2019), explained that stressors of teachers comes from demands for outputs from the administration. The statement of these teachers shows that they are confuse on their role as a teacher.

Responses to the question on teachers' transition to distance learning revealed a nuanced view of teachers' attitudes towards and beliefs about the transition to distance learning.

The statement of the participants shows that difficulties in reaching out students was due to poor internet connection and no available gadget. The findings supported the study conducted by Gül Özüdoğru, (2021), wherein he revealed that teachers encountered different problems including lack of time for the implementation of live courses, communication failure, lack of internet connection, and technical problems. Similarly, Aguinaldo (2021), found out that teachers experienced difficulties in online classes due to unstable internet connection, lack of space and necessary equipment, most students showed less eagerness to participate, only a few students can comply with the criteria given, and difficulties in giving instant feedback.

The results support the study of Bayram, H. (2021), wherein he mentioned that majority of teachers complained that students cannot be supervised, and measurement-evaluation process cannot be performed properly in distance education. Homework were done by parents or guardian of the students.

The teachers expressed their sense of gratitude to the people who supported them in dealing the different challenges they have encountered. They are also thankful for the initiative of the schools in conducting activities that will enhance their competencies.

Teaching in public school during pandemic has brought several challenges to the novice teachers who are just adjusting to the new system. The challenging situation can have a strong impact on the performance of the teachers and even on students. The current study has explored the different challenges of the five novice secondary public school teachers. It was sorted into four themes such as: workload, assessment and evaluation, communication, and teaching and learning process.

Coping mechanism was also identified as follows: support from colleagues and superior, having positive outlook, attending faculty meetings, webinar, and Learning Activity Cell. The findings of the study revealed that all the participants experienced difficulties in transitioning to the new setup of education but they are very positive in dealing with them. The support that they received from their colleagues and superior inspire them to do their responsibilities despite the difficulties brought by the pandemic.

Moreover, most of the teachers perceived these challenges as motivation. They also mentioned that through these challenges they become innovative, resourceful, flexible, and stronger as they surpassed a year of teaching experience during pandemic successfully. Since this study has identified workload as the most challenging experience by the novice teachers, the researcher would like to suggest to the academe to study the proper identification and assignment of workload for teachers. Hire more non-teaching personnel so that teacher can focus on their major role which is to teach. In the case of assessment and evaluation of students' output, teachers should develop activities that can evaluate students according to their modality through the help of community volunteer and parents. Constant communication should be established using multi-modal system. Printed instructions should be simplified and contextualized.

These teachers wanted to be successful at distance education as they believed in themselves. Two teachers mentioned that they wanted to reduce the stress of the situation by "keeping abreast of technologies and constantly familiarizing" with technology and by "being adaptable, engaging and showing empathy". From these responses it is apparent that the teachers had grit, persistence, and determination. They talked about being resourceful and creative.

The findings of this study are similar to those of Quijada and Orale (2019), who asserted that teachers had varied experiences in their work being assigned in far-flung areas. These experiences can be described as paradoxical, as they involve difficult and delightful experiences, pains and successes, and frustrations and fulfilments (Lapuz, 2018).

Even if they encounter inhibiting circumstances, teachers make sure that modules are delivered to their students to continue learning. The pandemic may have brought new challenges to the teaching profession, but it never changed the profession's love (Punzalan, 2020).

The second stage in the cycle is that of reflective observation. This means taking a time out from 'doing' and stepping back from the task and reviewing what has been done and experienced.

This stage allows me to elaborate on the experiences mentioned by the teachers in far-flung schools to understand their situations. The teachers primarily identified that the distance of the school and the quality of the road to be taken for going there are difficult to traverse. Novice teachers in remote areas need to endure the uncomfortable and less-safe modes of transportation to reach their destination (Quijada & Orale 2018). On the other hand, teachers could still find happiness out of the adversities they had gone through. The kindness and the goodness of the people lightened the

burden they carried. Javilla and Fabilla (2019), in their study, pronounced that as time goes by, teachers get attached to the community because of the hospitality and the love returned by people towards their service.

The third stage, abstract conceptualization, relates to my second question on the coping mechanisms of novice teachers in far-flung schools. The guiding question for this stage is, 'What could I have done better or differently? How can I improve?' (Brown, 2019).

To continue serving the community, teachers find the means to thrive in these trying times. Teachers' embodied values/ personal qualities in far-flung schools made them devoted to the profession. The passion, dedication and commitment made them persist in rendering their service. These values enabled teachers to perform their tasks selflessly and wholeheartedly (Campos, Daclan & Gempes, 2018).

Active experimentation, the fourth stage, is about taking one's reflections and thoughts about improvements and the theories back into practice and trying new strategies (Brown 2019). I see this stage as coherent to the third aim of my study. The insights expressed by the teachers, referring to their realizations and aspirations, are the focus of this part. The varied experiences enable the teachers to realize the purpose of their job and life that would help them spend passionately on teaching. The teachers are aware that these challenges are a means for them to be strong and better.

The teachers envisioned the success of their students and parents in the future. They hoped that they are able to make a difference and touch the lives of their students, and that somebody from the community will graduate as a professional teacher who will stay with them forever (Lapuz, 2019).

Quijada and Orale (2018) contended that no matter how teachers wish to be assigned permanently in far-flung schools, teachers are still looking forward to better assignments closer to their homes and family. Teachers looked forward to be assigned in lowland near to their loved ones.

Allowing the teachers to recollect their stories enables them to look clearly into their experience, determine the challenges that arise, think of strategies to overcome them next time, look into other possibilities and accumulate lessons that will make them stronger and better prepared.

Drago-Severson (2019) asserted that reflective practice is essential in supporting personal and professional learning and growth. He affirmed that teachers could think and reflect on an experience or event through reflective practice, learn from the experience, plan or change direction accordingly and ultimately advance in their learning and improve instructional practices.

This is further supported by Dobos, Neiseses and Wagner (2019), emphasising that reflective techniques help develop self-awareness, professional confidence, emotional intelligence and the ability to see professional problems in a broader context.

Informed by these, Kolb's experiential learning cycle can be immensely helpful in designing programs/workshops that are intended for teachers' personal and professional development. Doing this will capacitate teachers in the field and empower them as they navigate this challenging and noble profession.

4. DISCUSSION

It is the goal of this study to identify and present the perceived difficulties or challenges, best practices, and coping mechanisms of the modular teaching method carried out during the pandemic by novice educators. The teacher-respondent population profile is linked to the problems facing them, including the stressors and feelings they faced during the pandemic. Since most respondents (58%) are at the age of 23-30 years, they are called teachers who are 'tech-savvy' by using the most important teaching technology. However, teachers with more years of teaching experience are older demographic by default and are thus generally less tech-savvy (Lapada, 2020). In specific, this community of teachers needs more support to execute their lessons using online resources (Lapada, 2020).

The researchers in this analysis concentrate on the teachers' perspectives directly in the difficulties and how they handled their personal and institutional issues. When it comes to teaching, the pandemic has brought so many problems. It has created further work-related efforts to be carried out. Darling-Hammond et al (2019) even suggested that teachers have to re-think an intervention to deliver their lessons for these tough moments rather than face-to-face experiences. In this journey, the school plays a crucial role as they offer instruction and seminars for teachers to be trained with the expertise and experience of distance learning education. The findings of the study indicate that the key stressors and challenges among educators are weak internet access and lack of ICT equipment for portable learning webinars and online meetings, the tension between duty and protection, lack of supply for modular teaching, stable internet connection, communication with stakeholders and students, and evaluation of students. Online pieces of training do help educators to acquire the new skills set needed for this new normal educational setting. One article supported this by stating that institutions will achieve this by the provision of training sets and workshops; schools can also spend on distance learning services and equipment. It is evolving constantly; to cater to a changing learning environment, it is a must to be modified (Bozkurt, 2019).

Emotions, however, are also important variables that influence the success of teachers, in addition to the physical difficulties faced by teachers. Also, that as a result of a particular driven action, feelings could be perceived. Data indicated that support for teachers especially among private educational institutions should be strengthened by the government in its efforts to continue providing quality teaching in higher education. During the pandemic, it is important to resolve teachers' stress-related issues and help them improve their coping practices and encouragement at work. They feel that teachers need to do their job regardless of the difficulties, limiting physical contact with other people, they feel to have the obligation and dedication to doing work as a frontline educator are the main emotions that affect educators during the pandemic. The results from the study of the researchers were supported by the findings of Toquerob (2020), which suggested that anxiety or psychological stress that the pandemic has brought made the Filipino teachers feel stressed. For these problems to be addressed, best practices of teachers to handle stress are always there to maintain teachers' well-being. The results from the study suggested that it is highly encouraged to involve the parent in the modular teaching to seek support and have familial involvement. This is a dominant base for Uslu (2019) because according to her, elementary teachers should interact with their pupils through their guardians. For high school students, though, teachers can use internet tools and they use technology such as email and social media to be tech-savvy. Besides, that, she mentioned that teachers should plan a policy for how to stay in contact with students concerning connecting with students, such as the use of online platforms; however, it would also be beneficial to include print-based modules due to unstable internet access in rural areas. Elementary teachers can interact with their pupils through their guardians. For high school students, though, teachers can use internet tools and they use technology such as email and social media to be tech-savvy.

To work well, coping strategies are also very vital. Educators need to develop their means of dealing with work-related problems. It is safe for them to deal with it once in a while and not be exhausted by just worrying about work-related concerns. For all assignments, teachers should be prepared. In addition, coping strategies are required for these demands to be carried out effectively. The study proposed that teachers cope up through reading the prevention and transmission process of the pandemic during this period. Protection is a better coping strategy for them than any other form. As proven by previous authors (Baloran, 2020; Khalid, 2019) who have investigated the management techniques during the pandemic, strict personal security initiatives, such as decreased media visibility, are important. In addition, Schivano (2019) said that in times of pandemics, workplaces should also concentrate on enhancing contact and delivering social assistance to workers to mitigate negative encounters. While challenges are becoming difficult to cope with during his time teachers need to reinforce their hearts to carry out their work and duties. They need to make a complete effort to excel and become a successful frontline instructor. In the middle of the pandemic scenario, teachers are also struggling to maintain the standard of teaching and learning for students and to meet school quality goals amid the psychological pressures of the socio-economic and health crisis (Baloran, 2020). Based on the narratives of the study, there is a need to provide help and assistance to teachers, learners, parents and the community in the time of the pandemic. It is necessary to provide enough resources to the school and additional incentives to teachers as they face various risks in doing their work. The Local Government Unit must be able to consider the needs of the people in remote areas and find ways to concretize/improve the road leading to far-flung schools, since it is the primary concern of the teachers. In designing educational programs intended for teachers' personal and professional development, Kolb's experiential learning cycle model can be beneficial and worthy to consider. Further educational research must also be undertaken to document the experiences of the remote schools and marginalized sectors to bring into limelight the problems they are facing, so that the true goal that no one should be left behind will be realized.

5. REFERENCES

- [1] Bayram, H. (2021). Challenges Secondary School Teachers Face During the Distance Education Process, *International Journal of Eurasian Education and Culture*, 6(12), 613-658. DOI: <http://dx.doi.org/10.35826/ijoecc>
- [2] Li, C. and Lalani, F. (2020) The COVID-19 Pandemic Has Changed Education Forever. This Is How. <https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning>
- [3] Biana, H. (2019). Reaching the unreached: Philippine distance education and dislocation. *J. Worldwide Forum Educ. Cult.* 4, 73–84.
- [4] Moore, M., & Kearsley, G. (2019). *Distance Education: A Systems View*. Belmont, CA: Wadsworth, Cengage Learning.
- [5] Kim, J. (2020). Learning and teaching online during COVID-19: Experiences of student teachers in an early childhood education practicum. *IJEC* 52, 145–158. <https://doi.org/10.1007/s13158-020-00272-6>
- [6] Urdan, & Weggen (2019). *Corporate elearning: Exploring a new frontier*. WR Hambrecht Co.

- [7] Bautista, Bleza and Buhain (2021). School Support Received and the Challenges Encountered in Distance Learning Education by Filipino Teachers during the Covid-19 Pandemic. *International Journal of Learning, Teaching and Educational Research* Vol. 20, No. 6, pp. 360-385, June 2021. <https://doi.org/10.26803/ijlter.20.6.19>
- [8] Barron, Cobo, Najar & Ciarrusta (2021). The changing role of teachers and technologies amidst the COVID 19 pandemic: key findings from a cross-country study. *World Bank Blog*. <https://blogs.worldbank.org/education/changing-role-teachers-and-technologies-amidst-covid-19-pandemic-key-findings-cross>
- [9] Tria (2020). The COVID-19 Pandemic through the Lens of Education in the Philippines: The New Normal. *International Journal of Pedagogical Development and Lifelong Learning*. 1. ep2001. 10.30935/ijpdll/8311.
- [10] Miulescu, (2020). Walking the Tightrope: Challenges Encountered In Novice Teachers' Practice. *LXVIII*. 115-136. 10.26755/Revped/2020.1/115.
- [11] Ngang, T. K., & Chan, T. C. (2019). The Importance of Ethics, Moral and Professional Skills of Novice Teachers. *Procedia - Social and Behavioral Sciences*, 205(May), 8–12.
- [12] Redman, S.F. (2019). "Self-efficacy and teacher retention: Perception of novice teachers on job preparation, job support, and job satisfaction". *Electronic theses and dissertations*. paper 2611. <https://dc.etsu.edu/etd/2611>
- [13] Yee & Hassan (2019). Problems and Challenges Met by Novice Teachers in Johor. *International Journal of Recent Technology and Engineering (IJRTE)* ISSN: 2277- 3878, Volume-8 Issue-3S2,
- [14] Ahmed, Faizi, & Akbar (2020). Challenges of Novice Teachers and Strategies to Cope at Secondary Level. *Global Regional Review*, V(I), 403-416. doi:10.31703/grr.2020(V-I).44
- [15] Dvir & Oppenheimer (2020) Novice teachers in changing reality, *European Journal of Teacher Education*, 43:4, 639-656, DOI: 10.1080/02619768.2020.1821360
- [16] Dias-Lacy, & Guirguis, (2017). Challenges for New Teachers and Ways of Coping with Them. *Journal of Education and Learning*. 6. 265. 10.5539/jel.v6n3p265.
- [17] AL-Naimi, Romanowski, & Du (2020). Novice Teachers' Challenges and Coping Strategies in Qatari Government Schools. *International Journal of Learning, Teaching and Educational Research*. 19. 118-142. 10.26803/ijlter.19.9.7
- [18] Bautista, Bleza and Buhain (2021). School Support Received and the Challenges Encountered in Distance Learning Education by Filipino Teachers during the Covid-19 Pandemic. *International Journal of Learning, Teaching and Educational Research* Vol. 20, No. 6, pp. 360-385, June 2021. <https://doi.org/10.26803/ijlter.20.6.19>
- [19] Dela Rosa, J., Paul Obillos. (2019). Experiences, perceptions and attitudes on ICT integration: A case study among novice and experienced language teachers in the philippines. *International Journal of Education and Development using Information and Communication Technology*, 12(3), 37-57. Retrieved from <https://search.proquest.com/docview/1865153116?accountid=31223>
- [20] Aguinaldo (2021). Challenges Encountered by Physical Education Teachers in Online Learning. *Physical Education Department, De La Salle University, Philippines*. <https://www.dlsu.edu.ph/wp-content/uploads/pdf/conferences/research-congress-proceedings/2021/LLI-13>
- [21] Valdez, & Dominado (2020). The challenges encountered by the novice secondary school teachers in Philippines: A basis for mentoring. *Nairobi Journal of Humanities and Social Sciences*, 4(4). Retrieved from <https://royalliteglobal.com/njhs/article/view/471>
- [22] Sakai, M. (2019). "Lived Experiences of Novice Public School Adapted Physical Education Teachers: A Phenomenological Study" Ed.D. Dissertations. 343. <https://commons.cu-portland.edu/edudissertations/343>
- [23] Coboalberto, Najarinaki & Ciarrusta (2021). Remote learning during COVID-19 pandemic: How countries have faced the challenge of implementing multichannel education delivery strategies. *World Bank Blogs*. <https://blogs.worldbank.org/education/remote-learning-during-covid-19-pandemic-how-countries-have-faced-challenge-implementing>
- [24] Kim, J. (2020). Learning and teaching online during COVID-19: Experiences of student teachers in an early childhood education practicum. *IJEC* 52, 145–158. <https://doi.org/10.1007/s13158-020-00272-6>
- [25] Robosa, Paras, Perante, & Alvez, & Tus, (2021). The Experiences and Challenges Faced of the Public School Teachers Amidst the COVID-19 Pandemic: A Phenomenological Study in the Philippines. *International Journal Of Advance Research And Innovative Ideas In Education*. 7. 10.6084/m9.figshare.14028833.v1.

- [26] Schleicher, A. (2020). The Impact of COVID-19 on Education - Insights from Education at a Glance 2020. <https://www.oecd.org/education/the-impact-of-covid-19-on-education-insights-education-at-a-glance-2020.pdf>
- [27] Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The Difference between Emergency Remote Teaching and Online Learning. *EDUCAUSE Review*. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- [28] Kraft, M. A., & Simon, N. S. (2020). *Teachers' Experiences Working from Home During the COVID-19 Pandemic*. New York: Upbeat.
- [29] Winter, E., Costello, A., O'Brien, M., & Hickey, G. (2021) Teachers' use of technology and the impact of Covid-19. *Irish Educational Studies*, 40(2), 235–246 <https://doi.org/10.1080/03323315.2021.1916559>
- [30] Salmons, J. (2020). Making a Sudden Transition to Teaching Online: Suggestions and Resources. Retrieved from <https://www.socialsciencespace.com/2020/03/making-a-suddentransition-to-teaching-online-suggestions-and-resources/>
- [31] Zilka, G. C, Cohen, R, & Rahimi, I. D. (2018). Teacher presence and social presence in virtual and blended courses. *Journal of Information Technology Education: Research*, 17, 103–126. <https://doi.org/10.28945/4061>
- [32] Poth, R. D. (2019). Social presence in online learning. In M. Marmon (Ed.), *Enhancing social presence in online environments* (pp. 88–116). IGI Global. <https://doi.org/10.4018/978-1-5225-3229-3.ch005>.
- [33] Mykota, D. (2019). The impact of learner characteristics on the multi-dimensional construct of social presence. *The Turkish Online Journal of Educational Technology*, 16(2), 137–144.
- [34] Garrison, D. (2019). *E-Learning in the 21st Century: A Framework for Research and Practice* (3rd ed.). London: Taylor and Francis.
- [35] Ferraro, F. V., Ambra, F. I., Aruta, L., & Iavarone, M. L. (2020). Distance Learning in the COVID-19 Era: Perceptions in Southern Italy. *Education Science*, 10, 355. <https://doi.org/10.3390/educsci10120355>
- [36] Pokhrel, S., & Chhetri, R. (2021) A Literature Review on Impact of COVID-19 Pandemic on Teaching and Learning. *Higher Education for the Future*, 8(1), 133–141 <https://doi.org/10.1177/2347631120983481>
- [37] Armstrong-Mensah, E., Ramsey-White, K., Yankey, B., & Self-Brown, S. (2020). COVID-19 and Distance Learning: Effects on Georgia State University School of Public Health Students. *Front. Public Health*, 8, 576227. <https://doi.org/10.3389/fpubh.2020.576227>
- [38] Cavanaugh, C., & DeWeese, A. (2020). Understanding the professional learning and support needs of educators during the initial weeks of pandemic school closures through search terms and content use. *Journal of Technology and Teacher Education*, 28(2), 233–238.
- [39] Scull, J., Phillips, M., Sharma, U., & Garnier, K. (2020). Innovations in teacher education at the time of COVID19: An Australian perspective. *Journal of Education for Teaching*, 46(4), 497–506. <https://doi.org/10.1080/02607476.2020.1802701>
- [40] Howard, S. K., Tondeur, J., Siddiq, F., & Scherer, R. (2020). Ready, set, go! Profiling teachers' readiness for online teaching in secondary education. *Technology, Pedagogy and Education*, 30(1), 137–154. <https://doi.org/10.1080/1475939X.2020.1839543>
- [41] Collie, R. J., & Martin, A. J. (2018). Teachers' sense of adaptability: Examining links with perceived autonomy support, teachers' psychological functioning, and students' numeracy achievement. *Learning and Individual Differences*, 55, 29–39. <https://doi.org/10.1016/j.lindif.2017.03.003>
- [42] Barrot, J. S., Llenares, I. I., & del Rosario, L. S. (2021). Students' online learning challenges during the pandemic and how they cope with them: The case of the Philippines. *Education and Information Technologies*, 26, 7321–7338. <https://doi.org/10.1007/s10639-021-10589-x>
- [43] Winter, E., Costello, A., O'Brien, M., & Hickey, G. (2021) Teachers' use of technology and the impact of Covid-19. *Irish Educational Studies*, 40(2), 235–246 <https://doi.org/10.1080/03323315.2021.1916559>
- [44] Ertmer, P. A. (2019). Teacher Pedagogical Beliefs: The Final Frontier in Our Quest for Technology Integration? *Educational Technology Research and Development*, 53(4), 25–39. <https://doi.org/10.1007/BF02504683>
- [45] Tondeur, J., Van Braak, J., Ertmer, P. A., & Ottenbreit-Leftwich, A. (2019). Understanding the Relationship Between Teachers' Pedagogical Beliefs and Technology use in Education: A Systematic Review of Qualitative Evidence. *Educational Technology Research and Development*, 65(3), 555–575. <https://doi.org/10.1007/s11423-016-9481-2>

- [46] Ferri, F., Grifoni, P., & Guzzo, T. (2020). Online Learning and Emergency Remote Teaching: Opportunities and Challenges in Emergency Situations. *Societies*, 10, 86. <https://doi.org/10.3390/soc10040086>
- [47] Tarling, I., & Ng'ambi, D. (2019) Teachers pedagogical change framework: a diagnostic tool for changing teachers' uses of emerging technologies. *British Journal of Educational Technology*, 47(3), 554–572 <https://doi.org/10.1111/bjet.12454>
- [48] Carmo, R. O. S., & Franco, A. P. (2019). From Face-to-Face Teaching to Online Teaching: The Learning of University Teachers in Distance Education. *Educação em Revista*, 35, e210399. <https://doi.org/10.1590/0102-4698210399>
- [49] Martin, F., & Ndoye, A. (2019). Using Learning Analytics to Assess Student Learning in Online Courses, *Journal of University Teaching & Learning Practice*, 13(3). <https://doi.org/10.53761/1.13.3.7>
- [50] Zhang, W., Wang, Y., Yang, L., & Wang, C. (2020). Suspending classes without stopping learning: China's education emergency management policy in the COVID-19 outbreak. *Journal of Risk Financial Management*, 13(3), 55. <https://doi.org/10.3390/jrfm13030055>
- [51] Alhashem, F., & Agha, N. (2020). Analysis Based on the Three Objective Educational Domains for Final Summative Secondary Examinations of Science Subject (Chemistry, Physics, and Biology). *Education Research International*, Article ID 8886126. <https://doi.org/10.1155/2020/8886126>
- [52] Guangul, F. M., Suhail, A. H., Khalit, M. I., & Khidir, B. A. (2020). Challenges of remote assessment in higher education in the context of COVID-19: A case study of Middle East College. *Educational Assessment, Evaluation and Accountability*, 32, 519–535 <https://doi.org/10.1007/s11092-020-09340-w>
- [53] Richter, S., & Idleman, L. (2017). Online teaching efficacy: A product of professional development and ongoing support. *International Journal of Nursing Education Scholarship*, 1, 1. <https://doi.org/10.1515/ijnes-2016-0033>
- [54] Hebebeci, M. T., Bertiz, Y., & Alan, S. (2020). Investigation of views of students and teachers on distance education practices during the Coronavirus (COVID19) Pandemic. *Ijtes*, 4(4), 267–282. <https://doi.org/10.46328/ijtes.v4i4.113>
- [55] Cardullo, V., Wang, C., Burton, M., & Dong, J. (2021). K-12 teachers' remote teaching self-efficacy during the pandemic. *Journal of Research in Innovative Teaching & Learning*, 14(1), 32–45 <https://doi.org/10.1108/JRIT-10-2020-0055>
- [56] Robosa, Paras, Perante, & Alvez, & Tus, 2021
- [57] Creswell, J. W. (2019). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Boston, MA: Pearson.
- [58] Patton, M. Q. (2019). *Qualitative Evaluation and Research Methods*. Thousand Oaks, CA: Sage.
- [59] Black, W.C., Babin, B.J. and Anderson, R.E. (2020) *Multivariate Data Analysis*. 7th Edition, Pearson, New York.
- [60] McGrath C, Palmgren PJ, Liljedahl M. (2019) Twelve tips for conducting qualitative research interviews. *Medical teacher*. 2019 Sep 2;41(9):1002-6. <https://doi.org/10.1080/0142159X.2018.1497149>.
- [61] Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4), 589-597. <https://doi.org/10.1080/2159676X.2019.1628806>
- [62] Spradley, J. P., & McCurdy, D. W. (2019). *Conformity and conflict: readings in cultural anthropology*. 3d ed. Boston, Little, Brown.
- [63] Aronson, J., Fried, C. B., & Good, C. (2022). Reducing the effects of stereotype threat on African American college students by shaping theories of intelligence. *Journal of Experimental Social Psychology*, 38(2), 113–125. <https://doi.org/10.1006/jesp.2001.1491>
- [64] Taylor, S. J., & Bogdan, R. (2019). *Introduction to Qualitative Research Methods: A Guidebook & Resource* (5th ed.). New York: John Wiley and Sons.
- [65] Leininger, M.M., & McFarland, M. (2019). *Transcultural Nursing: Concepts, Theories, Research and Practice* (3rd ed.). New York: McGraw-Hill Medical.
- [66] Conostas, M. A. (2022). Qualitative analysis as a public event: The documentation of category development procedures. *American Educational Research Journal*, 29, 253-266.
- [67] Alson, Jollie (2019) "Stress Among Public School Teachers," *Journal of Research Initiatives*: Vol. 4 Iss. 2 ,Article 3.Available at: <https://digitalcommons.unctfsu.edu/jri/vol4/iss2/3>

- [68] Gül Özüdođru. (2021). Problems faced in distance education during Covid-19 Pandemic. Participatory Educational Research (PER) Vol. 8(4), pp. 321-333, December 2021 Available online at <http://www.perjournal.com> ISSN: 2148-6123 <http://dx.doi.org/10.17275/per.21.92.8.4>
- [69] Bayram, H. (2021). Challenges Secondary School Teachers Face During the Distance Education Process, International Journal of Eurasian Education and Culture, 6(12), 613-658. DOI: <http://dx.doi.org/10.35826/ijoecc>
- [70] Quejada, A. & Orale, R. (2019). Lived experiences of elementary teachers in a remote school in Samar, Philippines. Journal of Academic Research 3 (3), 1-13. Retrieved from <https://jar.ssu.edu.ph/index.php/JAR/article/view/7>
- [71] Lapuz, M. (2019), "Delights and difficulties multi-grade teachers in rural schools", International Journal of Engineering and Technical Research, Vol. 3 No. 7, ISSN: 2321-0869 (O) 2454-4698
- [72] Punzalan, C. H. (2020). Evaluating the Environmental Awareness and Practices of Senior High School Students: Basis for Environmental Education Program. Aquademia, 4, ep20012. <https://doi.org/10.29333/aquademia/8219>
- [73] Javilla, Mary Ann and Fabella, Frederick Edward (2019). Lived-Experiences of Mobile Teachers in Remote Schools in Antipolo City (October 2019). Available at SSRN: <https://ssrn.com/abstract=3516399> or <http://dx.doi.org/10.2139/ssrn.3516399>
- [74] Brown, R. (2019). 13 Differences Between Online and Face to Face Courses. Miami Regional. E-Campus News. Miami, FL.
- [75] Campos, A., Daclan, G.S., & Gempes, G. (2019). Plight of teachers in areas with unstable peace and order: Some stories to tell. International Journal of Science and Research 5(11), 465-487. doi: 10.21275/ART20162732
- [76] Brown, R. (2019). 13 Differences Between Online and Face to Face Courses. Miami Regional. E-Campus News. Miami, FL.
- [77] Lapuz, M. (2019), "Delights and difficulties multi-grade teachers in rural schools", International Journal of Engineering and Technical Research, Vol. 3 No. 7, ISSN: 2321-0869 (O) 2454-4698
- [78] Drago-Severson, E. (2019). Leading adult learning: Supporting adult development in our schools. Thousand Oaks, CA: Corwin Press.
- [79] Dobos, A., Neises, T. and Wagner, M. (2019) Advances in CSP Simulation Technology in the System Advisor Model. Energy Procedia, 49, 2482-2489. <https://doi.org/10.1016/j.egypro.2014.03.263>
- [80] Lapada, A. A. (2020). Audio-visual aided instruction in science among high school students in the Philippines. International Journal of Education and Research, 5(7), 139–156.
- [81] Darling-Hammond, L., Cook-Harvey, C., Flook, L., Gardner, M., & Melnick, H. (2019). With the Whole Child in Mind: Insights from the Comer School Development Program. Alexandria, VA: ASCD.
- [82] Bozkurt, A., & Bozkurt, A. (2019). From Distance Education to Open and Distance Learning: A Holistic Evaluation of History, Definitions, and Theories. Handbook of Research on Learning in the Age of Transhumanism. <https://doi.org/10.4018/978-1-5225-8431-5.ch016>
- [83] Toquerob, K. J. (2020). Philippine Teachers' Practices to Deal with Anxiety amid COVID-19. Journal of Loss and Trauma, 25(6-7), 573–579. doi:10.1080/15325024.2020.1759225
- [84] Uslu, Ö. (2019). Factors Associated with Technology Integration to Improve Instructional Abilities: A Path Model. Australian Journal of Teacher Education, 43(4). <https://doi.org/10.14221/ajte.2018v43n4.3>
- [85] Baloran, (2020). Knowledge, Attitudes, Anxiety, and Coping Strategies of Students during COVID-19 Pandemic, Journal of Loss and Trauma, 25:8, 635-642, DOI: 10.1080/15325024.2020.1769300
- [86] Khalid, F. (2019). The Benefits and Constraints of the Use of Information and Communication Technology (ICT) in Teaching Mathematics. Creative Education, 7, 1537-1544. <https://doi.org/10.4236/ce.2016.711158>
- [87] Schiavo, R. (2019). Health communication: From theory to practice (2nd ed.). Jossey-Bass.