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# Qualitative Content Analysis of Teachers' Perceptions and Experiences in Using Blended Learning during the COVID-19 Pandemic

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**Abstract.** The unexpected COVID-19 pandemic has closed schools and shifted the mode of education to digital and distance learning methods. However, the socioeconomic status of students affects their access to education. Blended learning, which includes online classes, television and radio broadcasts, and modular lessons, offers a more inclusive education that caters to the needs of the students. While the subject has been discussed in the literature from the perspective of the learners, this paper explores the perceptions, experiences, and insights of teachers in the Philippines on blended learning at the time of the pandemic. This study surveyed 39 basic education teachers and analyzed the data using qualitative content analysis. The results showed an agreement on teachers' perspectives about the effectiveness of educational policies implemented and the government's response to the pandemic. Despite the flexibility in using blended learning, the teachers experienced various challenges in applying this method during the pandemic, such as readiness, technology literacy, access to technology, financial difficulties, and health risk. These findings suggest the government and other education stakeholders provide additional financial support to schools during the pandemic; enhance the professional development activities for teachers; and continue developing learning platforms allowing open access to quality and reliable educational resources during and beyond the pandemic.

**Keywords:** blended learning; online learning; modular learning; inclusive education; COVID-19

## 1. Introduction

In response to the worldwide outbreak of the novel coronavirus, various governments shut down schools that affected over 60% of the global student population (UNESCO, 2020). As the schools have been identified as sources of influenza outbreaks (Coleman & Sigler, 2020), their closures reduce the social contacts among students, hence, interrupt the transmission of the virus (Jefferson et al., 2020; Viner et al., 2020).

Different countries then shift from face-to-face instruction to distance as well as digital learning (e-learning) (Crawford et al., 2020). This new environment allows flexible and self-paced learning and reflection, which gives the students ample time to review the learning materials and improve the lesson activities, and at the same time, allow the teachers to monitor the students' progress along the process (Rapanta et al., 2020). However, the abrupt shift to digital learning has led to a significant increase in the teachers' tasks, including the preparation of lectures, tutorials, laboratory works, and assessment tools (Dietrich et al., 2020). Meanwhile, students from low-income households have difficulties in an online environment that requires computers and connectivity to the internet that broadens the learning gap among the students from families with different socioeconomic statuses (Van Lancker & Parolin, 2020). Blended learning addresses these issues as it combines conventional face-to-face learning with asynchronous or synchronous e-learning and is effective, complementary to traditional methods (Moszkowicz et al., 2020).

While several studies have shown the value of blended learning from the perspectives of the learners (e.g., Lo et al., 2021; Ma & Lee, 2021; Nathaniel et al., 2021; Ożadowicz, 2020; Sefriani et al., 2021), there is still limited literature on its practice in the context of the teachers. This study aims to contribute to the literature by examining the experiences and challenges of using blended learning as a mode of instruction during the pandemic from the perspective of public and private school teachers in the Philippines. It is crucial to look at the perceptions of teachers given their irreplaceable role as facilitators in implementing blended learning during the pandemic (Agaton & Cueto, 2021). Meanwhile, the Philippines is chosen as the case study due to the following reasons: (a) it is a developing country that lacks enough resources to apply full online learning, (b) it is archipelagic, where some islands and remote communities lack access to electricity and technology, and (c) the government implemented blended learning as a mode of instruction during the pandemic.

The main objective of this study is to explore the lived experiences of teachers in using blended learning during the opening of classes in the "new normal" education in the time of the pandemic. Specifically, this aims to (1) describe the perception of teachers on the government's education policies implemented during the COVID-19 crisis, (2) analyze the experiences and challenges of basic education teachers in using blended learning during the pandemic, and (3) evaluate the implications of using this pedagogy in providing more inclusive education during a pandemic and beyond. Using the Philippines as a case study, an online survey was conducted to both public and private basic education teachers to share their perspectives and experiences with the research questions.

The collected data were analyzed using Qualitative Content Analysis. The findings of this study may serve as bases for recommendations to the government and other education stakeholders to support teachers and schools in continuing to provide learners more inclusive access to education.

## 2. Literature Review

### 2.1. Blended Learning

Students are accustomed to traditional face-to-face learning (Gherheş et al., 2021). Because of technological advancements and the novel coronavirus pandemic, the use of technology is increasing at a rapid rate (Saher & Anjum, 2021). Most sectors, including education, have embraced technology to prevent the spread of COVID-19. Teachers have used technology to facilitate the teaching-learning process remotely (Maity et al., 2021).

The idea of combining several instructional approaches is not new. Teachers have been employing novel and imaginative concepts in planning their lessons, and they have attempted to combine lectures and activities throughout the instructional process (Deshpande & Shesh, 2021). Blended learning is an instructional and learning experience that comprises in-person and online learning. It is a combination of several instructional and learning methodologies, one of which is essentially based on technology (Hege et al., 2020). Despite the use of technology, human intervention is unavoidable (Terblanché, 2015). Furthermore, digital learning resources have improved both the qualities of teaching and learning (Camilleri & Camilleri, 2017).

A technology-based learning environment provides a positive classroom climate for the students and an opportunity for the teachers to demonstrate their creativity throughout the teaching-learning process using technology (Kaufmann et al., 2016). The following are the four reasons for using blended learning, according to Deshpande and Shesh (2021):

1. Increased Access: Technology is now widely available to everyone. Most people own smartphones, and mobile internet access has connected several people worldwide.

2. Learner Flexibility and Convenience: Nowadays, online courses provide an opportunity for students to do tasks other than learning (e.g., working elsewhere). This can be extremely beneficial in providing equitable educational opportunities for everyone.

3. Cost-Effective and Time-Saving: Online courses also meet the demands of all students across the globe simultaneously. This reduces the cost and saves time. At a lower cost, more students can be approached.

4. Interesting: The use of audio-visual materials and the provision of engaging activities make the lesson interactive and increase the students' involvement.

### 2.2. Theoretical Foundations of Blended Learning

According to Khalil et al. (2018), the learning theories of cognitivism and constructivism guide the instructional design in a blended learning approach.

These theories describe learning differently as well as the part played by the students and the instructional approaches and assessment strategies used. They asserted that cognitive load and social constructivism theories are more appropriate in developing more learner-centered blended learning approaches.

Cognitive load theory (Sweller et al., 2011) emphasizes the significance of configuring the students' cognitive structure with the learning environment to achieve effective learning. This structure includes sensory memory, limited working memory, and unlimited working memory. According to Khalil and Elkhider (2016), the working memory deals with the following kinds of cognitive load: (1) intrinsic (e.g., the intricacy of subject matter and learning materials); (2) extraneous (e.g., the erroneous portrayal of learning materials); and (3) germane (e.g., students' interaction with the learning materials that play a part in learning). The overarching goal of employing cognitive load theory is to decrease extraneous cognitive load, deal with intrinsic cognitive load successfully, and foster germane load. Hence, to achieve the benefits of blended learning, Khalil et al. (2018) affirmed that the emphasis should be on designing effective learning resources for independent online learning and not on the utilization of media for combining instructional tasks.

On the other hand, the theory of social constructivism (Vygotsky, 1978) considers learning as a social process wherein students actively develop and use knowledge while interacting with their environment. They construct knowledge through collaborative and interactive effort. This theory also regards the students as active participants of the teaching-learning process and the teachers as facilitators of learning. Moreover, it promotes cooperation and self-directed learning among students. The examples of teaching strategies grounded on the theory of social constructivism include several types of cooperative learning that provide opportunities for the students to interact with more knowledgeable peers to enhance their knowledge. Social media and other forms of electronic communication have given rise to virtual communities of practice (Novakovich et al., 2017). Furthermore, communicating asynchronously encourages student control and enables participants to express their views and opinions in a safe atmosphere (Khalil et al., 2018).

### 2.3. Effectiveness of Using Blended Learning During the COVID-19 Pandemic

Worldwide, the COVID-19 pandemic has adversely affected billions of students. It resulted in halting in-person classes and shifting to online/blended learning delivery mode to ensure the continuity of learning. To foster effective teaching and learning during the pandemic, researchers have investigated the effectiveness of blended learning:

Ożadowicz (2020) developed a modified blended learning approach and presented a case study on how it was implemented to the building automation engineers at a technical university in Poland. The researcher reported that this approach yielded favorable outcomes in terms of students' participation, attendance, and engagement with learning activities. The researcher also found that the students prefer "passive" tools and activities such as webinars, presentations, and stand demonstrations.

Lo et al. (2021) examined the effectiveness of "flexible learning with multi-component blended learning mode" in teaching chemistry to undergraduate students in a university in Hong Kong. They found that this approach enhanced the students' learning achievement, engagement, and self-motivation in learning chemistry concepts.

Ma and Lee (2021) evaluated the effectiveness of ARCS (Attention, Relevance, Confidence, and Satisfaction)-based blended learning by comparing it with in-person and pure online learning. The researchers found that blended learning outdid pure online learning in terms of improving the learners' attention, confidence, and satisfaction perceptions. They also reported that the learners in blended learning were more satisfied than the learners in the in-person learning.

Nathaniel et al. (2021) developed an adaptive blended method for teaching a course in medical neuroscience for first-year medical students. They found that this approach helped high-achieving medical students improve their academic performance. It also facilitated identifying struggling learners at an earlier time, which served as a warning sign to provide appropriate intervention.

Sefriani et al. (2021) investigated the effectiveness of blended learning with *Edmodo* in teaching statistics to the students of Informatics Engineering Education at a university in Indonesia. The researchers reported that this approach brought positive results among students in terms of engagement in learning statistics. They also suggested that *Edmodo* can be a "virtual learning solution" during the COVID-19 pandemic.

These investigations have shown that the use of blended learning during the pandemic is beneficial to the students. This instructional and learning approach helps not only in preventing the spread of the COVID-19 and disruptions to teaching and learning but also in enhancing their overall learning experience. While several studies primarily focus on the effectiveness of using blended learning among students, particularly in higher education, the current research focuses on the perceptions and experiences of Filipino basic education teachers in using blended learning at the time of the pandemic.

### 2.4. Implementation of Blended Learning in the Philippines

Due to the rapid spread of COVID-19 in the Philippines, both public and private schools were closed following the government imposition of a total lockdown in March 2020, known as Enhanced Community Quarantine (Agaton & Cueto 2021). The Department of Education (DepEd) responded accordingly by developing appropriate learning delivery modalities to let the basic education learners continue education while containing the spread of COVID-19 (DepEd, 2020a). These modalities are referred to as Distance Learning or Blended Learning—a combination of the sub-categories of distance learning: Modular Distance Learning (MDL), Online Distance Learning (ODL), and Television-/Radio-based Instruction (TV/RBI). In the MDL, students with access to technology such as laptops, desktops, or tablets may take the digital MDL. Self-learning Modules (SLMs) in various digital formats are stored in external drives, while the printed SLMs are used by learners adopting a printed MDL.

Meanwhile, the ODL applies to schools where both teachers and learners have connectivity and access to online resources. This modality uses learning resources, including SLMs, textbooks, activity sheets, teacher-made videos, and Open Educational Resources (OERs). These resources are then converted into digital formats and made available through different learning management systems identified by the DepEd. Schools have the option to adopt synchronous, asynchronous online learning, or their combination, following the Screen Time Guidelines by Age recommended by the American Academy of Pediatrics and World Health Organization (DepEd, 2020b).

On the other hand, schools in areas with access to TV networks and/or radio stations can adopt the TV/RBI using the converted SLMs. In this option, the schools provide the broadcast schedule of the lessons to the parents and guardians of the learners.

The government ensures that all Filipino learners will have an equal opportunity to continue education amidst the COVID-19 pandemic by adopting various learning modalities, including blended learning and distance education, as the primary options. These learning modalities are now the "new normal" of delivering the basic education services in the Philippines while putting forward the welfare of teachers, learners, and other education stakeholders (DepEd, 2020a).

## 3. Methodology

### 3.1. Research Design

This study was conducted in the Philippines between August and October 2020, five months after the President declared various levels of community quarantine measures in different parts of the country. These months were also the period of starting the new academic year under the "new normal" education. The study was designed to describe the phenomenon of basic education teachers' work-related experiences during the pandemic using qualitative content analysis.

Qualitative research seeks to place the phenomenological understanding of the context, describe the behavior and beliefs, recognize the processes, and know the participants' lived experiences (Hennink et al., 2020). This study termed respondents as "participants" as they participate in the research by sharing their experiences in an in-depth online interview. The number of participants is limited to a few to achieve a depth of information gathered instead of statistical significance. An online qualitative survey was employed to collect the data because of its directness and adaptability in addressing the research questions (Braun et al., 2020) and it was the safest method appropriate during the time of the pandemic.

### 3.2. Participants and Data Collection

The participants of this study included 39 basic education teachers from the Philippines ages 21 to 58, with a median of 32. From this survey, 87% were teaching in public while 13% were in private schools; 10% in kinder and elementary, 26% in junior high school, and 64% in senior high school; and 74%

were female. Most participants were below 5 years in service, 29% are over 20 years in service, and 18% are between 5 and 20 years in service.

Purposive sampling was performed according to the following inclusion criteria: (a) teaching in public or private K-12 school for the school year 2020-2021; (b) applying blended learning during the COVID-19 pandemic; (c) voluntary participation in the survey and (d) completeness of the reports, following two main survey questions and instructions. To identify the sample size, this study followed the "data saturation" defined in Qualitative Research and Content Analysis (Kyngäs, 2020b) which refers to a certain point where the responses become repetitive and no additional information is gathered from continuing the data collection. Thus, the researchers analyzed the data during the collection process to be aware of reaching data saturation. During the analysis, the data saturation was reached after having 39 complete responses from the teachers.

This study collected the data using an online survey. The questionnaires comprised the study details (purpose, anonymity of responses, and confidentiality of the data), instructions, data of the participants, and two major open-ended questions. These included (1) a perception of the COVID-19 crisis and the government's response through educational policies during the pandemic, and (2) the experiences and challenges in using blended learning in delivering educational services to learners during the pandemic. The survey form incorporated encryption codes to anonymize the participants. All participants received the coded data and had the opportunity to verify and review their responses.

In conducting the survey, the study adhered to the Ethical Guidelines set by the publisher on research with human subjects. The study was conducted following the Declaration of Helsinki, and it was reviewed and approved by the ethics committee of Oriental Mindoro National High School. The academic purpose of this study was explained to all participants. Their participation was not compulsory, and they were free to opt-out at any time. The study employed an encrypted code for each participant to assure freedom from identification. Moreover, the confidentiality of personal information was guaranteed, as the research data is only accessible to the researchers.

### 3.3. Data Analysis

This study applied the Inductive Content Analysis, which is useful in qualitative research with an inductive starting line or with loosely defined themes following an open data collection method (Kyngäs, 2020a). The major advantages of this method include content-sensitiveness, application in highly adaptable research designs, and usage in examining several kinds of qualitative data (Kyngäs, 2020b).

Moreover, the following steps were obeyed in conducting a basic inductive content analysis: (I) preparation; (II) organization; and (III) reporting (Elo et al., 2014). Preparation includes identifying the data collection and sampling strategy, as well as selecting the unit of analysis. Organization involves data categorization and abstraction, interpretation, and checking the

representativeness of the sample data collected. Lastly, reporting entails systematic and logical reporting of the results.

## 4. Results

The abstractions of the data define a total of 26 codes, 11 sub-categories, 4 generic categories, and two main categories, which are the (i) teachers' perceptions on educational policies implemented during the pandemic in Table 1 and (ii) teachers' experiences in using the blended learning in Table 2.

### 4.1. Teachers' Perceptions on Educational Policies Implemented During the Pandemic

A total of 28 participants show agreement on the policies implemented by the government. They affirm that the decisions made by the government are timely and appropriate while prioritizing the welfare of the students, teachers, and school staff. For instance:

> *I would say that the decision made by DepEd is timely and appropriate, the welfare and safety of the teachers as well as the students must be our main priority.* (P20)

> *For the safety of not just students but also the administration, our school conducts blended learning where students learn even at a distance.* (P28)

**Table 1: Abstraction Results from Reports on Teachers' Perceptions**

| Main Category | Generic Category | Sub-category | Code(s) |
|---|---|---|---|
| Teachers' perceptions on educational policies during COVID-19 pandemic | State and the policies | Actions of the state | Measures on the welfare and safety of learners/teachers (13) |
| | | | Consultation of policies with stakeholders (1) |
| | | Uncertainty of the policies implemented | Readiness of schools to "new normal" (7) |
| | | | Uncertainty in reopening of classes (4) |
| | | | Uncertainty on the implementation of blended learning (3) |
| | | Educational policies during COVID-19 | Shifting the modalities from classroom to distance/blended learning (12) |
| | | | Delaying the reopening of classes (4) |
| | | | Policies to work at home (1) |
| | Teachers in COVID-19 crisis | Personal opinion and emotions | Difficulties in the situation (5) |
| | | | Worries on COVID risks (4) |
| | | Outlook during and beyond a pandemic | Positive outlook despite the pandemic (7) |
| | | | Adaptation with the current situation (6) |

Participants also agree on changing the learning delivery mode from in-person to distance and blended learning, as well as the closing of schools and the

movement of the reopening of classes for the schools and teachers to prepare the instructional materials. Among the responses includes:

> *For the safety of learners, it is okay to close the learning institutions for a while until it is safer to have face-to-face classes.* (P22)

> *It is okay to move the opening of classes since the teachers are not yet ready and the situation is not yet safe.* (P5)

> *I recommend strong implementation of online/blended learning to cater to all types of students with various conditions and statuses in life.* (P10)

On the other hand, six (6) participants disagree with the actions of the government, mentioning that no proper consultations were done with various stakeholders on moving the opening of classes, which brought more uncertainties, and that teachers and students are not yet prepared for implementing online and blended learning. Among the responses include:

> *I noticed that we just keep on receiving policies without even consulting us on whether they will be applicable in our area. No training was given on how it (blended learning) will be conducted.* (P3)

> *The school must not be closed so that all willing students to continue their studies can have the opportunity to pursue their education.* (P10)

> *During the face-to-face class, some students are not able to understand the lessons, so how much more with the printed module?* (P32)

Lastly, while nine (9) participants describe the worries about the health risks, thirteen (13) respondents exhibit a positive outlook on the pandemic, saying that the circumstances pave for opportunities to develop their skills and adapt to the situation. For example:

> *Education is very important that the current situation should never be a hindrance to learning.* (P28)

> *It was heart-breaking, having this noblest profession, we need to look for the brighter side, take this as a good opportunity, and challenge to develop ourselves on how to become better in doing our work effectively and efficiently.* (P29)

> *There is the need to adapt to the situation; teachers fulfill their sworn responsibility making learning possible for every Filipino youth.* (P35)

### 4.2. Teachers' Experiences in using Blended Learning

The results of abstractions from participants' reports on experiences using blended learning during the pandemic are presented in Table 2.

At work, the participants show concerns about the health risks from reporting to school, as well as pressures adapting to the new educational policies and preparations for the instructional materials.

> *Stressful. Learners and teachers are not used to this kind of setup.* (P22)

*There is a health risk of transferring the virus to one another during the distribution of learning modules.* (P11)

*The preparation time is not enough for the opening of the classes.* (P9)

In terms of teaching, most participants describe the technological challenges in preparing online lessons and SLM, financial challenges in printing the modules, as well as the responsiveness of the learners and their parents. Among the responses include:

*I am not well-versed with technologies and the same for some students.* (P13)

*It was hard as there is no financial support coming from the DepEd, so the teachers finance everything for the printing of the module.* (P1)

*We need more data allowance and strong access to an internet connection.* (P4)

*Parents sometimes cannot easily understand the modules given so we keep on answer queries even at night-time.* (P2)

**Table 2: Abstractions from Participants' Reports on Experiences**

| Main Category | Generic Category | Sub-category | Code(s) |
|---|---|---|---|
| Teachers' experiences in using blended learning during the pandemic | Experiences at work | School Policies | Adapt with the new educational policy (1) |
| | | | Not enough preparation time for the class opening (1) |
| | | | School support (2) |
| | | Health and safety at work | Health risk for COVID-19 (6) |
| | | | Mental, emotional, and physical strain (4) |
| | Experiences on teaching | Using blended learning as an instructional method | Internet connection issues (3) |
| | | | Troubles in using blended learning (11) |
| | | | Ease in using blended learning (5) |
| | | Preparation of instructional materials | Sufficient resources in printing the module (1) |
| | | | Financial struggles (7) |
| | | | Difficulties in creating printed modules (7) |
| | | Dealing with learners and their parents | Students' lack of gadgets for learning (2) |
| | | | Parents cannot easily understand the modules (1) |
| | | Coping with the challenges | Opportunity to learn from webinars (4) |

On the other hand, private schools provide all the necessary resources that teachers and learners need for online and blended learning. Some teachers from the public schools also seek assistance from external stakeholders to provide materials needed for the modules.

> *In our school, they provide for our needs in all aspects.* (P33)
>
> *The school can provide bond papers for module printing, but I still took the initiative to ask for a voluntary donation which is a very big help for the school.* (P24)

Finally, this new modality provided the teachers to learn new pedagogies in delivering educational services to several learners, particularly during the pandemic.

> *We learned the different ways of delivering distance learning, and the application of various technology.* (P5)
>
> *I maximize my time, talent, and treasure creating SLMs; attend online seminars to hone up skills; explore new financial resources giving me better opportunities to do things which usually not possible during the normal setting.* (P10)
>
> *It is very challenging, yet several pieces of training and tutorials help me to cope-up with the new normal.* (P21)

## 5. Discussion

This study examined the teachers' views on educational policies and blended learning during the COVID-19 pandemic. The findings show three important points for discussion. The first point summarizes the main findings and compares them with the existing literature. Moreover, the second point discusses the implications of the study on the digitalization of the educational system, on teacher education, and school management during and beyond the pandemic. Lastly, the third point describes the limitations of research focusing on blended learning, the data, and qualitative content analysis, which also serve as bases for further research.

### 5.1. Perspectives and Experiences on Educational Policies and Blended Learning During the Pandemic

In terms of the perspectives on educational policies set by the government during the COVID-19 pandemic, the participants are positive that the policies are timely and responsive. Among the measures mentioned include the closing of schools, social distancing, moving the opening of classes, shifting from classroom instruction to distance learning, and working from home. While the participants are saddened by the current situation, they still believe that the implemented policies are intended for the health and welfare of students, teachers, and the community. This result conforms with previous studies about the satisfaction of respondents with the government's initiatives to close schools as a proactive and effective move in reducing the risk of contracting the virus (Baloran, 2020; Mækelæ et al., 2020). Further, the teachers agree that introducing blended learning in the "new normal" system is the most appropriate instructional modality during the pandemic. The blended approach is an effective method, particularly during the transition from the conventional method to fully online in case of emergencies (Aboagye, 2020).

The radical shift from classroom instruction to blended learning during the pandemic brings opportunities and challenges for the teachers. These opportunities include attending training and seminars for the new teaching and learning modalities; learning new pedagogies and assessment tools; adapting to "new normal" education; developing financial and time management skills; and enhancing innovativeness, resourcefulness, and flexibility. Similar studies also confirm that teachers develop innovative pedagogical approaches, new assessment tools, digital competence, and flexibility during COVID-19 (Dhawan, 2020; König et al., 2020).

On the other hand, the findings show that teachers experience challenges in terms of health, technology, students, and finances. The health issues include the risk of getting infected from delivering the SLM to the parents and students, psychological problems such as stress from making SLM, and learning new technologies. Moving from classroom instruction to distance learning, changing instructional approaches, managing time, creating content which not only covers all the subjects but also holds the attention of the learners, and access to all digital tools pose serious challenges to teachers (Dhawan, 2020). Teachers work nights and weekends to develop learning materials and support their students (Jandrić, 2020). Also, they are challenged with students' insufficient knowledge and skills in e-learning as well as the unavailability of electronic devices and internet connectivity (Mailizar et al., 2020).

Another challenge is the financial burden of buying necessary equipment for online teaching as well as the reproduction of learning modules. Teaching with blended learning is expensive and therefore requires assistance from stakeholders for successful implementation (Aboagye, 2020). While schools alone cannot shoulder the printing of modules, teachers are encouraged to solicit financial and in-kind assistance from external stakeholders through the "Brigada Eskwela" program, also known as the "Bayanihan Para sa Paaralan (Working Together for Schools)" - a Filipino concept of unity. On the lighter side, the Brigada Eskwela is proof of an effective partnership between the government, education stakeholders, and the community.

### 5.2. Implications of the Study

The findings of this research provide in-depth insights into the perceptions, opinions, and experiences of basic education teachers during the COVID-19 pandemic. Based on the responses related to the implementation of blended learning, schools are not equipped with the facilities such as enough computers with an internet connection, printing machines for the modules, school supplies, and training for distance learning education at times of uncertainty. The government should promote the development of OERs, enhance the implementation of online programs, and examine whether it can fulfill the demand for distance learning during critical situations (Zhang et al., 2020). Educational policies and programs should remain flexible to allow various stakeholders to adjust to the "new normal." The basic education curriculum should be restructured to make the learning objectives attainable, considering the limitations brought by the pandemic. Furthermore, electronic devices such as

radio and television can also be harnessed to feature academic lessons (Lapada et al., 2020).

Government policies, as well as school management, play a crucial role in decisions related to closures and reopening of classes considering the safety of learners, teachers, and staff. Policymakers need to balance the reduction of the spread of the disease with the hefty costs of extensive shutting down of schools during the pandemic situation and the significant loss of healthcare staff to childcare duties at the time of closures (Viner et al., 2020). Additionally, policymakers and educational administrators must weigh the possibilities of reopening the schools while keeping students and staff safe. Schools may consider various precautionary measures, including physical distancing combined with proper hygiene, cleaning, and the use of isolation facilities (Melnick et al., 2020). Moreover, the government should invest, now more than ever, in teacher professional development to update the teachers continuously on effective pedagogical methods needed in the changing world.

Teacher education institutions (TEIs) also play an important role in providing a good formation for pre-service teachers. The TEIs should provide the pre-service teachers with an authentic opportunity to use knowledge rigorously in real-world situations and inspire them to teach according to the diverse educational needs of students, especially those with scarce learning resources (Mohamad Nasri et al., 2020). Additionally, TEIs should enhance the teachers' pedagogical knowledge for the integration of information and communications technologies (ICT) also known as technological, pedagogical, and content knowledge (TPACK). In this Internet era, the utilization of digital services to deliver high-quality instruction is an unavoidable trend (Zhang et al., 2020) not only during the COVID-19 crisis but also beyond the pandemic. The academic community, in cooperation with international organizations, the private sector, civil society, and other stakeholders, must continue developing open educational platforms that allow access to high-quality learning resources.

### 5.3. Limitations and Future Research

This research focuses on the analysis of teachers' perspectives and experiences in applying blended learning at the time of pandemic. This leads to various limitations of the study. First, different countries adopt various modes of education during the pandemic, including fully online, modular classes, flipped classrooms, videoconference, or combinations of these methods in blended learning (Adnan, 2020; Chick et al., 2020; Crawford et al., 2020). A comparison of the effectiveness of these methods provides a portfolio in which teachers and schools may adopt according to their learners' needs and local situation. This study can also be extended by exploring the experiences and insights of other education stakeholders, including school management, parents, and the community. From an economic perspective, the school management may look at the benefit of earlier investment in educational technologies, including distance learning platforms and open learning resources, applying the real options theory under uncertainty (Guno et al., 2021; Agaton, 2019).

Another limitation is the use of qualitative content analysis focusing on the teachers' perspectives and experiences, which is unable to provide numerical information that can be analyzed statistically. The findings of this research cannot be applied to larger populations with a similar level of certainty that can be done through quantitative analyses. For instance, a similar study examined the teachers' COVID-19 awareness and distance learning experiences using descriptive correlation analysis of a structured online survey with 2300 respondents and presented various levels of correlations and differences among the variables (Lapada et al., 2020). On the other hand, this qualitative study used open-ended questions which provided the participants with enough time to convey their thoughts, write their ideas freely, and describe their perceptions and experiences, which is impossible to attain by utilizing structured questionnaires with predetermined questions and answers (Lovrić et al., 2020). To take the advantage of the strengths and minimize the weaknesses of these methods, future studies may apply a triangulation with both qualitative and quantitative methods.

This study used an online survey with 39 participants. The disadvantages of using an online survey include unrepresentative sampling, decreased rates of response, concerns about money, restricted access to specific portals, short study duration, non-behavioral data, and scarcity of follow-up information (Rice et al., 2017). However, this method provides timelier data collection, reliable data, and anonymity of the participants. Moreover, this is the most appropriate method for data collection during the pandemic situation, as it puts first the safety of the researchers and the participants. The data analysis was done simultaneously with the data collection to monitor the saturation. It should be noted that the findings in this study cannot be used to generalize the entire teachers in the country due to the limited number of participants while the data obtained relied solely on teachers' self-reports of perceptions and experiences during the pandemic. Future studies may consider wider geographic coverage, including urban, rural, and remote schools, as well as combining other types of survey methods to accommodate teachers who have limited access to the internet.

Furthermore, this study focused on the utilization of blended learning during the pandemic. Due to the sudden change of instructional mode from classroom instruction to distance learning, the findings of this study showed the appropriateness and effectiveness of blended learning in providing more inclusive education. However, this study did not consider that in several countries, including the Philippines, the pandemic is exacerbated by other natural and man-made disasters such as severe typhoons, volcanic eruptions, flooding, wars, social unrest, and terrorist attacks (Cueto & Agaton, 2021). A study showed that these humanitarian emergencies affected the students as they brought stress in adjusting to distance education, completing academic requirements, and accessing technology for online learning (Cueto & Agaton, 2021). Future studies may look at how teachers cope with and adjust to implementing blended learning during multiple humanitarian emergencies.

Despite the given limitations, this research serves as a good basis for further analysis of exploring various options for educational institutions to offer more

inclusive access to education to several learners. Furthermore, it facilitates the preparation of a policy roadmap and the development of a high-quality blended learning design to assure the continuity of learning even during times of uncertainty and to help both the teachers and students in dealing with any critical situation in the present and future.

## 6. Conclusion

The recent COVID-19 pandemic has brought about unexpected and drastic impacts on all aspects of human life. Different countries shut down schools and shift to digital education. This virtual teaching-learning process has now become more popular and acceptable. Blended learning supplements this by providing alternative methods and allowing more inclusive access to education.

While the topic has been explored in the literature in the contexts of students, this study focused on the perspective and experiences of teachers on blended learning at the time of the pandemic. The main findings revealed an agreement of opinion about the effectiveness of educational policies and the government's response to COVID-19. Despite its flexibility, the teachers experienced difficulties in applying blended learning. These challenges include the readiness of schools in managing the pandemic; technological literacy, particularly by the older teachers; access to technology in remote areas; financial difficulties in providing learning modules; and health risks for teachers. Nonetheless, the situation provided the teachers an opportunity for professional development through seminars and training on blended learning, and updates on pedagogies using new technologies; to be flexible, resourceful, and innovative in adjusting to the needs of the learners; and to maintain a positive outlook in life despite the COVID-19 crisis. This is a novel finding, as this can be a major change that might improve teaching and learning during the pandemic situation, and this can have a positive impact on future educational transactions. The COVID-19 pandemic catalyzes teachers and other education stakeholders to accept a different perspective and skillset to meet the needs of today's learners.

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