

# Preparations, Challenges and Coping Strategies in the Implementation of New Normal Learning Delivery Modality Among Mathematics Teachers: Proposed Intervention Scheme

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## ABSTRACT

This study aimed identified the preparations, challenges and coping mechanisms of the Mathematics teachers in the implementation of the new normal learning delivery modality in Tacloban City Division during school year 2020-2021 as basis for a proposed intervention scheme. It tested the following hypotheses: 1) There is no significant relationship between the profiles and the extent of preparations relative to the implementation of the new normal learning delivery modality; 2) There is no significant relationship between the profiles and the challenges encountered in the implementation of the new normal learning delivery modality; and 3) There is no significant relationship between the profiles and the coping strategies employed

in relation to the challenges encountered. The study employed the descriptive-correlational research design. It employed 112 Math teachers in the 16 public secondary schools. The study used a self-made questionnaire. The data were statistically treated using the following: percentage, weighted mean, and Spearman Rank-Order correlation coefficient. The study has the following major findings: majority of the Math teachers lacked advanced degrees; they perceived the preparations for the new normal learning delivery modality to be moderately sufficient only; many challenges were encountered in the implementation of the new normal learning delivery modality, however, these were moderate only; they often utilized coping strategies in relation to the challenges encountered, most common of which was through prayers, maintaining support group such as friends and joining chat groups, and maintaining positive attitude. It was concluded that there was still a need for more preparations in relation to the implementation of the new normal learning delivery modality. Furthermore, it was concluded that despite the many challenges encountered, the respondents were able to positively cope up. Consequently, it was recommended that the output of the study, which was the intervention plan be implemented.

**Keywords:** *Preparations, challenges and coping; new normal learning delivery modality; mathematics teachers*

## INTRODUCTION

It is a common knowledge that education is a basic human right. This has been emphasized by pronouncements and legal documents published by the United Nations. Every country like the Philippines

has also emphasized education as a right; hence, it is given preferential attention by the government. This is so because education is seen as a way of ascertaining a good future for the young people. It is assumed that when children cannot go to school, their future is uncertain. In fact, even when they do attend school, sometimes there are not enough guarantees that they will be able to acquire the life skills demanded by the 21<sup>st</sup> century society. Also, education is one way of preparing young people to be active participants in nation building.

The pandemic caused by COVID-19 has created the largest disruption of the educational system in the history of the world. But like in any emergency, education must continue. It is necessary as it is a basic right. It has to continue as stopping it would be counterproductive to the children. Children will miss the opportunity learn. Stopping delivery of education to them would make them idle in their own homes. It may cause high extent of boredom. On the contrary, if delivery of education continues, their time would be productive as they will be learning even they are at home. For sure, there are issues and challenges that may arise. There may not be exactly the same quality learning as when they go to school in a face-to-face modality. However, it is still better than nothing at all.

Indeed, there are challenges in the implementation of a new modality of learning, which everyone was not used to. There will always be limitations like insufficiency of resources, having no preparations for the new normal modality such as online, modular or blended approaches, the lack of skills of teachers to implement the new normal modality, among others. Indeed, managing learning continuity in the new normal has been difficult. This is true to the Philippines and other countries.

“New normal” becomes a common term nowadays as a result of the pandemic. There emerges a lot of “new normal” things that has become part of the daily routine, at home, in work places, on the government processes and in education. It broke the norms that people have used to live by. It is characterized by staying at home, wearing of masks and face shields when people go out, no face-to-face activities and doing them online instead. In education, it means doing school activities at home, it means reading modules and answering activity sheets at home with parent’s supervision and returning activity sheets to school.

Due to these new modalities of learning delivery, several issues came out. In the Division of Tacloban City, as in other school’s divisions, there had been issues and challenges faced from the preparations to the actual implementation of the new normal learning modality. In addition, the modular modality of distance learning is supplemented by radio-based and TV-based instructions wherein lessons parallel to that in the modules are delivered through these platforms by teacher-broadcasters.

Despite the efforts made by the Division Office to provide quality education to the learners, some issues and concerns are still evident. Though minimal, there are some concerns raised like errors in the self-learning materials (SLMs); insufficiency of SLMs delivered to the students; manner of distribution and retrieval; low accessibility of the other platforms due to low frequency of some radio stations, and weak internet connections, among others. Other concerns include health and safety issues, readiness of the students to deal with the new normal modality, the ability of the parents to assist their children in their learning tasks, assessment modalities suited to the conditions of the students, and the teachers’ readiness for the implementation of the new normal learning modality.

Considering the premises presented, it is imperative to conduct a study to determine the preparations made by the teachers, specifically the Mathematics teachers; identify the challenges encountered in the implementation of the new normal learning modality, and the corresponding coping mechanisms employed. Moreover, the researcher is also in the front line in the implementation of the new normal learning modality. As such, she has also experienced challenges relative to it. Thus, this researcher has a firsthand knowledge the delivery of education to learners in this time of pandemic, and therefore, she finds it necessary to conduct this study. The result of this study could provide valuable inputs to strengthen the implementation of the new normal learning modality. More specifically, compensatory intervention schemes may be proposed, with the end in view of proving a better-quality education to the learners.

### Statement of the Problem

This study identified the preparations, challenges and coping mechanisms of Math teachers in the implementation of the new normal learning modality in the Division of Tacloban City during the school year 2020-2021 as basis for a proposed intervention plan.

Specifically, it sought answers to the following questions:

1. What is the profile of the respondents in terms of the following?
  - 1.1 age
  - 1.2 sex
  - 1.3 civil status
  - 1.4 position/rank
  - 1.5 length of service in DepEd
  - 1.6 highest educational attainment
  - 1.7 relevant trainings and seminars attended
2. What are the preparations made by the respondents relative to the implementation of the new normal learning delivery modality?
3. What are the challenges encountered by the respondents in the implementation of the new normal learning delivery modality?
4. What coping strategies were employed by the respondents relative to the challenges encountered?
5. What is the relationship between the following?
  - 5.1 profile of the teachers and
    - 5.1.1 extent of preparations made relative to the implementation of the new normal learning modality
    - 5.1.2 challenges encountered in the implementation of new normal learning modality
    - 5.1.3 coping strategies relative to challenges encountered
6. What intervention plan may be proposed based on the findings of the study?

### Theoretical Framework

This study is anchored on the Transactional Theory of Stress and Coping developed by Lazarus and Folkman (1984). This theory provided the foundation the relationship between the challenges or problems which they encounter in the course of discharging their mandate and the coping they use. This theory emphasizes the transactional nature of stressful encounters in which the path from stressful situation to outcome is a process that is highly individualized, situationally specific, and inseparable from the cognitions that accompany the experience. In this study, these stressful encounters are manifested by the challenges that the teachers face in the implementation of the new normal learning modality.

Furthermore, the transactional theory of stress and coping posits that acute and chronic stress outcomes are contingent upon individual and environmental factors. Relationships between stressor exposure and stress outcome are mediated by how benign, threatening, harmful, or challenging those factors are deemed by the individual (primary appraising) and the degree to which the individual feels capable of dealing with threatening, harmful, or challenging appraisals (secondary appraising, which includes coping self-efficacy). These appraisals, in turn, are mediated by the coping strategies the individual enlists to adapt to other than neutral appraisals (Lazarus and Folkman, 1984).

### Conceptual Framework

Figure 1 on the next page shows the conceptual framework of the study. The schema illustrates the variables of the study and the relationships. These include the profile of the respondents, the preparations of the Math teachers relative to the implementation of the new normal learning modality, and the coping strategies. Double-headed arrows connect between the following pairs of profiles to show the relationships:

profile and preparations relative to implementation of new normal learning modality; profile and challenges encountered; profile and coping mechanisms; and challenges encountered and the coping mechanisms. Also reflected in the schema is the output of the study which is a proposed intervention scheme based on the findings of the study.

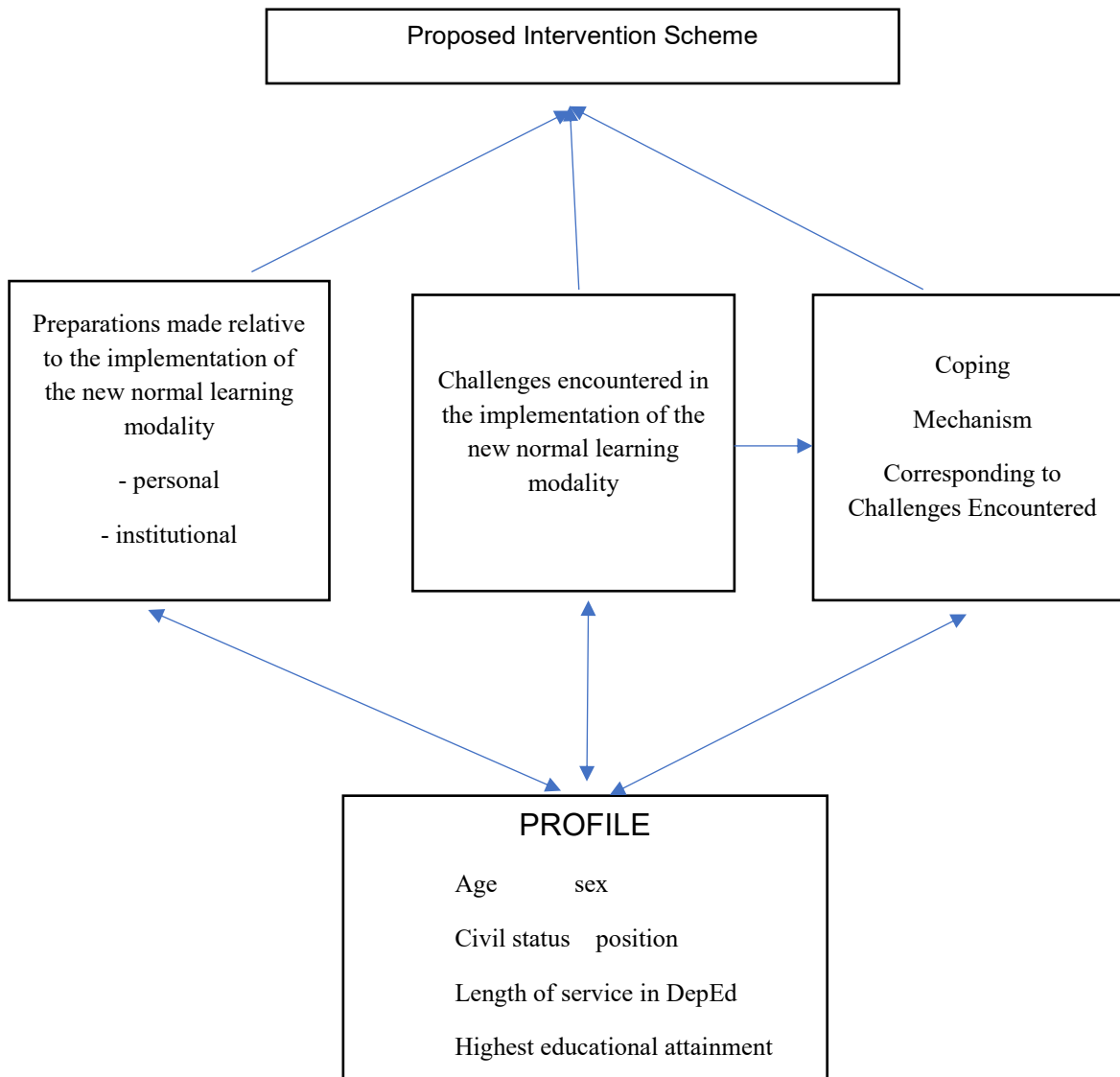


Figure 1. *The Conceptual Framework of the Study*

## Literature Review

### *The Right to Education*

Education is a basic human right. The right to education had been emphasized in many declarations by several countries including the Philippines. The declaration of the United Nations Convention on Rights

of the Child which was adopted by the United Nations General Assembly in 1998 proclaims education as a basic right, and that should be free and compulsory as a matter of urgent priority. It further elaborates the promotion of international cooperation in matters of education (Article 28); a holistic approach to child development which incorporates, among other things, the national values of the country in which children are living and the country from which they may originate (Article 29); and for the treatment, recovery and social reintegration of children who are victims of conflict (Article 39), something that education can directly address (Boyden & Ryder, 1996).

In the Philippines, the 1987 Constitution manifest the commitment of the state in promoting education as a right as stipulated in the following provisions:

*“The State shall protect and promote the right of all citizens to quality education at all levels and shall and shall take appropriate steps to make such education accessible to all.”* (Section 1, Article XIV)

*“The State shall give priority to education, science and technology, arts and culture, and sports to foster patriotism, nationalism, accelerate social progress, and promote total liberation and development.”* (Section 17, Article II)

Indeed, education is a human right and should be guaranteed and protected for all people, at all times. However, in emergencies, states often encounter difficulties in guaranteeing and protecting people’s human rights particularly the rights of members of already marginalized groups. This may be due to loss of power and the lawlessness that ensues, the destruction of infrastructure or because of the redirection of resources. In any case, emergencies lead to an increased likelihood that the right to education will be violated. It is therefore important that international law and the international community act to minimize and ameliorate the harmful effects of emergency situations. In emergencies, human rights law applies in all contexts; people do not lose their human rights because of conflict, famine, natural disasters, or pandemic. (Mohammed, 2008)

Education in Emergency and Pandemic. Emergency situations affecting education are defined as all situations in which man-made or natural disasters destroy, including pandemic within a short period of time, the usual conditions of life, care and education facilities for children and therefore disrupt, deny, hinder progress or delay the realization of the right to education (Mohammed, 2008).

According to UNESCO (2020), conflicts, disasters caused by natural hazards, and pandemics keep millions of children out of school and the numbers are rising. In crisis-affected countries, school-age children are more than twice as likely to be out of school as their peers in other countries. Thus, even in critical emergency circumstances when communities have lost everything, must remain the top priority of governments.

Emergency education is as a set of linked project activities that enable structured learning to continue in times of acute crisis or long-term instability (UNESCO, 2010). Similarly, UNESCO (2001) defines educational emergency as a crisis situation created by conflicts or natural disasters which have destabilized, disorganized or even destroyed the education system, and which requires an integrated process of crisis response. In general, emergency education programmers are a response to exceptional means of response, linked to a process of planning for future educational development.

As enumerated in Guidelines for Education in Situations of Emergency and Crisis, the following are the aspects needed in the needs assessment so as to be able to respond accordingly to the needs of the affected communities: demographic characteristics of the emergency-affected populations; current education programs for these populations; gender-related dynamics that influence access to education; quantitative and qualitative gaps in reaching the EFA for these populations; and current status of school

enrolments (Bensalah, 2013) Most of these, those which were demand relevant, are considered in this current study.

Furthermore, the immediate educational response in times of emergencies is anchored on the beliefs that: 1) education helps meet the psychological needs of children and adolescents affected by disasters that have disruptive their lives, studies and social networks; 2) education is a tool for protecting children in times of emergencies; 3) education provides a channel for conveying health and survival messages and for teaching new skills and values, such as peace, tolerance, human rights, environmental conservation, among others; 4) Education for All is a tool for social cohesion, whereas, educational discrepancies lead to poverty for the uneducated and fuel civil conflict; 5) education is vital reconstruction of economic basis of family, local and national life, and for sustainable development and peace building (Bensalah, 2013).

The Department of Education is committed to fulfilling its mandate even in this most challenging times. As Secretary Briones said: “DepEd recognizes the challenges of the school year ahead, but if we opted for an academic freeze, we would have lost many months of the children’s learning” (Business Mirror, 2020).

**Learning in the New Normal.** The American Dictionary defines new normal as “a previously unfamiliar or atypical situation that has become standard, usual, or expected.” The new normal is characterized by: the lockdowns, quarantines, masks, washing hands, taking vitamins and nutrient-rich food to nurture health, covering a coughing mouth and sneezing nose, physical distancing, and the omnipresent support technology, virtual meetings and conferences, online business, virtual private networks, among others (Tanhueco-Tumapon, 2020).

Tria (2020) explained that the present COVID-19 pandemic has brought extraordinary challenges and has affected the educational sectors, and no one knows when it will end. Tria further elucidated that in the educational context, to sustain and provide quality education despite lockdown and community quarantine, the new normal should be taken into consideration in the planning and implementation of the “*new normal educational policy*”.

As the country continues to confront different issues brought about by the coronavirus disease 2019 (COVID-19) pandemic, the Department of Education (DepEd) is addressing the challenges in the basic education for the school year 2020-2021 through its Basic Education Learning Continuity Plan (BE-LCP) under DepEd Order No. 012, s. 2020. The BE-LCP is consistent with the mandate of Section 1, Article XIV of the 1987 Constitution for the state to protect and promote the right of all citizens to quality education at all levels, and to take appropriate steps to make such education accessible to all (ACCRALAW, 2020).

The BE-LCP aims to ensure the health, safety, and well-being of the learners, teachers, and personnel in the time of COVID-19, while finding ways for education to continue amidst the crisis. In particular, the BE-LCP has been designed with a legal framework responsive to the “new normal,” keeping in mind the constitutional mandate to uphold the right of all citizens to quality education at all times. In line with this, the learning delivery modalities that schools can adopt may be one or a combination of the following, depending on the local health conditions, the availability of resources, and the particular context of the learners in the school or locality (ACCRALAW, 2020): face-to-face, distance learning, blended learning, and homeschooling.

Face-to-face refers to a modality where the students and the teacher are both physically present in the classroom, and there are opportunities for active engagement, immediate feedback, and socio-emotional development of learners. Notably, this modality is feasible only in very low risk areas with no history of infection, easily monitored external contacts, and with teachers and learners living in the vicinity of the school.

Distance learning refers to a modality where learning takes place between the teacher and the learners who are geographically remote from each other during instruction. This modality has three types,

namely: Modular Distance Learning, Online Distance Learning, and Television/Radio-Based Instruction. This is most viable for independent learners, and learners supported by periodic supervision of parents or guardians.

Blended learning refers to a learning delivery that combines face-to-face with any, or a mix of, Modular Distance Learning, Online Distance Learning, and Television/Radio-Based Instruction. Blended learning will enable the schools to limit face-to-face learning, ensure social distancing, and decrease the volume of people outside the home at any given time.

Homeschooling is a modality which aims to provide learners with quality basic education that is facilitated by qualified parents, guardians, or tutors who have undergone relevant training in a home-based environment. However, this modality will be the subject of a later DepEd issuance since there remain several issues in its implementation, including the supervision of licensed teachers and alignments with the standard curriculum.

Furthermore, the data from the Learner Enrollment and Survey Form showed that 8.8 million parents preferred modular while 3.9 million voted for blended learning, which combines different modalities: module, television and radio, and radio with online. Individualized instruction in modular distance learning is useful in remote areas with limited internet access such as mountains. Learners use self-learning modules in print or digital format. They may need home visits by teachers for learners' remediation or assistance. If it is workable, students could reach their teacher via email, telephone, text message or instant messaging. (Lardizabal-Dado, 2020)

The Business Mirror (Nov. 1, 2020) reported that as the DepEd's successful implementation of the different learning modalities across the country, Regional Offices (ROs) are working hard to continuously provide students with learning materials. With the vision of making education accessible to every student in the country, DepEd reports that 690,578,576 Self Learning Modules (SLM) have already been printed. Distribution of the said learning materials has also been successful, with 465,225,636 SLMs being distributed to students nationwide for the first quarter of the school year.

Moreover, in the midst of a raging pandemic, the government and all other stakeholders are scaling up efforts to ensure that children continue with their studies. For starters, teachers were given trainings on how to discuss their lessons using the limited time effectively and efficiently during online classes, a daunting task due to internet connectivity issues in the country. For students, it's a struggle whether their chosen system is through printed modules, blended learning, or online class. Other pressing issues include the volume of transferees from private schools and the lack of teachers that will take this additional task. (Villanueva, 2020).

Undoubtedly, the shift of the teaching-learning delivery in schools to modular distance learning made more challenging, on the part of the school personnel, the delivery of basic quality education. That is why DepEd leaders are always finding avenues to solve the problems and capacitating its teachers and school heads to become more effective in their field for the modular distance learning. As frontliners in the educational system, they have undergone various trainings and seminars to be more equipped in delivering better education amid the COVID-19 pandemic as it is a norm of the department to train teachers not just for professional growth but to become ready for unexpected circumstances. Identified teaching personnel together with the Education Program Supervisors prepared modules starting in May 2020 in all subjects for all grade/year level across four quarters in accordance to the "Most Essential Learning Competencies". These self-learning modules are already considered learning packages containing pre-test, discussion, and a series of evaluation/assessment. They are distributed to all learners with the modular learning class schedule. The class will guide the learners on what subjects and modules they have to study and learn for the particular week. (Bagood, 2020).

Corresponding to the challenges which the teachers and others in the frontline service experienced are the ways of coping. Woods (2020) narrated that as the coronavirus outbreak prompts a physical

shutdown of many K-12 schools, teachers are grappling with taking their classrooms online for the very first time. The rapid shift to distance learning may be contributing to the declining morale among teachers and students. A report finds that “76 percent of students and 66 percent of teachers are in lower spirits than they were before the crisis.”

Thus, the need to cope up with these challenges such as training teachers on how to develop a blended, self-paced content approach, using self-made videos and face-to-face interaction. Some suggestions to cope with the challenges are: assignment instructions should be simple and direct, offering no more than two resources; the digital platform should be the one place students can find the most up-to-date information related to their course; incorporate longer, student-driven assignments into the lesson plan; make an effort to stay connected with students on an individual basis through email, phone or video; and for educators to learn how to effectively transition from a traditional classroom setting to a more blended learning approach or a totally online approach (Woods, 2020).

Callo and Yazon (2020) conducted a study in Laguna State Polytechnic University (LSPU) to investigate the factors influencing the readiness in online teaching and learning as an alternative delivery mode to continue the teaching-learning process, even the absence of face-to-face interactions between teachers and students. The content-validated and researchers-made online survey instrument, which reported an excellent reliability index of Cronbach  $\alpha = 0.95$ , was administered via a google form. Responses from 348 faculty and 7,205 students at the university were analyzed using descriptive statistics such as frequency count, percent, mean, and standard deviation. Multiple linear regression analysis was employed to determine the significant predictors of respondent readiness. The results revealed that respondent familiarity and capability, preparation, device and access connectivity, self-efficacy, and experience with technology significantly influence their readiness on the conduct of online teaching and learning modality. It is concluded that faculty and student readiness on online teaching and learning is determined by their competence, accessibility of ICT tool, preparedness, confidence in their ability to use technology, and exposure to e-learning materials. Consequently, it recommended that the university and in the broader scope, the Commission on Higher Education (CHED), may conduct series of training for teachers as a capacity building to equip them with knowledge and competencies on the use of flexible or blended learning. Further, a university-wide learning system may be designed, adopted, and implemented in case the Enhanced Community Quarantine will not be lifted for a longer period.

Another local study was conducted by De Villa and Manalo (2020). The study was a phenomenological research which explored the lived experiences of secondary teachers in the Division of San Pablo City in the pre-implementation of distance learning in the new normal. The participants were selected through purposive sampling and underwent one-on-one actual in-depth interview through video conference. The documented interviews were transcribed and coded. Categories were clustered; then, emerging themes were derived. Results identified three core themes related to preparation such as gathering resources and establishing practices, profiling learners, and capacity building for continuous learning and development; three core themes related to challenges such as complexity of assessment, difficulty in instructional delivery and digital divide; and five core themes related to coping mechanisms which include positive well-being, time management, openness to change, peer mentoring, and collaboration. Findings revealed that as education migrates to a New Normal, teachers make necessary preparations to equip themselves with distance learning. Though they face challenges which may hamper their work, they still manage to cope with the new normal to continue their tasks. Based on the findings, it recommended that higher offices and school authorities should work with teachers at the pre-implementation of distance learning to address their needs in resources and training to effectively facilitate the delivery of quality education for students. Both local studies are very relevant to the present study as they delved on factors and experiences in relation to education in the new normal.

One related foreign study was conducted by MacIntyre, Gregersen and Mercer (2020) which examined the stress and coping responses of an international sample of over 600 language teachers who responded to an online survey in April 2020. The survey measured stressors and 14 coping strategies grouped into two types, approach and avoidant. Substantial levels of stress were reported by teachers. Correlations showed that positive psychological outcomes (wellbeing, health, happiness, resilience, and growth during trauma) correlated positively with approach coping and negatively with avoidant coping. Avoidant coping, however, consistently correlated ( $r_s$  between 0.42 and 0.54) only with the negative outcomes (stress, anxiety, anger, sadness, and loneliness). In addition, ANOVA showed that although approach coping was consistently used across stress groups, avoidant coping increased as stress increased suggesting that there may be a cost to using avoidant coping strategies. Stepwise regression analyses using the 14 specific coping strategies showed a complex pattern of coping. As part of the recommendations, suggestions for avoiding avoidance coping strategies were offered.

Another foreign study was conducted by Liao et al. (2018) to explore the teaching problems that encountered by the junior high school teachers in social study field and the coping strategies based on individual background and school environment variables. Questionnaire survey method was established after thoroughly literature reviewing. A total of 264 valid questionnaires were returned while 342 questionnaires have been sent, and valid return ratio was 77.2%. The collected data was analyzed by statistical methods of frequency distribution, percentage, mean, standard deviation, T test, one-way ANOVA, Scheffe posteriori comparison and Pearson correlation. Results were summarized as follows: 1) “Classroom Management” and “Teacher’s Professional Competence” are viewed as the highly disturbing problems to junior high school teachers in social study field; and “positive” is their responding strategy when encountering problems; 2) Teaching problems of junior high school teachers in social study field have significant differences due to different ages, positions, school located areas and school size; 3) As junior high school teachers in social study field, Adjunct homeroom teachers are more actively seeking for solutions than adjunct administrative teachers; and adjunct administrative teachers are more actively looking for help than subject teachers.

Onojetah, (2020), on the other hand, investigated the challenges and coping strategies for enhancing the effectiveness of distance learning in achieving the objectives of Business Education in Delta State, Nigeria. The descriptive survey research design was employed. A total of 73 lecturers participated in the study. All the 73 lecturers participated in the study because of their manageable size. The medium of data collection was a 35-item structured questionnaire. Mean, standard deviation and Analysis of Variance (ANOVA) were used to analyze the data collected for the study. The study identified 10 administrative challenges, 10 technology-based challenges and 13 strategies for achieving the objectives of the Business Education program under the distance learning education system. The study recommended adequate funding, recruitment of qualified facilitators, production and distribution of course materials to students and lecturers, among others.

Similarly, Musingafi (2015) conducted a study to investigate the challenges facing Open and Distance Learning students at the Zimbabwe Open University (ZOU). The study was conducted at ZOU Masvingo Regional Campus. The study employed both qualitative and quantitative approaches. The main data collection techniques were questionnaires and structured interviews, supplemented by documentary review. The results showed that ODL learners were challenged with a range of obstacles in their course of studies. The most reported challenges were lack of sufficient time for study, difficulties in access and use of ICT, ineffective feedback and lack of study materials. It was recommended that ZOU should strive to achieve effective and balanced teaching and learning system that satisfies the desire of the learners to the extent that they would wish to come back to the institution for further studies and feel proud to recommend the institution to others who are seeking for knowledge.

## METHODS

### Research Design

The descriptive-correlation design was applied in this study. The study identified and describe a certain condition, thus, descriptive is used as its main research design. Particularly, the study determined the types and extent of preparations of the teachers in relation to the implementation of the new normal learning modality, the challenges and that teachers experience and the corresponding coping which they employ. Hence, this design is deemed appropriate. Correlation was also employed since relationships between the variables will be determined.

### Research Environment

The study was conducted in the Division of Tacloban City. This is one of the 13 Schools Division covered by DepEd Region VIII. This Division has 64 public elementary and secondary schools which are divided into ten (10) school districts. Each school district is headed by a public school district supervisor, while each school is headed by a school principal or teacher-in-charge (TIC).

Specifically, the study was conducted in public secondary schools with Mathematics teachers as respondents. There are 16 public secondary schools – nine regular day class high schools, one “stand alone” senior high school, four-night high schools and two integrated schools. In compliance to the ethical standards in research, specifically the principle of confidentiality and anonymity, these schools were referred only by letters, such as School A, School B, School C, and so on.

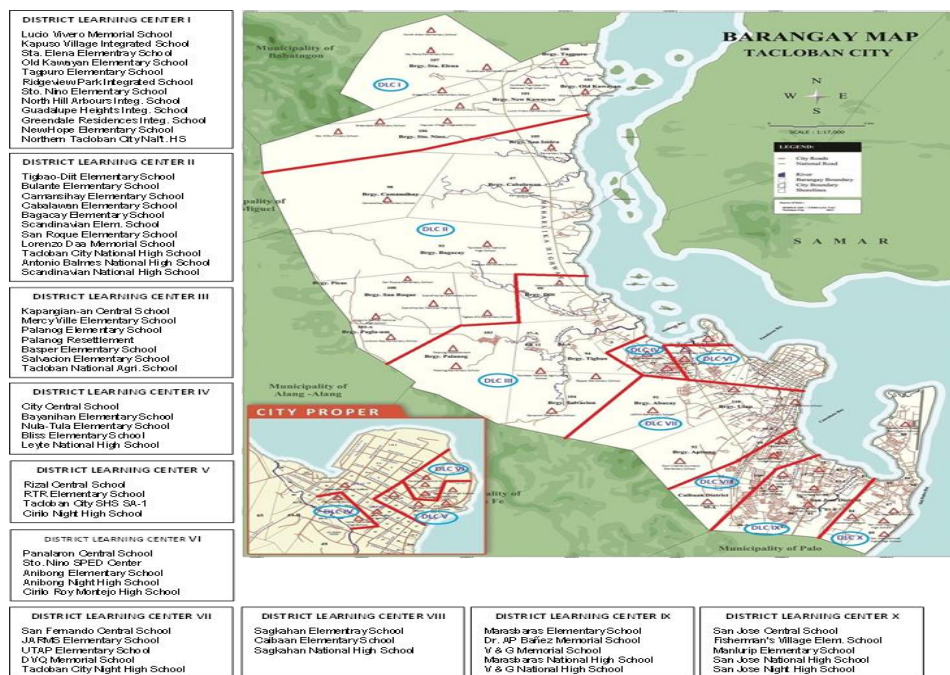


Figure 2. The Map of the Division of Tacloban City

### Research Respondents

The expected respondents of the stud were all the Math teachers in all the 16 public high schools of the Division of Tacloban City. There were 138 Math, however, only 112 gave consent to be respondents. In adherence to the ethical principle, those who refused to be included as respondents were not included. The purpose was to include all; hence, no sampling procedure was implemented. Table 1 shows the distribution of the respondents by school.

School	Male	Female	Total Expected	Actual Respondents
A	27	33	60	50
B	7	9	16	12
C	5	7	12	10
D	1	3	4	3
E	2	4	6	4
F	3	5	8	6
G	4	6	10	8
H	1	2	3	3
I	1	2	3	2
J	1	1	2	2
K	1	1	2	2
L	1	-	1	1
M	1	1	2	2
N	1	2	3	2
O	1	1	2	2
P	2	2	4	3
Total	59	79	138	112

Table 1. *The Respondents of the Study*

### Research Instruments

A self-made questionnaire was used as the data gathering tool. It was composed of four parts. Part I was on the profile. For each profile, there were categories for which the respondents checked the category that applied to him or her.

Part II was about the preparations made by the teachers in relation to the implementation of the new normal learning modality. Activities were identified such as attendance in trainings and seminars, acquiring gadgets and other preparations. To measure the extent of preparation in terms of sufficiency, a 5-point rating scale is used such that: 5 - very sufficient, 4- sufficient, 3-moderately sufficient, 2-insuffiient, 1- very insufficient, and 1- none at all.

Part III was about the challenges encountered in relation to the implementation of the new normal learning modality. It contained different issues and concerns or challenges. To measure the extent or severity of problem, a 5-point rating scale is also used such that: 5 - severe, 4 - high, 3 - moderate, 2 – slight, and 1 – not a concern at all.

Part IV was on the coping mechanisms or strategies corresponding to the challenges encountered. It contained a list of activities and strategies which could be used to address an issue. A 5-point rating scale was also used to measure the frequency of use such that: 5 – almost always, 4 – often, 3 – moderately often, 3 – seldom, 2 – very seldom, and 1 – never.

### Validation of the Instrument

Considering that the research gathering tool was a self-made one, it underwent validation, specifically content validation by experts. Three experts were asked to evaluate the instrument to determine its comprehensibility. Then it was pilot tested in a neighboring school division with math teachers as participants. The results of the pilot test were used to improve the questionnaire based on the comments and suggestions of the respondents.

### Data Gathering Procedure

The data was gathered using the validated research questionnaire. It was distributed to the identified respondents – the math teachers in the 16 public high schools of the Schools Division of Tacloban City. Retrieval was done by the researcher.

The researcher exercised the highest standards in research. Thus, the following were done prior to the data collection: a permit from the Dean of the Graduate School was sought; permissions to conduct the data gathering was also sought from the Schools Division Superintendent of the Division of Tacloban City and from the school heads of the 16 public secondary schools; and finally, consent was sought from the respondents. This was purely voluntary, which means that the participants had the right to refuse.

### Statistical Treatment of Data

The following statistical tools were used for the data analysis:

**Percent.** This was used for the profile. Specifically, this was used to analyze and interpret data and eventually answer statement of the problem number 1.

**Weighted Mean.** For statement of the problem numbers 2, 3 and 4 such as those pertaining to preparations, challenges and coping, the weighted mean was used. This is appropriate as a descriptive measure since the variables were measured using 5-point rating scale.

**Spearman Rank-Order Correlation.** This was used for statement of the problem number 5, specifically on the relationship between profile and the other variables such as preparations, challenges and coping.

## RESULTS AND DISCUSSION

### Profile of the Respondents

The respondents of the study were 112 Mathematics teachers in the public secondary schools of the Schools Division of Tacloban City. Their profiles include the following: age, sex, civil status, position/rank, length of service in DepEd, highest educational attainment, and relevant seminars and trainings attended.

**Age.** The age of the respondents ranged from 21 to above 60, and mostly were in the 40 and below age brackets. Specifically, one-third of the respondents were 31-40 years old and 32 percent were 21-30 years old. About another one-third was above 40 years old.

The usual age range of teachers as government employees is 20 years old to 65 years old, 65 being the compulsory retirement age. The distribution shows that the distribution is concentrated in the lower age brackets indicating that majority of the secondary Mathematics teachers in the Division of Tacloban City are young.

Table 2. *Age, Sex, and Civil Status of the Respondents*

Profile		f	%
Age	21 – 30	36	32.1
	31 – 40	37	33.0
	41 – 50	28	25.0
	51 – 60	8	7.1

	61 – above	3	2.7
	Total	112	100.0
Sex	Male	46	41.1
	Female	66	58.9
	Total	112	100.0
Civil Status	Single	41	36.6
	Married	68	60.7
	Widowed	3	2.7
	Total	112	100.0

**Sex.** The result showed that majority of the respondents were female teachers which composed 59 percent. The male teachers comprised 41 percent of the total respondents. This resulted to a ratio of four males to every six females. This result signifies that female teachers dominate in terms of numbers. This further implies that teaching profession attracts more female than male. The dominance of female teachers is true in the Philippines as well as in the entire globe. The UNESCO Institute of Statistics (2020) reported that 54.2 percent of secondary education teachers in the world are females.

**Civil Status.** The respondents were dominantly married as this comprised 61 percent of the respondents. The others were still single which comprised 37 percent. Three, however, or about three percent were already widowed.

### Position, Length of Service, Educational Attainment, and Trainings

Table 3. *Position, Length of Service, Educational Attainment, and Trainings of the Respondents*

	Profile	f	%
Position/ Rank	Teacher I	37	33.0
	Teacher II	23	20.5
	Teacher III	37	33.0
	Master Teacher I	15	13.4
	Total	112	100.0
Length of Service in DepEd	Below – 2 years	27	24.1
	3 – 5 years	29	25.9
	6 – 10 years	27	24.1
	11 – 20 years	20	17.9
	21 – 30 years	7	6.3
	31 years - above	2	1.8
	Total	112	100.0
Highest Educational Attainment	Bachelor’s Degree	79	70.5
	Master’s Degree	28	25.0
	Doctorate	5	4.5
	Total	112	100.0
Trainings and Seminars	None	5	4.5
	1 – 2	33	29.5
	3 – 5	43	38.4
	6 – 10	15	13.4
	11 – above	16	14.3
	Total	112	100.0

**Position/Rank.** Position or rank refers to the profile which classifies teachers according to their item either as teacher, master teacher, or head teacher. Teacher and master teacher are focused on instruction or classroom teaching, while head teacher is on management.

The result showed that almost 87 percent of the respondents had Teachers I, II and III positions – 33 percent were Teacher I, 20.5 percent were Teacher II, and 33 percent were Teacher III. On the other hand, 13.4 percent were Master Teacher I. Master Teacher I is the next rank after Teacher III. Master Teachers are considered instructional leaders and one of their roles is to assist the school head in instructional supervision.

Promotion to master teacher position entails one to acquire necessary qualifications which include very satisfactory or outstanding performance, research and innovations, outstanding accomplishments, advanced education units or degree, among others.

**Length of Service in DepEd.** This profile refers to the teaching experience of the respondents in the Department of Education. As revealed in Table 3, 50 percent of the respondents had below six years of teaching experience – 26 percent had 3-5 years, and 24 percent had two years and below. The other 50 percent had six years and above of teaching experience. Those which had already more than 20 years teaching experience comprised eight percent (8%) of the total respondents.

This result is consistent with that of their age profile which showed that majority of the respondents were 40 years old and below. This, therefore, indicates that most respondents were still less experienced.

**Highest Educational Attainment.** This profile refers to the highest degree obtained by the respondents. The result showed that close to 71 percent of the respondents had no advanced degrees. These teachers had only the minimum degree requirement which is bachelor's degree with corresponding teacher's license. The other 29.5 percent had master's degrees (25%) and doctorate degrees (4.5%).

Educational attainment is one criterion in promotions. Teachers with higher educational attainment have an edge over those who have none. Enrolling in graduate programs is also one of the ways for teachers advance their content and pedagogical knowledge and skills. This is one way to be updated with the latest trends in teaching, and teachers with advanced degrees are expected to have outstanding teaching competencies.

**Trainings and Seminars Attended.** Table 3 revealed that, 95 percent of the respondents had at least one training or seminar attended within the last three years. Among them, 38 percent had 3-5 trainings, 30 percent had 1-2 trainings, 13 percent had 6-10 trainings, and 14 percent had more than 10 trainings and seminars. On the other hand, five (5) teacher or about five percent admitted to have not attended at least one training.

Trainings and seminars are regularly done in the Department of Education as a way of updating teachers knowledge relative to teaching and learning. In this time of pandemic, more trainings and seminars were done as there was a change of the learning delivery modalities. From the face-to-face modality, the learning delivery became totally distance education using modular approach. To supplement the modular approach, the Department of Education, specifically the Schools Division of Tacloban City implemented other modalities such as the TV and Radio-based instruction. Some school also implemented online instruction, though limited only because of many constraints.

With the several trainings sponsored by the department and through the initiatives of private groups and other public institutions, including school level in-service-trainings, it is quite unusual that some were not able to attend at least one training. Therefore, this result showing few teachers without trainings may imply that these teachers willingly and purposely evaded the trainings. Moreover, this may imply defiance of an order as DepEd issued several memoranda relative to conduct of trainings and seminars.

### **Preparations Relative to the Implementation of the New Learning Delivery Modality**

One main objective of the study was to identify the preparation of the respondents in relation to the implementation of the new learning delivery modality. The preparations are categorized as institutional preparations, and personal preparations. The former pertains to the initiatives of the Department of Education to prepare teachers for the new normal teaching, while the latter refers to the personal initiatives of teachers.

### **Institutional Preparations**

Table 4 presents the different types of activities in the preparations for the new normal learning delivery modalities sponsored by the Department of Education. The extents of preparations are indicated by the weighted means.

Table 4. *Extent of Institutional Preparations for the New Normal Learning Delivery Modalities*

Preparations/Activities	Extent	
	Mean	Interpretation
1. Attended/participated in webinars or trainings sponsored by DepEd (School, Division, Region or CO) on the following topics/themes: 1.1 new learning modalities	3.67	Sufficient
1.2 psycho-social	3.17	Moderately sufficient
1.3 teaching strategies in the new normal	3.21	Moderately sufficient
1.4 BE-LCP preparations	2.94	Moderately sufficient
1.5 BE-LCP orientation	2.97	Moderately sufficient
1.6 health and safety protocols	3.51	Sufficient
1.7 conducting research in the new normal	2.74	Moderately sufficient
1.8 crafting of other learning materials like learning activity sheets (LAS), etc.	3.09	Moderately sufficient
1.9 writing modules	2.51	Moderately sufficient
1.10 validation of modules	2.51	Moderately sufficient
1.11 radio-based and TV-based instruction	2.93	Moderately sufficient
1.12 assessment of learning in the new normal	3.10	Moderately sufficient
1.13 orientation of DepEd policies, orders, and instructions	3.39	Sufficient
Mean	3.06	Moderately sufficient

*Legend:*

Scale	Mean Range	Interpretation
5	4.18 – 5.00	very sufficient
4	3.34 – 4.17	sufficient
3	2.51 – 3.33	moderately sufficient
2	1.68 – 2.50	insufficient
1	0.84 – 1.67	very insufficient
0	0 – 0.83	none at all

Table 4 reveals that there were many trainings and related activities which the Department of Education implemented in order to prepare teachers for the new normal learning delivery modalities. However, the respondents perceived these preparations as moderately sufficient only. This was manifested by the overall mean of 3.06. Specifically, most of the trainings/seminars and related activities were considered as moderately sufficient by the respondents. These include webinars on writing of modules and validation of modules. Each got a mean of 2.51 which was the lowest mean ratings. Both were interpreted as moderately sufficient. Webinars on conducting research in the new normal, which was also moderately sufficient, got the third lowest mean of 2.74.

On the other hand, attendance and participation in the webinars relative to new learning modalities, health and safety protocols, and orientation of DepEd policies, orders and instructions were perceived by the respondents as sufficient. These got the highest means of 3.67, 3.51, and 3.39, respectively.

These results imply that, despite the many webinars implemented by DepEd, these did not prepare them fully for the implementation of the new normal learning delivery modalities. Indeed, the pandemic has caught everyone unprepared. It was a fact that no institution, including the Department of Education, was not prepared for the implementation of distance learning, which was the only viable modality considering the situation. However, provision of continues education of children is a mandate and must continue. Hence, the Department of Education did everything, despite the limitations, to provide education to the learners. This is exemplified by this statement of the Secretary of Education: “DepEd recognizes the challenges of the school year ahead, but if we opted for an academic freeze, we would have lost many months of the children’s learning” (Business Mirror, 2020).

Indeed, there is a need for preparations in terms of trainings and seminars as these are factors that are associated with the readiness to implement new normal learning delivery modalities such as distance learning using modular approach, among other modalities. This is being highlighted in the study of Callo and Yazon (2020), which found that preparation is one of the things which significantly influence the teachers’ readiness on the conduct of online teaching and learning modality in the new normal. Thus, the researchers recommended to conduct series of training for teachers as a capacity building to equip them with knowledge and competencies on the use of flexible or blended learning.

### Personal Preparations

To complement the institutional preparations, there were personal preparations made by the teachers in Mathematics. These preparations and the perceived sufficiency of these are presented in Table 5. As revealed in Table 5, there were different trainings/seminars and related activities which the teachers had done as their own counterpart in the preparations for the teaching and learning in the new normal. However, the overall mean of 2.78 indicated that these were only moderately sufficient.

Except for three identified activities, all were considered to be moderately sufficient. The one which was perceived to be sufficient by the respondents was on acquiring gadgets like smart phone, laptop, PC, and others, which can be used for distance learning. This got the highest mean of 3.35. This was followed by preparing study to working area/room at home, which got a mean of 3.21; and acquiring internet connection, which got a mean of 3.20. However, these two were only considered to be moderately sufficient.

Table 5. Extent of Personal Preparations for the New Normal Learning Delivery Modalities

Preparations/Activities	Extent	
	Mean	Interpretation
2. Attended/participated in webinars/trainings sponsored by private NGOs and other NGAs on the following themes:		
2.1 New learning modalities	2.71	Moderately sufficient
2.2 psycho-social	2.87	Moderately sufficient
2.3 teaching strategies in the new normal	2.83	Moderately sufficient
2.4 BE-LCP preparations	2.63	Moderately sufficient
2.5 BE-LCP orientation	2.71	Moderately sufficient
2.6 health and safety protocols	3.08	Moderately sufficient
2.7 conducting research in the new normal	2.48	Moderately sufficient
2.8 crafting of other learning materials like learning activity sheets, etc.	2.59	Moderately sufficient
2.9 writing modules	2.25	Insufficient
2.10 validation of modules	2.35	Insufficient

2.11 radio-based and TV-based instruction	2.61	Moderately sufficient
2.12 assessment of learning	2.79	Moderately sufficient
3. Acquired gadgets (ex. smart phone, laptop, PC, etc.) which can be used for distance learning	3.35	Sufficient
4. Acquired internet connection	3.20	Moderately sufficient
5. Enhanced internet connection	2.86	Moderately sufficient
6. Prepared study or working area/room at home.	3.21	Moderately sufficient
Mean	2.78	Moderately sufficient

*Legend:*

Scale	Mean Range	Interpretation
5	4.18 – 5.00	very sufficient
4	3.34 – 4.17	sufficient
3	2.51 – 3.33	moderately sufficient
2	1.68 – 2.50	insufficient
1	0.84 – 1.67	very insufficient
0	0 – 0.83	none at all

Participating in webinars relative to writing modules and validation of modules were the least among the personal preparations. These got the lowest means of 2.25 and 2.35, respectively and were both interpreted as insufficient.

The perceptions of the respondents as to the sufficiency of their personal preparations for the implementation of the new normal learning delivery modality was similar to the institutional preparations. Therefore, it can be deduced that there was a generally low extent of preparations.

Understandably, there was limited time for such preparations as education was resumed despite the health emergency. However, the Department of Education is continually providing in-service trainings to teachers. Webinars and related activities with the aim of enhancing the teachers' competencies in teaching in the new normal are still being conducting. Indeed, during the academic break, nationally sponsored webinars and school-based in-service trainings had been conducted. Furthermore, the HRD records (January – March 2021) showed several Division and school level in-service trainings were conducted. Others are still to be conducted based on the submitted training proposals.

### **Challenges Encountered in the Implementation of the New Learning Delivery Modality**

The implementation of the new normal learning delivery modalities, considering that this is new in the Department of Education, had several challenges. This study reveals these challenges are these are presented in Table 6.

Table 6. Challenges Encountered in the Implementation of the New Learning Delivery Modality

Challenges	Extent	
	Mean	Interpretation
1. Lack of knowledge and skill in delivering quality education in the new normal	2.75	Moderate
2. Fear of being infected by the virus.	3.79	High
3. Uncooperative parents.	3.06	Moderate
4. Lack of support from the management.	2.62	Moderate
5. Lack of support from the LGU (support was focused on addressing pandemic issues)	2.79	Moderate
6. Lack of support from the NGOs (support was focused on addressing pandemic issues)	2.83	Moderate

7. Lack of materials to sustain the reproduction of self-learning modules/materials.	3.05	Moderate
8. Uncooperative co-teachers.	2.18	Slight
9. Erroneous module	2.75	Moderate
10. Complaints from parents and other stakeholders	2.79	Moderate
11. Overlapping activities in DepEd (several virtual seminars) and other activities	3.22	Moderate
12. Difficulty in reaching out to parents and students	3.26	Moderate
13. Less responsive parents	3.15	Moderate
14. Less responsive students	3.29	Moderate
15. Students not seriously accomplishing learning tasks	3.55	High
16. Social pressure and regulation: need to finish/accomplish tasks (set deadline of submission of reposts and other relevant documents) in a short period of time	3.40	Moderate
17. Feeling of isolation: working alone; no association with co-teachers	2.43	Slight
Mean	3.00	Moderate

Legend:

Scale	Mean Range	Interpretation
5	4.21 – 5.00	Severe
4	3.41 – 4.20	High
3	2.61 – 3.40	Moderate
2	1.81 – 2.60	Slight
1	1.00 – 1.80	Not a concern at all

Table 6 discloses the different challenges and issues which were encountered in the implementation of the new normal learning delivery modalities. The extent to which these identified challenges were encountered was, however, generally moderate. This was substantiated by the overall mean of 3.00. It can also be noted that most of the challenges were moderately encountered.

Fear of being infected with the virus, which got a mean of 3.79; and students not seriously accomplishing the learning tasks, 3.55 were the two identified challenges which were considered high extent. Social pressure and regulation or the need to finish/accomplish tasks (set deadline of submission of reports and other relevant documents) in a short period of time came in next with a mean ratings of 3.40. However, this was interpreted as a moderate.

On the other hand, uncooperative co-teachers, and the feeling of isolation for having to work alone or having no association with other co-teachers were the least of the teachers' concerns. These got the lowest mean ratings of 2.18 and 2.43, respectively. Both were interpreted as "slight" problem or concern.

Indeed, challenges, issues or problems are inevitable, especially in implementing new programs and projects. This is especially true when there is an abrupt implementation due to the lack of time for the preparations. This result of the study corroborates with that of De Villa and Manalo (2020). Their qualitative study identified three themes related to challenges encountered in the new normal teaching and learning. These include complexity of assessment, difficulty in instructional delivery, and digital divide.

### Coping Strategies in Relation to the Challenges Encountered

In relation to the challenges encountered, the study also identified the coping strategies which were employed by the respondents. These are shown in Table 7.

Table 7. *Coping Strategies Encountered in Relation to the Challenges Encountered*

Coping Strategies	Extent	
	Mean	Interpretation

1. Prayed harder, deepened faith	4.44	Almost always
2. Did self-study for enhancement of knowledge and skills about the new normal learning modality	3.94	Often
3. Attended more seminars/ trainings and similar activities for knowledge and skill enhancement relative to new normal learning modality	3.32	Moderately Often
4. Maintained a circle of friends whom I can talk to about issues and concerns in relation to delivery of education in the new normal.	4.10	Often
5. Joined chat groups with co-teachers so as to be updated with relevant issues, and instruction of DepEd.	4.23	Almost always
6. Diligently attended DepEd sponsored activities for professional development	3.65	Often
7. Maintained a positive attitude.	4.41	Almost always
8. Stayed at home most of the time; and as much as possible, limited exposure to crowded places.	3.91	Often
9. Created chat groups with parents/guardians so as to be able to easily communicate with them.	3.78	Often
10. Conducted virtual meetings with parents to discuss issues and concerns.	3.21	Moderately often
11. Identified students with poor performance/not properly accomplishing their tasks and conducted follow-up through virtual platform or any means allowed by authorities.	3.78	Often
12. Conducted review of the modules and learning materials and provided corrections before distributing to the students.	3.43	Often
13. Talked to peers, department head, or other school officials to discuss issues and concerns relative to learning delivery modality and other relevant concerns.	3.85	Often
14. Solicited materials like bond papers from friends and relatives to be used for printing of modules.	2.14	Very seldom
15. Bought from personal funds materials needed for reproduction of modules and other learning materials.	2.63	Moderately often
Mean	3.65	Often

*Legend:*

Scale	Mean Range	Interpretation
5	4.18 – 5.00	almost always
4	3.34 – 4.17	often
3	2.51 – 3.33	moderately often
2	1.68 – 2.50	seldom
1	0.84 – 1.67	very seldom
0	0 – 0.83	never

Table 7 reveals several coping strategies which the Mathematics teachers employed in relation as a response to the challenges they encountered in the implementation of the new normal learning delivery modalities. In general, these coping strategies were often employed by the respondents. This was proven by the overall mean of 3.65.

Those which they have done almost always were the following: prayed harder or deepened faith, which got the highest mean of 4.44; maintained positive attitude, 4.42; and joined chat groups with co-teachers so as to be updated with relevant issues, and instructions of DepEd, 4.23.

Praying as a primary coping strategy demonstrates the deep faith in the power of the Almighty among the teachers. This also exemplifies the teachers' religiosity which is typical character of a Filipino.

Maintaining positive attitude as another good coping strategy and illustrates teachers' optimism. This is also another typical Filipino trait, which even in the midst of crisis and uncertainties, do not easily lose hope. Joining chat groups with co-teachers is another positive coping which help teachers to cope with the feeling of isolation. Being in a support group makes one feel stronger, and experiences the feeling of togetherness. This also makes one realize the need to depend on others and to help others when needed.

On the other hand, the respondents very seldom solicited materials like bond papers from friends and relatives to be used in printing modules. This got a mean of 2.14. This result, specifically implies that some respondents may have solicited from friends, but mostly did not. This further connotes that there was enough supply of materials for such purpose.

Some of less used coping were: attending more seminars/ trainings and similar activities for knowledge and skill enhancement relative to new normal learning modality; conducting virtual meetings with parents to discuss issues and concerns; and buying from personal funds materials needed for reproduction of modules and other learning materials. These got means which were interpreted as moderately often. In general, it can be deduced that the teachers, despite the many challenges they have encountered in the implementation of the new normal learning delivery modalities, they were able to positively cope up. Thus, they were able to do their duties and functions as expected.

These findings were also similar to that of De Villa and Manalo (2020). Their study identified positive coping strategies which teachers employed to cope with the challenges they encountered in the new normal teaching. In their study, they identified five core themes related to coping mechanisms which include positive well-being, time management, openness to change, peer mentoring, and collaboration. They further concluded that despite the challenged faced which may have hampered their work, the teachers were able to manage to cope with the new normal in order to continue with their tasks.

### Relationship between the Profile and the Extent of Preparations

The study delved on determining the relationship between the profiles and the extent of preparations. The results are shown in Table 8.

Table 8. Relationship between the Profile and the Extent of Preparations

Variables		Statistics		
		Correlation Coefficient	p-value	Interpretation (Significance)
Preparations: Institutional	Age	-0.107	0.264	Not Significant
	Sex	-0.118	0.214	Not Significant
	Civil Status	-0.137	0.151	Not Significant
	Position	-0.070	0.460	Not Significant
	Teaching experience	-0.106	0.264	Not Significant
	Highest Educational Attainment	0.035	0.715	Not Significant
	Trainings & seminars	0.097	0.309	Not Significant
Preparations: Personal	Age	-0.071	0.456	Not Significant
	Sex	0.089	0.349	Not Significant
	Civil Status	-0.178	0.061	Not Significant
	Position	-0.016	0.868	Not Significant
	Teaching experience	-0.099	0.300	Not Significant
	Highest Educational Attainment	-0.099	0.300	Not Significant
	Trainings & seminars	0.175	0.064	Not Significant

To establish whether or not the relationships between each profile variable and the extent of preparations of the teachers were significant or not, analyses were done using the appropriate statistical

tools. The results of the analyses revealed correlation coefficients indicated in Table 8. The results further yielded p-values corresponding to the correlation coefficients which were greater than 0.05. The statistical analysis failed to provide evidence to reject the null hypothesis. Thus, the null hypothesis stating the non-significance of the relationship between the profiles and the extent of preparations, both institutional and personal, was not rejected at the 0.05 level of significance.

This led to a conclusion that the profiles were not significantly associated with perceived extent of preparations relative to the implementation of new normal learning delivery modalities. These results imply that, regardless of the profile of the respondents, their perceived extent of preparations may be high or may be low.

### Relationship between the Profile and the Challenges Encountered

Another test of relationship that was done in the study was between each profile of the respondents and the extent of challenges encountered. The results of the test are shown in Table 9.

Table 9. Relationship between the Profile and the Challenges Encountered

Variables		Statistics		
		Correlation Coefficient	p-value	Interpretation (Significance)
Challenges Encountered	Age	-0.176	0.064	Not Significant
	Sex	-0.150	0.113	Not Significant
	Civil Status	0.226*	0.017	Significant
	Position	0.091	0.342	Not Significant
	Teaching experience	-0.005	0.995	Not Significant
	Highest Educational Attainment	0.209*	0.027	Significant
	Trainings & seminars	0.057	0.549	Not Significant

\*Relationship is significant at the 0.05 alpha level.

As revealed in Table 9, the correlation coefficients for the relationship between the extent of challenges encountered and the following profiles as to age, sex, position, and teaching experience were very low indicating very weak relationships. The tests for significance were revealed by the p-values corresponding to the correlation coefficients, which were greater than 0.05. Thus, the decision was not to reject the null hypothesis stating that: There is no significant relationship between the profiles and the extent of challenges encountered. Conclusion followed that these profiles were not significantly associated with the extent of challenges encountered. On the other hand, civil status and highest educational attainment were found to be significantly associated with the extent of challenges encountered.

For civil status, the correlation coefficient was 0.226. This had an equivalent p-value of 0.017 which was lesser than 0.05. Correspondingly, the null hypothesis stating the non-significant of the relationship between the profile (civil status) and extent of challenges encountered was rejected at the 0.05 alpha level. Hence, civil status was significantly correlated with extent of challenges encountered.

The analysis further showed that single teachers had lesser extent of challenges encountered than the married and widowed. Plausibly, single teachers had generally less concerns than married. For one, single teachers had lesser responsibilities at home that married ones. Thus, they can focus more on their school concerns. Another is that younger teachers such as the single ones are less “serious” in life than the married ones; hence, challenges may have lesser impact on them than their married counterparts.

For the highest educational attainment, the correlation coefficient was 0.209. This had an equivalent p-value of 0.027, which was lesser than 0.05. Thus, the hypothesis stating the non-significance of the relationship between the profile and the extent of challenges encountered was rejected at the 0.05

alpha level. Consequently, it was concluded that highest educational attainment was significantly associated with extent of challenges experienced by the respondents.

Further analysis showed that those with lower educational attainment had lesser encountered challenges than those with higher educational attainment. The reason for this could be that those with higher educational attainment had more concerns as they probably had more responsibilities than those with lower educational attainment.

### Relationship between the Profile and the Coping Strategies Employed

Finally, the study identified the relationship between the profile and the coping strategies employed. The results are revealed in Table 10.

Table 10. Relationship between the Profile and the Coping Strategies Employed

Variables		Statistics		
		Correlation Coefficient	p-value	Interpretation (Significance)
Coping Strategies Employed	Age	-0.034	0.721	Not Significant
	Sex	0.012	0.899	Not Significant
	Civil Status	-0.080	0.402	Not Significant
	Position	-0.039	0.685	Not Significant
	Teaching experience	-0.089	0.353	Not Significant
	Highest Educational Attainment	0.096	0.315	Not Significant
	Trainings & seminars	0.109	0.253	Not Significant

The result of the test of relationship between the profiles and the coping strategies employed yielded very low values of correlation coefficients. These all suggest weak degree of relationships. Correspondingly, the results of the test for significance of the relationships yielded p-values which were greater than the 0.05 alpha levels. Thus, these led to the decision of not rejected the null hypothesis, which stated that there was no significant relationship between the profiles and the coping strategies. Consequently, it was concluded that the profiles were not significantly associated with the coping strategies employed. Further, these results proved that regardless of the profile, the teachers may have high or low coping strategies employed.

### Findings

The following were the major findings of the study:  
 Profile of the Respondents. The age of the respondents ranged from 21 to above 60, and 65 percent were 21 to 40 years old. They were composed of 59 percent female and 41 percent male; 61 percent were married, 37 percent were single and 3 percent were widowed. As to their positions, 33 percent were Teacher I, 21 percent were Teacher II, 33 percent were Teachers III, and 13 percent were Master Teacher I. Their length of service in DepEd as teachers ranged from less than 2 years to above 30 years, where 50 percent had 5 years and below. Majority of them (71%) graduates in bachelor's degrees with not advanced units or degrees, 25 percent had master's degrees, and 5 percent had doctorate degrees.

Except for five, all had attended at least one training or seminar within the last three years. 38 percent had 3-5 trainings/seminars; 30 percent had 1-2, 14 percent had 11 and more, and 13 percent had 6-10 trainings or seminars. Preparations Relative to the Implementation of the New Normal Learning Delivery Modality. There were many webinars and related activities which were implemented in order to prepare the teachers for the implementation of the new normal learning delivery modality. These were categorized as institutional and personal. For the institutional or activities initiated by DepEd in all levels of governance, most of the trainings/seminars and related activities were considered as moderately

sufficient. These include webinars on writing of modules and validation of modules, each got a mean of 2.51 which was the lowest mean ratings and were interpreted as moderately sufficient. However, attendance and participation in the webinars relative to new learning modalities, health and safety protocols, and orientation of DepEd policies, orders and instructions were perceived by the respondents as sufficient. These got the highest means of 3.67, 3.51, and 3.39, respectively.

For the personal preparations, or those which were initiated by the teachers themselves, the overall mean of 2.78 indicated that these were only moderately sufficient. Except for three identified activities, all were considered to be moderately sufficient. The one which was perceived to be sufficient by the respondents was on acquiring gadgets like smart phone, laptop, PC, and others, which can be used for distance learning, which got the highest mean of 3.35. This was followed by preparing study to working area/room at home, which got a mean of 3.21; and acquiring internet connection, which got a mean of 3.20. However, these two were only considered to be moderately sufficient. Participating in webinars relative to writing modules and validation of modules were the least among the personal preparations. These got the lowest means of 2.25 and 2.35, respectively and were both interpreted as insufficient.

**Challenges Encountered in the Implementation of the New Normal Learning Delivery Modality.** There were different challenges and issues which were encountered in the implementation of the new normal learning delivery modalities. These were, however, generally moderately encountered as substantiated by the overall mean of 3.00. Fear of being infected with the virus, which got a mean of 3.79; and students not seriously accomplishing the learning tasks, 3.55 were the most common challenges encountered. On the other hand, uncooperative co-teachers, and the feeling of isolation for having to work alone or having no association with other co-teachers were the least of the teachers' concerns.

**Coping Strategies employed in Relation to the Challenges Encountered.** Several coping strategies were employed Mathematics teachers in relation as a response to the challenges they encountered in the implementation of the new normal learning delivery modalities. In general, these coping strategies were often employed by the respondents as proven by the overall mean of 3.65. Those which they have done almost always were the following: prayed harder or deepened faith, which got the highest mean of 4.44; maintained positive attitude, 4.42; and joined chat groups with co-teachers so as to be updated with relevant issues, and instructions of DepEd, 4.23. On the other hand, the respondents very seldom solicited materials like bond papers from friends and relatives to be used in printing modules, which got a mean of 2.14.

**Relationship between the Profile and the Extent of Preparations.** The results of the analyses revealed correlation coefficients with p-values greater than 0.05. The null hypothesis stating the non-significance of the relationship between the profiles and the extent of preparations, both institutional and personal, was not rejected at the 0.05 level of significance.

**Relationship between the Profile and the Challenges Encountered.** The correlation coefficients for the relationship between the extent of challenges encountered and the following profiles as to age, sex, position, and teaching experience were very low indicating very weak relationships, with corresponding p-values which were greater than 0.05. The hypothesis stating that there is no significant relationship between the profiles and the extent of challenges encountered was not rejected.

On the other hand, civil status and highest educational attainment were found to be significantly associated with the extent of challenges encountered. For civil status, the correlation coefficient was 0.226 with an equivalent p-value of 0.017 which was lesser than 0.05. Correspondingly, the null hypothesis stating the non-significant of the relationship between the profile (civil status) and extent of challenges encountered was rejected at the 0.05 alpha level.

For the highest educational attainment, the correlation coefficient was 0.209 with an equivalent p-value of 0.027, which was lesser than 0.05. Thus, the hypothesis stating the non-significance of the relationship between the profile and the extent of challenges encountered was rejected at the 0.05 alpha level. **Relationship between the Profile and the Coping Strategies Employed.** The result of the test of

relationship between the profiles and the coping strategies employed yielded very low values of correlation coefficients, which suggest weak degree of relationships. Correspondingly, the results of the test for significance of the relationships yielded p-values which were greater than the 0.05 alpha levels. The null hypothesis stating the non-significance of the relationship was not rejected.

## CONCLUSIONS

Based on the findings of the study, it is concluded that:

On the profile of the respondents, majority of the Math teachers were young, females and single; the teachers were mostly holding lower positions or ranks of Teacher I to Teacher III; majority were less experienced; and lacked advanced degrees, and almost all had attended at least one training or seminar attended. There were several seminar/trainings and related activities which were made in preparation for the implementation of the new normal learning delivery modalities. These preparations were mostly initiated by DepEd; while others were the initiatives of the teachers themselves. However, the teachers considered these preparations to be moderately sufficient. There were several challenges encountered in the implementation of the new normal learning delivery modality; however, these were only moderate. It is therefore concluded that the challenges encountered had minimal impact on the teachers' performance in relation to the aforesaid implementation.

As to relationships, the profiles of the teachers were not significantly associated with the extent of preparations relative to the implementation of the new normal learning delivery modality; age, sex, position, length of service and trainings/seminars attended were not significantly associated with the challenges encountered. On the other hand, civil status and highest educational attainment were significantly associated with the challenges encountered. Furthermore, it is concluded that single teachers were more likely to encounter lesser challenges than married ones; and those with higher educational attainment were more likely to encounter more challenges, which could be the result of the greater responsibilities that they had. The profiles were not significantly associated with the coping strategies employed in relation to the challenges encountered.

## Recommendation

From the findings and conclusions, the following recommendations were drawn:

1. Encourage teachers to take up graduate programs. This can be done by giving priority to teachers with no advanced degrees in granting study leave.
2. More seminars, trainings and relevant activities need be implemented, especially the following as these were the perceived trainings which were not sufficient:
  - 2.1 writing and validating of modules and other instructional materials, like learning activity sheets (LAS);
  - 2.2 conducting research in the new normal
  - 2.3 Radio-based and TV-based instruction,
  - 2.4 BE-LCP preparation and orientation,
  - 2.5 assessment of learning in the new normal, and
  - 2.6 teaching strategies in the new normal.
3. To address the issue on students who were not seriously accomplishing learning tasks, the following are specifically recommended:
  - 3.1 close monitoring of teachers through coordination with parents,
  - 3.2 conduct of limited face-to-face homeroom PTA to orient parents as to how they can assist their children with their learning tasks,
  - 3.3 conduct online monitoring, and

- 3.4 simplified learning activity sheets must be prepared by the teachers for those who find difficulty in accomplishing learning tasks.
4. The proposed intervention plan, which is the output of the study, is strongly recommended for implementation.
  5. A study similar to this may be conducted by future researchers.

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