

TEACHING MATHEMATICS VIRTUALLY IN HIGHER EDUCATION AMIDST THE PANDEMIC: A PHENOMENOLOGICAL INQUIRY

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In light of the pandemic brought about by COVID-19, classes have shifted from physical to virtual. There was an abrupt change in the methodologies and sudden adjustments in the teaching and learning process. It led to various problems, especially in mathematics, where teachers required more board work and supplemental activities to ensure student learning. This study was done in order to assess the different experiences of mathematics teachers in higher education amidst the pandemic. Employing a qualitative method, particularly the phenomenological research design, participants from the mathematics department in a higher education institution participated in the interviews. Thematic data analysis reveals five themes which are: the teachers had difficulty in teaching and presenting the topics; there was not enough interaction from students; slow internet connection became a big problem; there is a need for more digital infrastructure; and teachers had to be flexible and lenient. This study implies that mathematics teachers at the tertiary level are continually providing the learning that the students need despite the absence of face-to-face classes. The study reveals the diversity of efforts amidst the pressure and anxiety brought about by the pandemic.

KEYWORDS: Higher Education Mathematics, Mathematics Teachers, Phenomenological Inquiry, Qualitative Method, Virtual Teaching

INTRODUCTION

Teaching mathematics in higher education has always been a challenge since it requires sufficient number of activities and examples in order for the students to grasp the topics. Wilkie (2019) remarked that in order to improve the

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learning of the students in mathematics courses, the teaching practices of the teachers need to be improved first. In the usual scenario, the teaching for mathematics in the Philippines would require more of board work as these activities could further strengthen and supplement the learning of the students. Chalk and board is indeed a very important material when teaching and learning mathematics subjects (The Philippine Star, 2020). The social constructivist model mentions mathematics teaching as a teaching and learning process in which students actively acquire knowledge by participating in increasingly significant ways in the re-enactment of existing classroom concepts (Purwanti & Darmajanti, 2019).

Nevertheless, in the later part of the year 2019, the whole world was affected by the proliferation of Novel Corona Virus (COVID-19) which had originated from China. The first suspected case in the Philippines was recorded on January 22, 2020 and this drastically ballooned to 633 suspected cases on March 1, 2020 (Edrada et al., 2020). With the rapid increase of the cases, the Philippine Government declared the state of calamity and implemented the enhanced community quarantines by virtue of the Presidential Proclamation No. 929. This resulted to the lockdowns and even closure of establishments, including the closure of classes across all levels. The action was done as a preventive measure just to contain the virus and protect the individuals in acquiring COVID-19.

The traditional face-to-face instruction has swiftly shifted to virtual wherein the classes are conducted online. More than 1.5 billion students in 190 countries have been unable to attend school because of the COVID-19 pandemic (UNESCO, 2020). The sudden transition of the classes has affected the students and even the teachers since there were no sufficient for this occurrence. Faculty rushed to adapt conventional learning to suit an online world, conscious of technology, learning management systems, and numerous online learning channels that students could access from home, as the first response from schools and universities (Bhagat & Kim, 2020).

Major problems in Philippines as identified by Cahapay (2021) include unstable internet connection, electric power interruptions, distractions in the environment, and unknown accessibility issues. He further added that with the emergence of remote learning as an academic requirement that necessitates an internet service to varying degrees, implementing the online evaluation has become a challenge. Among the many issues, this situation exposes significant digital divides for many students who lack access to the internet required to participate in the online evaluation.

Despite the presence of technology, there remains to be a barrier in doing

mathematics classes virtually. Aside from the fact that the teachers have to be well-versed with the updates of technologies, they also have to keep abreast with the various applications and software that are indispensable to make classes more engaging despite the absence of the physical presence. This then poses the problem whether or not the teachers themselves are adept in manipulating technologies and platforms such as google classroom, zoom, google meet, and the like, which could aid the learning of the student during the pandemic.

The purpose of this study is to describe the experiences encountered by the faculty members teaching mathematics subjects in the tertiary level through online platforms during the pandemic as brought about by COVID-19 and how the situation shaped their teaching practices and methodologies. And with the dearth of available studies about this issue, it is believed that this piece of scholarly endeavour would be of great benefits to the faculty members, the students, parents, and even to other researchers.

THEORETICAL LENS

In order to identify the various challenges and opportunities that mathematics teachers in the tertiary education met during the pandemic, three theoretical ideas were framed for this study. First is in the lens of didactical tetrahedron (Rezat & Sträßer, 2012) which guided the designing of research questions and the framing of teachers' responses. Second is the idea of meta-didactical transposition (Arzarello et al., 2014; Healy, 2015). The third and the last is on Bishop's framework on values in mathematics education of (Bishop, 2008; Leder & Forgasz, 2019).

The didactical tetrahedron is a conceptual representation of the relationship amongst students, teachers, resources, and mathematics, which has been widely used to represent and explain the complexities of educational phenomena, particularly in the aspect of mathematics teaching and learning (Aldon et al., 2021). This model describes the intertwined roles of the teachers, students, resources, and mathematics subjects within the context of teaching-learning process (Gueudet & Trouche, 2009; Rezat & Sträßer, 2012).

In this study, this model was used to guide the proponent in crafting the research questions and in framing the various responses from the participants. The use of this model paved for the structured ways in addressing multifaceted phenomena and their relations. Particularly, this would serve as a beacon which would light the study on understanding the experiences of the teachers using different resources in the new normal classes.

In addition, this study was anchored to the meta-didactical transposition

(Chevallard, 2006) which proposes a general model of human activities based on the main concept of dialectic materialism, which states that any behaviour related to the development, diffusion, or acquisition of information should be viewed as an ordinary human activity (Aldon et al., 2021). Moreover, this MDT focused on the thoughts and reflections with regard to the mathematics teachers' actions and justifying why would they choose such actions within the context of the community (Lloyd & Chapman, 2020). In this study, MDT was used contextualize the diverse actions of the teachers in order to fit their strategies to the new situation. This also aided the proponent to the conceptual analysis and logical interpretation of the teachers' preference and means in facilitating learning through virtual classrooms.

Lastly, Bishop's framework on values in mathematics education was an anchor to where the proponent construed the underpinning reasons as to the motivation the teachers in administering particular techniques and choices of behaviour (Bishop, 2008, 2012). Bishop's six pairs of values within the three categories of ideological, human, and social values was used in order to determine and to define the values that govern teachers' practices (Aldon et al., 2021). And on this study, this framework was used as guide of the proponent in understanding what motivates the teachers to employ a particular teaching practice. This would describe the various ideologies of the teachers within the context of online learning.

REVIEW OF RELATED LITERATURE

Considering the Philippines being one of the countries having the slowest internet connectivity (Salac & Kim, 2016), teaching and learning through online platforms has posed a problem to the teachers, students, and even to the parents. The difficulties faced by the transition to online teaching have thus been added to the long-standing challenges of Philippine education. These issues ultimately come down to the possibilities that schools may fail to effectively transmit the literacy and numeracy skills needed at the primary level, as well as the respect for and dedication to knowledge, as well as the vital outlook that accurate higher education is expected to impart to people of a democracy, at the collegiate level (Teodoro, 2020).

Although it is clear that transitioning to online distribution is necessary, failing to consider online pedagogy can be equally damaging. As a result, their key efforts in teaching, studying, and conducting research have been harmed (Bhagat & Kim, 2020). This is very common especially in mathematics subjects. As a universally accepted truth, mathematics is the most feared subject. When the subject is hard to be taught and learned even when the teacher is physically

present and the students would have ample time to ask, how much more when there is no face-to-face instruction and that students are limited with their time and even with their internet connections? In the current standard, teaching and studying math is very tough and complicated. There will be doubts, worries, and anxieties that may be developed. Misunderstandings can arise, as well as a dislike for the subject or the instructor becomes inevitable (The Philippine Star, 2020).

Literature revealed that mathematics teachers face a number of obstacles when it comes to implementing online learning, including their preparation in running applications for online learning, online learning facilities for students, limitations in achieving learning that requires mathematical thought, and restrictions in providing input to students (Mailizar et al., 2020; Bhagat & Kim, 2020). Nevertheless some of these teachers believe that online learning has a number of benefits, including encouraging students to learn more independently, encouraging learners and educators to master ICT, allowing students to be more creative in their assignments and searching for lesson references, and allowing the material delivered to be better stored, or in other words, reducing the digital footprint (Fakhrunisa & Prabawanto, 2020).

COVID-19 has a number of terrifying yet practical effects. And a preliminary examination of pandemic-related school disturbances shows that one subject in particular is likely to be impacted: mathematics (Loewus, 2020). There's no point in conducting tests that require students to come up with a single response because several of them operate remotely; it's just too easy to cheat. Teachers are thus focused on measuring students' intellectual comprehension of mathematics—and they've had to without having able to read students' nonverbal cues or hear them speak in person (Will, 2020).

The mathematics teachers and professors, as a quick response to this pandemic, made use of the various technologies and platforms in order to continue the learning of the students. They were faced with the task of creating alternative instructional approaches, such as teaching at a distance using digital technologies (Ferrerias, 2020).

As of the present time, there is a scarcity of published studies giving emphasis on teaching mathematics using the diverse online platforms. Nonetheless, just recently, Perienen (2020) revealed that better learning in mathematics of the students can be associated with appropriate technology that is used in teaching by the teachers. He also stressed out that as technology plays a larger role in information acquisition, content assimilation, and comprehension, the teachers' technical competence and their capacity to achieve the emerging styles of learning of digital natives is becoming

increasingly important.

RESEARCH QUESTIONS

This study was based on the following research questions:

1. What are the lived experiences of the mathematics teachers in teaching in the tertiary level through virtual classes during this pandemic?
2. What aspects in teaching mathematics virtually do the participants perceive to be most challenging?
3. How do the participants cope with the challenges that they encounter in their virtual classes during this new normal?
4. What insights can be drawn from the experiences of these participants in the new normal education?

RESEARCH DESIGN

This study employed a qualitative phenomenological approach in exploring the lived experiences of tertiary level mathematics teachers in their virtual classes. Qualitative research according to Creswell (2014) is an expressway of exploring and understanding individuals or groups ascribe to a social or human problem. The proponent utilized the qualitative research design to understand and delve into the lived experiences of mathematics teachers in the tertiary level through in-depth interviews. Further, this design is apt to use since it aids in understanding the experiences, human situations, and problems (Neubauer et al., 2019). Also, it is the most common method used in gathering through interviews which may be structured, semi-structured, unstructured (Valunaite Oleskeviciene & Sliogeriene, 2020). All data were extracted from the location of the participants.

Phenomenology has provided ways of considering the phenomena of human experiences to the means of expressing them (Sloan & Bowe, 2014). Moreover, phenomenology is deemed to be appropriate as a research methodology as this allows the proponent to gather the best description of the experiences of participants in the context this study. Besides, it is important to understand that participants will expose subjective and objective experiences. Furthermore, according to Tarnoki and Puentes (2019), phenomenological design is apt to be used since there is a need to collect data through the thoughts, opinions, or experiences of a small group of people.

Moreover, phenomenological approach was used because it is suited in the study of lived/common experiences. And it is an effective tool in getting a clear

understanding of human experiences, to get the intended information most especially the experiences of mathematics teachers in teaching their students virtually during this pandemic time. Therefore, it is appropriate to use a qualitative phenomenological research design in this study since the proponent gathered the data about the lived experiences of the mathematics teachers through interviews. All the data that were gathered were used to interpret, analyze, and understand the phenomena.

RESEARCH PARTICIPANTS

In this phenomenological inquiry, there were nine participants – all of whom are faculty members of the Davao Oriental State University teaching mathematics subjects for the second semester of academic year 2020-2021. In the determination of the number of participants, the proponent is keen in considering the suggestion of Creswell (2014) that the studied group should consist of three to fifteen members. Nevertheless, this size was not final yet, since the proponent adhered to the ideas of Morse (2015) who remarked that the estimation of the number of research participants in a qualitative study should be dependent on the saturation of the needed information. Thus, this number can still be changed along the way.

The participants were selected through purposive sampling. According to Guetterman (2015), purposive sampling is also known as judgment sampling since it is a deliberate choice of the proponent to select the participants due to the qualities they possess. Furthermore, as for the inclusion criteria in identifying the research participants, he or she must be a mathematics teacher in the university who is teaching his or her students virtually with the use of online platforms. All of these participants must also have teaching load for the second semester of academic year 2020-2021.

DATA COLLECTION PROCEDURE

There are different steps in collecting the research data from the participants. As Yüksel and Yıldırım (2015) stated, data can be collected using interviews, observations of the research environment, and video recording.

To conduct the study, the proponent first secured an approval to the university president stating that his faculty members were subjected to in-depth interview. Then, another communication letter was given to the program head of the mathematics department for the information. Then, the identified participants received informed consent asking permission for the conduct of this study. Once they sign the consent, this signified their acceptance and willingness to participate in the study together.

The participants were interviewed according to their availability and willingness to participate in the study. Table 1 presents the details and interview schedule of the participants. The proponent ensured that the participants are thoroughly informed about the nature of the study and the purpose as well. All the participants were oriented also regarding the protocol design in the data collection procedure and were assured that all the data extracted would remain confidential.

And in accordance with the proper protocol in line with the inter-agency task force on emerging infectious diseases of the Philippines, there were no face-to-face collection of the data. The interviews were conducted through google meet, depending on the available time of the research participants. And according to the American Psychological Association, this interview through online is a mitigation action for the researchers especially in the time of pandemic wherein physical contacts are still discouraged (Clay, 2020).

All the answer coming from the participants were recorded through the record mechanism of the platform to be used in order to avoid missing any single information or any misinterpretation. After recording, the entire document was stored in a flash drive or a laptop ready for transcription, making sure that the information remained confidential. Then, the transcription was done, and thematic analysis followed.

Table 1

Details and Interview Schedule of the Participants.

Research Participant	Years of Teaching	Online Platform Utilized	Interview Schedule
SP1	6	Google Classroom, Zoom	March 8, 2022
SP2	3	Google Classroom, Zoom, Canvas	March 8, 2022
SP3	21	Google Classroom, Zoom	March 8, 2022
SP4	30	Google Classroom, Zoom	March 9, 2022
SP5	5	Google Classroom, Zoom	March 9, 2022
SP6	7	Google Classroom, Zoom, Canvas	March 10, 2022
SP7	7	Google Classroom, Zoom, Canvas	March 10, 2022
SP8	8	Google Classroom, Zoom	March 11, 2022
SP9	5	Google Classroom, Zoom	March 11, 2022

DATA ANALYSIS

As postulated by Akinyode and Khan (2018) data logging, anecdotes, vignettes, data coding, and thematic analysis are the five steps in analysing qualitative data. However, in the context of this study, the proponent highlighted the usage of data coding and thematic analysis. Participants of this study were coded using a pseudonym to maintain their anonymity.

Coding is an element of data organization that reduces the amount of raw data to the most relevant in the research questions and break down into manageable sections. Through this, the development of themes emerged. In addition, the more the same the code occurs or if the code would repeatedly emerge, the more likely it can be considered to be a theme (Vaismoradi et al., 2016).

In the context of this study, highlighters and coloured pens were used to mark on the texts being analysed that represent important and reoccurring themes. Then, the text with the same colour of pens and highlighter and label it with words and short phrases were grouped. Meanwhile, thematic analysis is both emerging contents as a theme and clear content as a category in data analysis, the content analyst chooses between them before proceeding to the high levels of data analysis. Thus, it gave assistance to the proponent towards thorough understanding of qualitative data interpretation (Vaismoradi et al., 2016).

In the context of this study, thematic analysis was done after the initial codes were identified. Then, categorizing and analysing all the responses of the participants from general to specific had followed. Responses with similar core ideas were extracted and grouped together to formulate comprehensive themes. Each theme consisted of at least three core ideas to make it valid (Vaismoradi et al., 2016).

FINDINGS AND DISCUSSION

After qualitative analysing of the data, there were five themes and patterns which emerged to be significant to the experiences of the mathematics teachers in the higher education amidst the pandemic. These are: difficulty in teaching and presenting the topics; not enough interaction from students; slow internet connection; a need for more digital infrastructures; and being flexible and lenient. These themes were analysed from the interview transcripts of the participants (Table 2).

Table 2

Themes from Participant Interviews.

Research Questions	Codes	Themes
RQ 1.	<ul style="list-style-type: none"> Teaching Math in online class is very difficult and very challenging especially in showing the intricate solutions symbols. Drastic change of what-we-used-to. Difficulty in adjusting in the way of presenting the details of the math topics. It is so hard to virtually solve problems and explain the step-by-step method. 	There is Difficulty in Teaching and Presenting the Topics.
	<ul style="list-style-type: none"> There is limited feedback from the students. Sometimes, students just attend the online class, but they are not listening. There is not enough interaction from the students and teachers. Students are easily disturbed. We cannot assure that students are listening well. 	There is not enough interaction from Students
RQ 2.	<ul style="list-style-type: none"> The lack of resources and even weak connection really pose problem in the online classes. Internet connectivity is a big problem not just for students but for us teachers as well. Slow internet connection makes it harder to teach. There are not enough instruments to teach mathematics especially the solving of activities. 	Weak Internet Connection is a great problem
RQ 4.	<ul style="list-style-type: none"> We must invest more of the blended learning since we are gearing towards online learning even if the COVID-19 ends. The institution must invest on digital infrastructures. This has become a trend. 	Need for more digital infrastructure for Education
RQ 3.	<ul style="list-style-type: none"> Sometimes, we must extend or even will not impose any deadlines because our students are struggling as well. We need to understand the problems of our students. 	Flexibility and Leniency

Theme 1: Difficulty in Teaching and Presenting the Topics

The first theme implies that the mathematics teachers in the higher education institutions are having difficulty in terms of presenting the solutions to their students. Mathematics subject calls for more explanation and presentation of succinct solutions for the learners to learn. One of the participants clearly stated:

In mathematics, we usually present the problems then show the solutions in an orderly manner. And with this pandemic, I had really difficulty in adjusting, in the way of presenting the details of the math topics. (SP3)

This difficulty of the teachers is somehow common to all teachers not just in tertiary level but even in the primary and secondary. The same concern was even revealed by Fhloinn and Fitzmaurice (2021), where they found that mathematics lecturers had considered teaching during the pandemic as stressful and time-consuming. Indeed, no one had prepared for this pandemic. Hence, there would be ample number of adjustments needed in order to continue delivering the topics that have to be discussed. Moreover, this problem is related to the limitations on the online learning such as the unavailability of the technology to be used in the teaching for distance learning (Irfan et al., 2020). Which then narrowed down to the implication that learning teaching mathematics online is much harder compared to teaching it through face-to-face (Bringula et al., 2021).

This concern has been remarked by Bhagat and Kim (2020) that with the transition of teaching to online modality, sufficient time must be provided in the conduct of classes and research activities. Nonetheless, this poses a problem to the teaching and learning process in the field of mathematics considering that students need to actively acquire knowledge by participating and constantly following the patterns of solution presented by the teacher (Purwanti & Darmajanti, 2019).

Theme 2: There is Not Enough Interaction From Students

Like any usual mathematics class, the teachers will always call for interaction from the students in order to gauge whether they are learning the topics or not. And with the distance education, students are becoming less interactive. Some of these students are not even reached by internet connectivity; and if they have, their connections are not stable at all. However, there are still few that join the online classes, yet they do not open their cameras, which then left the teachers unsure if the learners are still listening. The participants even said:

I am not so certain if my students are listening to me, because I cannot force them to open their cameras since it would take more internet data. And when I sometimes call their names, only few would respond. That is the struggle in there. (SP6)

My students are not always attending my classes. So, I cannot really expect more interaction from them because some of them are not around when I call them and others would not even care to speak; and I cannot see their faces all throughout the discussion, which made it difficult for me to determine if they are still listening or sleeping already. (SP4)

While learning needs to be interactive as much as possible in Mathematics (Salimaco, 2020), it was very apparent that students do not give more value on their interaction during their online classes (Baber, 2022). However, Amrullah et al. (2022) posited that with this shifting of physical classes to virtual, students have enjoyed their social interaction with their friends and classmates. This posits that when the students are not able to fully grasp the topic that their mathematics teacher is discussing in their online class, they tend to communicate with their classmates or seniors and ask for further explanation and assistance. With this notion, there are students who just prefer not to attend class and will only ask updates from their classmates.

This result is also supported by the study of Mailizar et al. (2020), which revealed that there have been various restrictions in the side of students particularly in their coping with the lessons now that classes are done online. Similarly, this was noted by Bhagat and Kim (2020) that teachers are having difficulties in providing inputs and feedback to their students. However, on the other side of it, students have become more independent and resourceful, since they are trying their best to cope up with the lessons by browsing their recorded class discussion and searching for other references online (Fakhrunisa & Prabawanto, 2020).

Theme 3: Weak Internet Connection is a Great Problem

When the pandemic hit and classes were done virtually, internet connection had become an essential need. Bahinting et al. (2022) remarked that the online education strengthens the conception of the internet era. Issues related to weak internet connectivity has been considered a prevailing one across the globe (Ahmadon et al., 2020; Irza, 2021). And this predicament is not common even among the teachers. One participant even stated that:

It is very disappointing when you are in the middle of your class, and you suddenly realize that your connection was interrupted. Especially when you are discussing through PowerPoint presentation and you cannot see your students. That time I wasn't sure how long did I go out from our class. Being a teacher, that is really a big problem. (SP 2)

The weak to nearly no internet connection has been prevalent. The teachers have become restricted with their actions and strategies because they cannot fully implement them due to connectivity problem. The worst case is that due to this problem, students would tend to lose their interest in their education (Bahinting et al., 2022). This result is consistent with the findings of previous studies. It was already noted by Salac and Kim (2016) that problems on the online classes will be greatly affected by the insufficient and slow internet connection, since the Philippines is considered as one of the countries suffering with this problem. Similarly, it was noted that unstable internet connection has greatly affected the students and even the teachers since there were no ample preparations for this occurrence (Cahapay, 2021).

Theme 4: Need for More Digital Infrastructures for Education

People are very adaptive to change; and this online learning has been adapted by the students and teachers as well. As time passes, the teachers are already putting more efforts in dealing with their virtual classes by modifying their methods and strategies which are fitted to the individual needs, interests and learning styles of their students. Nonetheless, although there have been developments of digital instructional materials, there is still need of continually improving the school facilities where teachers can freely progress their training and teaching. One participant said:

Actually, we have already been accustomed to our current situation where we teach the students online. However, we need more up-to-date facilities and infrastructure where we can devise modules and activities which will not be susceptible for cheating and will assess the students' learning appropriately. Especially in math, we need more digital devices that will help us in teaching the math concepts easily. (SP1)

There are many advantages to incorporating consistency into the infrastructure and architecture of online learning. Teachers could spend much less time attempting to explain every lesson, which allows them to devote more time providing more examples to have effective learning. Additionally, it makes it simpler for them to provide help and troubleshoot while creating and managing courses, which will be crucial for the others who are not totally adept in technology.

This result is supported by Perienen (2020) who noted that better learning in mathematics can be associated with the appropriate technology that is used in teaching. Thus, a strong online learning infrastructure plays a pivotal role in sustaining the future of higher education (Woods, 2020).

Higher education institutions are under pressure to put technology at the centre of learning because it is becoming more and more ingrained in this technology era. This guarantees that they will remain competitive in a market

that is linked globally and culturally and is evolving all the time (Al-adwan & Smedley, 2012).

Theme 5: Flexibility and Leniency

While teachers trying to adjust their teaching methodologies and strategies, so are the students. In fact, some of the students are having very hard time in adjusting since it is undeniable that in a third-world country like Philippines, not all students are provided with gadgets such as phones and laptops, which are indispensable in online learning. This kind of predicament among the students is not new to the teachers. And they even tried to be as understanding and as flexible as they could. Some of the participants clearly stated that:

I know that my students are struggling, too. For that, I am very lenient to them, for instance in their attendance. I also adjust my assessment and evaluation with my students. (SP4)

When I give activities to my students, I give them deadlines. However, these deadlines are just to let them know that I want them to finish early because I know that they have other subjects as well. I still accept their works even if they are late in submitting them. (SP5)

I adjust my teaching styles. I made sure that they can reach me through SMS or even in my messenger so they could follow up on our lessons. I also record and upload my class for them to see anytime just in case they missed our class due to poor Internet connection. (SP3)

Though teachers are after students' learning, with humanitarian consideration, they have been more flexible and lenient at the height of the pandemic. This has been evident in Changes were evident in their grading system, submission of requirements for laboratory and research works, and the like. This is consistent to the findings of Cahapay (2020), that in the Philippine tertiary institutions, there have been practices which were contextually reshaped as far as the current crisis is concerned. Teachers have created alternative instructional approaches (Ferraras, 2020) in order to meet the necessary requirements of the course.

IMPLICATIONS AND RECOMMENDATIONS

This study implies that mathematics teachers in the tertiary institutions are continually providing the learning that the students needed despite the absence of the face-to-face classes. The diversity of efforts amidst the pressure and anxiety brought about by the pandemic had been revealed. This was depicted by the themes wherein the mathematics teachers in the higher education had been adaptive of the situation and even provided utmost flexibility just to ensure that learning never stops.

Now that the face-to-face classes have slowly been resuming, it is recommended that teachers have to improve their strategies in such a way that the learners' physical and psychological aspects would not be compromised, considering that there was almost two years of full virtual classes. They could also continue utilizing technology in their classes to ignite student participation and to keep abreast with the “technology era”. Lastly, this result can be used as future reference of other researchers particularly in the context of mathematics teachers' experience in teaching during the pandemic.

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