



## The Role of Community College: Navigating the Issues and Interventions of Mabalacat City College Amidst COVID Pandemic

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### Abstract

The COVID-19 pandemic has generated a myriad of issues in educational systems across the globe. This community-based study aims to navigate the issues encountered by professors of Mabalacat City College during the pandemic and the interventions employed to address these issues. This study used a descriptive survey research design. In this study, a purposive sampling method was employed to obtain 27 professors. Survey questionnaires were distributed using Google Forms to the participants at Mabalacat City College. The data obtained from the participants were subject to the data privacy act. Thematic analysis and descriptive statistics were used to analyze the participants' data. The results revealed two major themes faced during the pandemic which are "technical problems" and "classroom management". The study found that the installation of DigiHubs provided opportunities for learners experiencing difficulties during the pandemic. These DigiHubs have various means, such as internet connection, gadgets, modules, and learning spaces, that foster a conducive environment. In addition, workshops/training sessions, seminars, and webinar sessions empowered technophobic professors who adhered to traditional modalities. Hence, these findings underscore the critical role of community colleges in the educational system, particularly during times of crisis.

**Keywords:** Community college; COVID; DigiHubs; Mabalacat city college

### INTRODUCTION

Corona viruses (CoV) are the primary cause of respiratory illness and intestinal problems in humans and animals with zoonotic behavior (Masters, 2019). Historically, these viruses affected humans during the outbreak of Middle East Respiratory Syndrome (MERS) and severe acute respiratory syndrome (SARS) (WHO, 2020). Today, another virus (with different strains) related to SARS and MERS began proliferating in other continents. This virus, known as SARS-CoV, causes COVID-19 and originated in Wuhan, China (Kumar et al., 2020). On January 30, 2020, the virus spread rapidly in different countries, infecting many people from infancy to adulthood regardless of gender (Kumar et al., 2020).

The battle against the COVID-19 pandemic suffered prominent effects and impacts on almost all sectors of humanity (Tria, 2020). Due to this pandemic, the progression and development of widespread disturbances such as travel restrictions (Chinazzi et al., 2020), political conflicts (Barrios & Hochberg, 2022), racism (Habibi et al., 2020), misinformation (Enitan et al., 2020), global economic fluctuations (Fernandes, 2020), and closure of schools (Viner et al., 2020) have become sluggish. The extant effects of the COVID-19 pandemic continue to contribute to the suffering of different sectors, especially education. In addition, the lack of vaccines and poor medical facilities have aggravated the eradication of this disease in this timeline (Tria, 2020). According to UNESCO, most governments worldwide have temporarily closed numerous educational institutions. To elaborate, around 978,503,100 learners are affected by the COVID-19 pandemic globally, as well as

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the 131 country-wide closures and other autonomous institutions that are partially opened. Sadly, in the Philippines, roughly 28 million learners are affected. These numbers are affected by community lockdowns and quarantine, which drive education in the Philippines to embrace online learning platforms (Crawford et al., 2020).

DepEd denotes the Department of Education in the Philippines. The executive branch of the Philippine government supervises operations in basic education. This department is involved in the formulation and execution of educational policies, programs, and services in the Philippines. On the other hand, Higher Education Institutions (HEIs) refer to all forms of postsecondary educational institutions that foster advanced education and specialized training that are aligned with lifelong learning. These institutions are higher than basic education or high school level. In the Philippines, HEIs are categorized differently as (1) National University, (2) Private Higher Education Institutions, and (3) Public Higher Education Institutions where Mabalacat City College is located. In the Philippines, the Commission on Higher Education (CHED) is the governmental agency charged with promoting quality higher education, overseeing, and regulating institutions under the HEI across the Philippines.

In response to the appalling situation during the COVID-19 pandemic, educational leaders under DepEd and CHED agreed to employ the new normal approach in the Philippines' educational system (Tria, 2020). For instance, in DepEd, a learning continuum plan (LCP) minimizes direct and indirect contact with students and strengthens social distancing. This LCP was projected in DepEd ORDER No. 12 s. 2020 (DepEd, 2020). Interestingly, in CHED, HEIs were given academic freedom to adopt and implement distance learning, e-learning, remote learning, and other alternative modes, all encapsulated in the New Normal Approach. This approach is not new to the educational system in the Philippines; in fact, UP Manila applied blended learning in its educational system before the COVID-19 pandemic (Tanhueco-Tumapon, 2020).

Another innovative approach used in the educational sector during the COVID-19 pandemic is the HyFlex approach. HyFlex is a combination of online and face-to-face synchronous courses, where students are free to choose when and how they will engage in the course. This modality was first introduced in 2007 by Beatty, and the primary goal of this modality is to connect online and face-to-face approach (Cumming et al., 2024).

Mabalacat City College (MCC) is a Higher Education Institution founded in 2008 as Mabalacat College by Marino "Boking" Morales during his term as mayor of Mabalacat City. The MCC, located in Pampanga, Philippines, has 5 institutes: the Institute of Arts and Sciences (IAS), the Institute of Business and Computing Studies, the Institute of Hospitality, Tourism, and Management, and the Institute of Teacher Education. As COVID-19 started to affect Mabalacat City College, President Michelle Aguilar-Ong decided to adopt and implement the HyFlex modality to cope with this volatile situation. One of the executed projects of this institution was the MCC's Technological Advanced Project in the spirit of the MCC Smart Classroom. This project was designed to foster innovative teaching experiences and learning using HyFlex learning during the COVID pandemic. It provided opportunities to mimic a normal classroom setup, even when students were in remote areas. Despite this innovation, community colleges may still experience issues and challenges similar to those of the COVID-19 pandemic. Hence, navigating issues and interventions during crises is pivotal for providing information about possible strategies that can be used when encountering similar problems.

Thus, this study focuses on providing insights into the professors of Mabalacat City College, Mabalacat City, Pampanga, Philippines. Specifically, this study sought to answer the following questions:

1. How to navigate issues encountered by professors of Mabalacat City College during the COVID-19 pandemic; and

2. Identification of interventions made by Mabalacat City College to address issues encountered by the faculty staff.

## LITERATURE REVIEW

This section presents the results of the literature review and studies conducted to unveil what is already known about issues and interventions in the educational system during the COVID-19 pandemic.

### **The Nature of the New Normal: Educational Involvement**

In any aspect of humanity, especially education, 2020 has proven challenging due to the COVID-19 pandemic. As reported, roughly one billion students are affected by the pandemic. To cope with the current situation, UNESCO provided a way to alleviate it by using distance education (Sali, 2020). UNESCO defines distance education as "any educational process in which all or most of the teaching is conducted by someone removed in space and time from the learner with the effect that all or most of the communication between teachers and learners is thorough an artificial medium either electronic or print". In other words, this approach is defined as "Learning experiences in synchronous or asynchronous environments using different means with internet involvement". UNESCO Director-General Audrey Azoulay said, "Never before have we witnessed educational disruption on such a large scale". The coronavirus outbreak disrupted the global academic calendar and its state of arrays (Demuyakor, 2020). To achieve the optimum effectivity of distance education/distance learning, 4As should be implemented: accessibility, availability, adaptability, and acceptability (Sali, 2020). Usually, the New Normal Approach has two main instructional deliveries used in the field of education: synchronous and asynchronous. The nature of synchronous learning is structured such that the student attends live or real-time lectures between the student and the teacher. In contrast to the asynchronous approach, it is a nonstructured approach where students can choose when to do their tasks. (Dwivedi et al., 2020).

### **Alternative Learning Delivery Modalities**

DepEd prepares self-learning modules for education's new normal. July 1, 2020, DepEd, Steadfast in its preparation for School Year 2020-2021, the Department of Education (DepEd) provided Self-Learning Modules (SLMs) with alternative learning delivery modalities offered for various types of learners across the Philippines. Learning delivery modalities include blended, modular, and online learning (DepEd, 2020). A decade ago, blended learning was a way to promote innovation, reduce educational costs, personalize learning experiences, raise student achievement, and create a more student-centered learning approach. This practice is widely adopted across different levels in the field of education to the extent that scholars coined it as the "new traditional model" (Dziuban et al., 2018). Interestingly, three categories of blended learning systems: first is the enabling, which encapsulates the improvements to access and convenience; second is enhancing, which explains the incremental but not radical pedagogical change; and last is transforming, which concerns more of the radical transformation of pedagogy. Nevertheless, even though scholars provided the fundamental nature of blended learning, observing, and tracking its growth is an arduous job because of its definitional ambiguity (Dziuban et al., 2018). Because of its broad nature, many scholars have defined this new model in many ways (Okaz, 2015), and due to technological innovation, it has been increasingly used in many e-learning or online courses (Morton et al., 2016). Also, blended learning gained importance, especially with the development of online learning and flipped teaching, which made this practice more innovative (Wang et al., 2015; Morton et al., 2016). The Department of Education (DepEd) developed a program known as the "DepEd Computerization Program" that will allow public schools to have computers (DepEd,

2018), thus providing an effective way to improve the quality of education.

The term "Online Learning" has a broad definition; for instance, it refers to learning mediated by the Internet (Rapanta et al., 2020). Due to the pandemic, learning systems in different countries have shifted to different modalities (Aliyyah et al., 2020). Online learning embraces internet-based courses initiated using synchronous, asynchronous, or hybrid approaches. Despite the positive feedback and outcomes of online learning, there are also negative impacts reported by several countries (Aliyyah et al., 2020). Furthermore, to achieve the optimum effectivity of online learning, the internet connection must be robust to achieve the alternative to face-to-face (Lassoued et al., 2020). According to Rapanta et al. (2020), there are 4 purposes of online learning: (1) the learner is at a distance from the tutor/instructor, (2) the learner uses some form of technology to access the learning materials, (3) the learner uses technology to interact with the tutor/instructor and with other learners, and (4) some support is provided to learners.

### **Advantages and Disadvantages of Alternative Learning Delivery Modalities (ALDM)**

Indeed, the COVID-19 pandemic brought inequities into human daily lives (Ambrose, 2020). Nonetheless, this scenario pushes the sectors involved in education to utilize all means to provide quality education—ALDM (Korkmaz & Toraman, 2020). Despite the positive feedback from these alternatives, there is also negative feedback, which is described below.

Some of the reported disadvantages of ALDM include issues related to time management, the use of technology tools, student assessment, communication, and the lack of in-person interaction (Gloria & Uttal, 2020). To begin with, online learning may not be efficient and accessible to some students due to the lack of either devices or an internet connection (Wang et al., 2020). Furthermore, older internet users will benefit the least for reasons like technophobia (Lee et al., 2020). In addition, numerous teachers/instructors are technophobic, worried, anxious, or not confident enough to deal with their computer hardware and software during online learning (Rosen & Weil, 1995). Moreover, bad connections prominently happen in data packages, which can cause late collection, completion, and even understanding of the material by the student (Aliyyah et al., 2020).

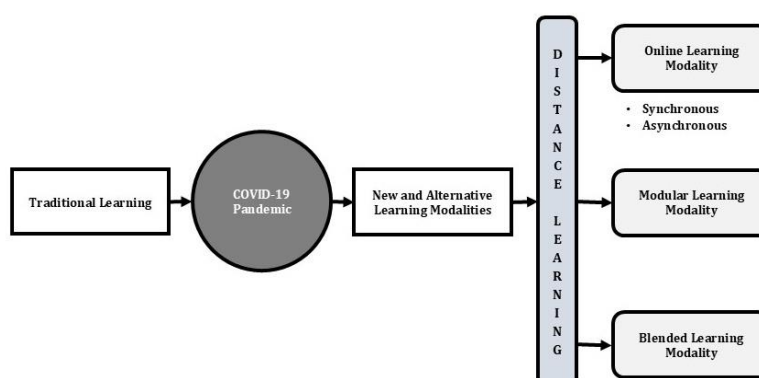
ALDM has had a positive impact on the educational system. A few of them are as follows: (1) The educational approach has provided an ideal alternative for the current situation of the pandemic. (2) This online learning approach provided experiential situations for student activities and the teacher's/instructor's working practices (Rapanta et al., 2020). For instance, teachers can record and upload lessons using different platforms (Google classroom and other online platforms), enhancing teachers' orientation toward technology (Toquero, 2020). In addition to the advantages, online learning also has the same effectivity as face-to-face learning in some situations for students (Rajab et al., 2020). Furthermore, some of the characteristics of online learning are free and broad access in the student's time (Zhang, 2020), not to mention the synchronous and asynchronous approach used in online learning (Aliyyah et al., 2020). Moreover, online learning paves the way for education to continue despite the national and local enhanced community quarantine (ECQ) (Korkmaz & Toraman, 2020). Also, students with smartphones and internet access can experience the advantages of online learning (Adnan & Anwar, 2020).

### **Related Studies**

The Study by Jayalath et al. (2020), Language Advising as Psychosocial Intervention for First-time Self-access Language Learners in the Time of COVID-19: Lessons from the Philippines, shows the nature of Language Learning Using Metacognitive Reflection of their Different Participants. A few of their results are that students need more connections during online classes, which causes inadequate delivery. In addition, the lack of feedback from students was also their major problem

during this pandemic. [Demuyakor's paper \(2020\)](#) revealed the perceptions of Ghanaian International Students in China toward the online learning approach. The study included 315 participants (69.1% male and 30.9% female). The results show that they were content with online learning. In addition, scores on the effectiveness and credibility of online learning programs are higher than the students' challenges during the pandemic. The journal of [Jayalath et al. \(2020\)](#) enhances the capacity of the academic community to meet similar satisfaction in the future. Six universities in Sri Lanka were selected for this study. A survey questionnaire was distributed randomly to 90 teachers and 650 students at six universities. Narrative analyses were conducted to identify shared views through telephone inquiries. The manuscript by [Kapasias et al. \(2020\)](#) expresses the impact of lockdowns on students' learning status in West Bengal, India. Their Study sent students a structural questionnaire link using Google Forms via various platforms. A total of 232 students distributed complete survey information. A simple percentage value was used in this Study to evaluate the data. Students have been facing various problems related to depression, anxiety, poor internet connectivity, and an unfavorable study environment at home.

The study by [Rajab et al. \(2020\)](#) was conducted at the College of Medicine (COM) of Alfaisal University, Riyadh, Saudi Arabia. The survey questionnaire was e-mailed to the participants. A total of 1,289 students and faculty members from COM participated in this research. The challenges reported to online medical education during the COVID-19 pandemic included issues related to communication (59%), student assessment (57.5%), use of technology tools (56.5%), online experience (55%), pandemic-related anxiety or stress (48%), time management (35%), and technophobia (17%). The results of [Johnson et al. \(2020\)](#) were gathered from 897 faculty and administrators. The participants reported that faculty with and without online teaching experience pivoted to online teaching, and nearly all administrators indicated that those without online teaching experience were learning how to teach online. Regardless of whether the faculty had previous experience teaching online or not, many faculty members reported using new teaching methods. Most faculty members reported changing their assignments or exams because of transitioning to a new delivery mode. Nearly half reported lowering students' expected workload (including dropping assignments or exams) and shifting to a pass or fail status in the semester.



**Figure 1.** Conceptual Framework

## RESEARCH METHOD

This study employed a descriptive survey research design to navigate issues faced by professors and interventions at Mabalacat City College, Mabalacat City, Pampanga, Philippines during the COVID-19 pandemic. A thematic approach was used in this research to showcase and thematize the experiences of the participants ([Lassoued et al., 2020](#)). A descriptive survey study summarizes the participants' experiences using a survey questionnaire ([Korkmaz & Toraman,](#)

2020). This research applied a descriptive method (Allo, 2020).

### Participants

This study used a purposive sampling method to maximize the potential participants of the study at different institutions in Mabalacat City College. The subjects of the study were limited to the instructors of Mabalacat City College who used the HyFlex learning approach. The data obtained from the participants were treated with the utmost confidentiality and in adherence to RA 10173. This Study used purposive sampling to select a representative population sample (Korkmaz & Toraman, 2020). Participants include part-timers and full-time faculty of the local college who will explore instructors' issues, challenges, and interventions regarding the new normal approach at the tertiary level. Demuyakor's guide (2020) was applied to the percentage of participants involved; the sample size should be >50% to be appropriate for analysis. A total of 27 participants participated in the survey questionnaire.

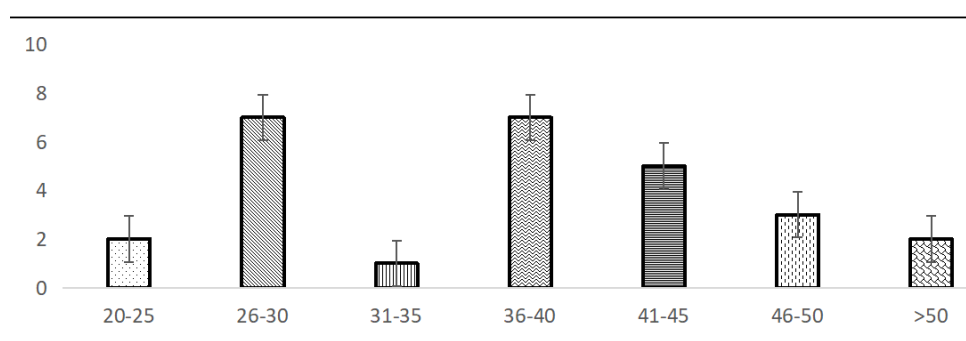
### Data Collection and Procedures

The data collection was conducted in November-December 2022. The questionnaire was e-mailed a week before data collection using a Google Forms platform. The estimated time for participants to complete the tool was 10 minutes at maximum. All participants provided full consent before participating in the online survey (Rajab et al., 2020; Kapasia et al., 2020; Demuyakor, 2020). All electronic copies of the data were stored in a password-protected Zip file before their permanent deletion.

### Data Analysis

This study used graphs and descriptive statistics to analyze data distribution. Also, percentage distribution, arithmetic mean, and frequency distribution were applied in this research (Kapasia et al., 2020). All computations were performed in Microsoft Excel, and all graphs were extracted using GraphPad Prism V9. All the data gathered from the participants were subjected to thematic mapping to explore the organization and facile observation (Aliyyah et al., 2020).

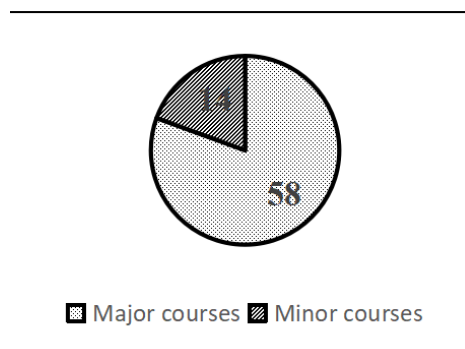
## FINDINGS AND DISCUSSION



**Figure 2.** The age range of the participants is shown.

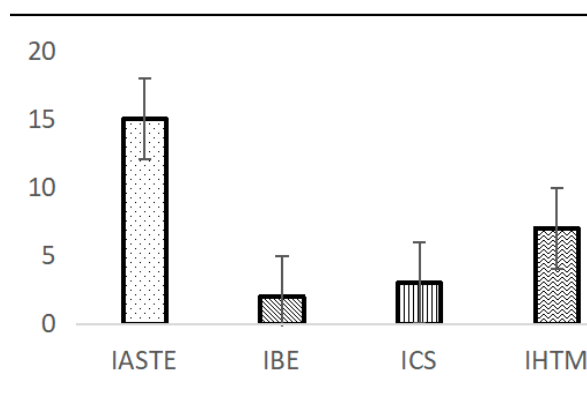
As shown in Figure 2, most participants in this study were within the age groups of 26-30 and 36-40 years, followed by those aged 41-45 years. The least represented age groups were 46-50 years, 20-25 years, over 50 years, and 31-35 years.





**Figure 3:** Percentages of major and minor courses taught by the participants.

In terms of teaching responsibilities, the professors were primarily engaged in teaching major courses. Figure 3 shows that 58 participants were involved in delivering these major courses. Additionally, a smaller portion of their teaching load included minor subjects, with 14 minor courses also being covered.



**Figure 4:** Distribution of participants among the Institutes.

*IASTE: Institute of Arts and Sciences; IBE: Institute of Business Education; ICS: Institute of Computing Study; IHTM: Institute of Hotel and Tourism Management*

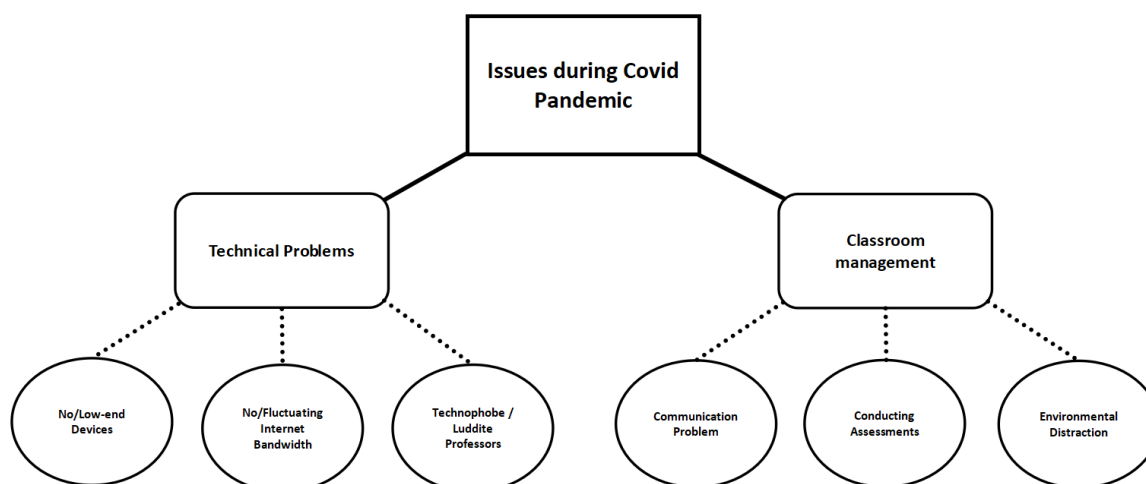
As shown in figure 4, the Institute of Arts, Sciences, and Teacher Education had the highest number of participants (15), followed by the Institute of Hospitality and Management with 7 participants. In contrast, the Institute of Business Education and the Institute of Computing Studies had the fewest participants.

**Table 1:** Results of thematic analysis of the corresponding distributions and frequencies

Themes	Sub-theme	Distributions	Total frequency (%)
Technical Problems	No/Fluctuating Bandwidth	Internet	15
	No/Low-end Devices		8
	Technophobes / Professors	Luddite	4
Classroom management	Conducting Assessments		11
	Miscommunication		5
	Environmental Distractions		9

Table 1 presents the major themes related to issues faced by MCC professors during the COVID-19 pandemic. These issues were categorized into two main themes: (1) Technical Problems and (2) Classroom Management. Within the theme of Technical Problems, the most frequently reported issue was unstable or fluctuating internet bandwidth, affecting 15 respondents. This issue is widespread across universities as the pandemic continues to impact the educational sector. Studies by [Rotas and Cahapay \(2020\)](#), [Diasti and Hartono \(2023\)](#), and [Lapitan et al. \(2021\)](#) similarly reported that both professors and students experienced unstable internet connections during online classes. Likewise, [Hermano and Denamarca \(2022\)](#) noted that slow or unstable internet connections were common in Philippine State Colleges. Additional challenges included the need for more access to adequate or compatible devices for online learning and difficulties encountered by technophobic or Luddite professors. As traditional teaching methods remain the predominant teaching modality in the Philippines' educational system, the abrupt shift to innovative teaching methods during the pandemic posed significant challenges for traditional professors and students ([Boyer-Davis, 2020](#)). Numerous scholars have documented the difficulties faced by technophobic faculty in adapting to the new normal in education ([Yang & Wang, 2024](#); [Khasawneh, 2023](#); [Rehman et al., 2024](#)), particularly among seasoned professors ([Nimrod, 2018](#)). However, this study found technophobia to be the least frequently reported issue because most participants were relatively younger (Fig. 2A).

Second, classroom management revealed that conducting online assessments posed a challenge to the professors. This finding aligns with the observations of [Tuah and Naing \(2021\)](#) and [Perwitasari et al. \(2021\)](#), who noted that online assessments remained challenging, as the pandemic persistently exacerbated social distancing protocols and lockdowns. Furthermore, since online assessment platforms were not widely used before the pandemic, transitioning to these methods proved difficult for both professors and students. Environmental distractions were also significant, reported by 9 participants. Although less frequently mentioned, Miscommunication was noted as a challenge by 5 participants. These data provide information about the complex issues during the COVID-19 pandemic.



**Figure 5:** Theme mapping of issues encountered by the MCC professor

Conspicuously, figure 5 shows the two primary themes of issues encountered by MCC professors during the COVID-19 pandemic. The figure further delineates the subthemes within each theme, emphasizing areas where interventions could be effectively used to address these specific issues.



To address these issues, the MCC implemented various projects to alleviate the issues faced by professors and students. The MCC launched the "Tablet Loan Project" to address the problem of students and professors with no or low-end devices. This initiative gave stakeholders easy access to decent devices, alleviating their experience with the HyFlex modality. Devices were distributed in these DigiHubs to enable better connectivity and engagement during online classes. Fluctuating internet bandwidth emerged as a significant subtheme in this study (Table 1). To mitigate this issue, MCC extended support to the community by establishing "Digital Hubs" in every barangay in Mabalacat City, where internet connection, desktop, tablet, and learning space were available. These hubs provide fast, reliable internet access, hard-copy modules for students' courses, and other means for students. Beyond addressing technical concerns, these hubs also tackled issues related to the "Classroom Management" theme by offering a learning environment conducive to online education while simultaneously addressing environmental distractions, communication problems, and conducting assessments. These hubs allow students to access a supportive learning environment close to home, even during the pandemic (Marushchak et al., 2023). In response to the final subtheme of technical challenges, which focused on enhancing the capabilities of MCC's professors for HyFlex teaching, the college introduced the "Faculty Training Program." This program offered a range of training sessions, workshops, and webinars/seminars to promote professional growth and equip faculty members for effective online teaching (Toquero & Talidong, 2020). Participation was substantial, with 68% of faculty members from IASTE, 68% from ICS, 80% from IBCE, and 100% from IHMT engaging in webinars and training sessions during the pandemic. Through this initiative, seasoned professors were able to learn and adapt to the HyFlex modality, finding enjoyment in the process despite their initial difficulties with technology (Luddite).

## CONCLUSIONS

As the challenges of the COVID-19 pandemic began to diminish, numerous lessons and insights emerged from this unprecedented period. Various factors and issues have been highlighted throughout the pandemic, many of which remain relevant as we move forward. Mabalacat City College, as a community-oriented institution, has played a significant role in supporting the local community by extending services and resources despite numerous obstacles. Through its proactive interventions, such as installing DigiHubs, distributing printed modules, providing gadget loan and deploying desktops across barangay, the college effectively addressed some of the most pressing issues encountered during the pandemic. These included limited access to devices, unreliable internet connectivity, communication barriers, challenges in conducting assessments, and environmental distractions that affected learning. Although these solutions mitigated several challenges, the issue of technophobia among faculty members was a particularly difficult challenge. This experience highlighted the importance of flexibility and resilience in education. To further ameliorate and improve the crisis action of the institution, it is highly recommended that similar institutions should establish continuous development programs focusing on technology adoption and online modalities to empower the educational staff in future catastrophes similar to the COVID-19 pandemic. As a recommendation to other HEIs, addressing this issue requires dedicated effort and institutional adaptability. Such experience underscores the importance of resilience, innovation, and community-centered approaches to overcoming adversity. Mabalacat City College's initiatives testify to how community colleges can effectively respond to crises by adapting to new demands and supporting students and educators through thoughtful interventions.

## LIMITATION AND FURTHER RESEARCH

This study was limited to 27 professors from Mabalacat City College, which may limit the information on broader issues and possible interventions during the COVID-19 pandemic.

Demographic profiles and open-ended questions were used to acquire the information and insights of the participants during the study. Although these data may provide insightful information, they are limited to the experiences of the faculty at Mabalacat City College. Descriptive statistics and thematic analysis were employed in this study to explore the role of Mabalacat City College in issues during the COVID-19 pandemic; and the interventions applied to alleviate the situation.

Future research could explore comparative studies among various educational settings, including public and/or private higher education institutions and rural and/or urban colleges, that can offer more understanding of how these communities responded to the challenges posed by the COVID-19 pandemic. Moreover, examining the effectiveness of specific interventions could provide deeper insights into their sustainability and long-term benefits for both students and educators. Another potential avenue for research is to examine the impact of the shift to online and blended learning modalities on student learning outcomes, participation, and comprehension, which could involve studies to assess how these modalities affect different student demographics and whether the interventions implemented during the pandemic have had lasting positive effects on educational equity and access. Finally, exploring how faculty support systems and professional development programs helped institutions remain resilient during the crisis could also provide insights into how schools can better prepare for future challenges.

## REFERENCES

- Adnan, M., & Anwar, K. (2020). Online Learning Amid the COVID-19 Pandemic: Students' Perspectives. *Online Submission*, 2(1), 45-51. <http://www.doi.org/10.33902/JPSP.%202020261309>
- Aliyyah, R. R., Rachmadtullah, R., Samsudin, A., Syaodih, E., Nurtanto, M., & Tambunan, A. R. S. (2020). The Perceptions of Primary School Teachers of Online Learning During the COVID-19 Pandemic Period: A Case Study in Indonesia. *Journal of Ethnic and Cultural Studies*, 7(2), 90-109. <http://dx.doi.org/10.29333/ejecs/388>
- Allo, M. D. G. (2020). Is the Online Learning Good in the Midst of COVID-19 Pandemic? The Case of EFL Learners. *Jurnal Sinestesia*, 10(1), 1-10. <https://sinestesia.pustaka.my.id/journal/article/view/24>
- Ambrose, A. J. H. (2020). Inequities During COVID-19. *Pediatrics*, 146(2). <https://doi.org/10.1542/peds.2020-1501>
- Barrios, J. M., & Hochberg, Y. V. (2022). Risk perception through the lens of politics in the time of the COVID-19 pandemic. In *Risk Perception Through the Lens of Politics in the Time of the COVID-19 Pandemic: Barrios, John Manuel | uHochberg, Yael V.* [SI]: SSRN. <https://doi.org/10.3386/w27008>
- Boyer-Davis, S. (2020). Technostress in Higher Education: An Examination of Faculty Perceptions Before and During the COVID-19 Pandemic. *Journal of Business and Accounting*, 13(1), 42-58. [https://asbbs.org/files/2020/JBA\\_Vol\\_13.1\\_Fall\\_2020.pdf#page=42](https://asbbs.org/files/2020/JBA_Vol_13.1_Fall_2020.pdf#page=42)
- Chinazzi, M., Davis, J. T., Ajelli, M., Gioannini, C., Litvinova, M., Merler, S., ... & Vespignani, A. (2020). The Effect of Travel Restrictions on the Spread of the 2019 Novel Coronavirus (COVID-19) Outbreak. *Science*, 368(6489), 395-400. <https://doi.org/10.1126/science.aba9757>
- Crawford, J., Butler-Henderson, K., Jurgen, R., Malkawi, B. H., Glowatz, M., Burton, R., Magni, P., & Lam, S. (2020). COVID-19: 20 Countries' Higher Education Intra-Period Digital Pedagogy Responses. *Journal of Applied Learning & Teaching*, 3. <https://doi.org/10.37074/jalt.2020.3.1.7>
- Cumming, T. M., Han, C., & Gilanyi, L. (2024). University Student and Instructor Experiences with Hyflex Learning: A Scoping Review. *Computers and Education Open*, 100229. <https://doi.org/10.1016/j.caeo.2024.100229>

- Demuyakor, J. (2020). Coronavirus (COVID-19) and Online Learning in Higher Institutions of Education: A Survey of the Perceptions of Ghanaian International Students in China. *Online Journal of Communication and Media Technologies*, 10(3), e202018. <https://doi.org/10.29333/ojcm/8286>
- DepEd (2020). *Adoption of the Basic Education Learning Continuity Plan for School Year 2020-2021 in the Light of the COVID-19 Public Health Emergency*. Retrieved from <https://www.deped.gov.ph/2020/06/19/june-19-2020-do-012-2020-adoption-of-the-basic-education-learning-continuity-plan-for-school-year-2020-2021-in-the-light-of-the-COVID-19-public-health-emergency/>
- DepEd (2018, April 6) *DepEd Computerization Program*. Available at <https://www.deped.gov.ph/2018/04/06/deped-computerization-program/>
- Diasti, K. S., & Hartono, H. (2023). EFL Students' Self-Regulation in Online Learning During the COVID-19 Pandemic. *Panyonara: Journal of English Education*, 5(1), 90-100. <https://doi.org/10.19105/panyonara.v5i1.8254>
- Dwivedi, Y. K., Hughes, D. L., Coombs, C., Constantiou, I., Duan, Y., Edwards, J. S., ... & Upadhyay, N. (2020). Impact of COVID-19 Pandemic on Information Management Research and Practice: Transforming Education, Work and Life. *International journal of information management*, 55, 102211. <https://doi.org/10.1016/j.ijinfomgt.2020.102211>
- Dziuban, C., Graham, C. R., Moskal, P. D., Norberg, A., & Sicilia, N. (2018). Blended Learning: The New Normal and Emerging Technologies. *International Journal of Educational Technology in Higher Education*, 15, 1-16. <https://doi.org/10.1186/s41239-017-0087-5>
- Enitan, S. S., Ibeh, I. N., Oluremi, A. S., Olayanju, A. O., & Itodo, G. E. (2020). The 2019 Novel Coronavirus Outbreak: Current Crises, Controversies and Global Strategies to Prevent a Pandemic. *International Journal of Pathogen Research*, 4(1), 1-16. <https://doi.org/10.9734/ijpr/2020/v4i130099>
- Fernandes, N. (2020, March 22). *Economic Effects of Coronavirus Outbreak (COVID-19) on the World Economy*. IESE Business School Working Paper No. WP-1240-E. <https://doi.org/10.2139/ssrn.3557504>
- Gloria, A. M., & Uttal, L. (2020, April). Conceptual Considerations in Moving from Face-to-Face to Online Teaching. In *International Journal on E-Learning* (pp. 139-159). Association for the Advancement of Computing in Education (AACE). <https://www.learntechlib.org/primary/p/184150/>
- Habibi, R., Burci, G. L., de Campos, T. C., Chirwa, D., Cina, M., Dagron, S., ... Hoffman, S. (2020). Do not violate the International Health Regulations during the COVID-19 outbreak. *The Lancet*, 395(10225). [https://doi.org/10.1016/S0140-6736\(20\)30373-1](https://doi.org/10.1016/S0140-6736(20)30373-1)
- Hermano, J. R., & Denamarca, S. (2022). Perceived Learning Difficulties of Students in Flexible Learning in a Philippine State College. *International Journal of Educational Research Review*, 7(4), 244-252. <https://doi.org/10.24331/ijere.1131542>
- Jayalath, C., Wickramasinghe, U., Kottage, H., & Somaratna, G. (2020). Factors Influencing Orderly Transition to Online Deliveries During COVID19 Pandemic Impact. *Asian Journal of Education and Social Studies*, 9(2), 10-24. <https://doi.org/10.9734/ajess/2020/v9i230242>
- Johnson, N., Veletsianos, G., & Seaman, J. (2020). US Faculty and Administrators' Experiences and Approaches in the Early Weeks of the COVID-19 Pandemic. *Online learning*, 24(2), 6-21. <https://doi.org/10.24059/olj.v24i2.2285>
- Kapasia, N., Paul, P., Roy, A., Saha, J., Zaveri, A., Mallick, R., ... & Chouhan, P. (2020). Impact of Lockdown on Learning Status of Undergraduate and Postgraduate Students During COVID-19 Pandemic in West Bengal, India. *Children and Youth Services Review*, 116, 105194. <https://doi.org/10.1016%2Fj.childyouth.2020.105194>

- Khasawneh, O. Y. (2023). Technophobia: How Students' Technophobia Impacts Their Technology Acceptance in an Online Class. *International Journal of Human-Computer Interaction*, 39(13), 2714-2723. <https://doi.org/10.1080/10447318.2022.2085398>
- Korkmaz, G., & Toraman, Ç. (2020). Are We Ready for the Post-COVID-19 Educational Practice? An Investigation into What Educators Think as to Online Learning. *International Journal of Technology in Education and Science*, 4(4), 293-309. <https://doi.org/10.46328/ijtes.v4i4.110>
- Kumar, V., Pruthivishree, B., Pande, T., Sinha, D., Singh, B., Dhama, K., & Malik, Y. S. (2020). SARS-CoV-2 (COVID-19): Zoonotic Origin and Susceptibility of Domestic and Wild Animals. *J Pure Appl Microbiol*, 14(suppl 1), 741-7. <https://doi.org/10.22207/JPAM.14.SPL1.11>
- Lapitan Jr, L. D., Tiangco, C. E., Sumalinog, D. A. G., Sabarillo, N. S., & Diaz, J. M. (2021). An Effective Blended Online Teaching and Learning Strategy During the COVID-19 Pandemic. *Education for chemical engineers*, 35, 116-131. <https://doi.org/10.1016/j.ece.2021.01.012>
- Lassoued, Z., Alhendawi, M., & Bashitialshaaer, R. (2020). An Exploratory Study of the Obstacles for Achieving Quality in Distance Learning During the COVID-19 Pandemic. *Education sciences*, 10(9), 232. <https://doi.org/10.3390/educsci10090232>
- Lee, O. E. K., Kim, D. H., & Beum, K. A. (2020). Factors Affecting Information and Communication Technology Use and Ehealth Literacy Among Older Adults in the US and South Korea. *Educational Gerontology*, 46(9), 575-586. <https://doi.org/10.1080/03601277.2020.1790162>
- Marushchak, O., Muliarevych, O., Saienko, V., Hurbanska, A., & Nowak, B. (2023). Digital Learning Hubs as a Component of the Information and Digital Learning Environment. *Journal of Curriculum and Teaching*, 12(5), 24-35. <https://doi.org/10.5430/jct.v12n5p24>
- Masters, P. S. (2019). Coronavirus Genomic RNA Packaging. *Virology*, 537, 198-207.
- Morton, C. E., Saleh, S. N., Smith, S. F., Hemani, A., Ameen, A., Bennie, T. D., & Toro-Troconis, M. (2016). Blended Learning: How can We Optimise Undergraduate Student Engagement?. *BMC Medical Education*, 16, 1-8. <https://doi.org/10.1186%2Fs12909-016-0716-z>
- Nimrod, G. (2018). Technophobia Among Older Internet Users. *Educational Gerontology*, 44(2-3), 148-162. <https://doi.org/10.1080/03601277.2018.1428145>
- Okaz, A. A. (2015). Integrating Blended Learning in Higher Education. *Procedia-Social and Behavioral Sciences*, 186, 600-603. <https://doi.org/10.1016/j.sbspro.2015.04.086>
- Perwitasari, F., Astuti, N. B., & Atmojo, S. (2021, April). Online Learning and Assessment: Challenges and Opportunities During Pandemic COVID-19. In *International Conference on Educational Assessment and Policy (ICEAP 2020)* (pp. 133-137). Atlantis Press. <https://doi.org/10.2991/assehr.k.210423.077>
- Rajab, M. H., Gazal, A. M., & Alkattan, K. (2020). Challenges to Online Medical Education During the COVID-19 Pandemic. *Cureus*, 12(7). <https://doi.org/10.7759%2Fcureus.8966>
- Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., & Koole, M. (2020). Online University Teaching During and After the COVID-19 Crisis: Refocusing Teacher Presence and Learning Activity. *Postdigital Science and Education*, 2, 923-945. <https://doi.org/10.1007%2Fs42438-020-00155-y>
- Rehman, A. U., Mahmood, A., Bashir, S., & Iqbal, M. (2024). Technophobia as a Technology Inhibitor for Digital Learning in Education: A Systematic Literature Review. *Journal of Educators Online*, 21(2), n2. <https://doi.org/10.9743/jeo.2024.21.2.3>
- Rosen, L. D., & Weil, M. M. (1995). Computer Availability, Computer Experience and Technophobia Among Public School Teachers. *Computers in Human Behavior*, 11(1), 9-31. [https://doi.org/10.1016/0747-5632\(94\)00018-D](https://doi.org/10.1016/0747-5632(94)00018-D)

- Rotas, E., & Cahapay, M. (2020). Difficulties in Remote Learning: Voices of Philippine University Students in the Wake of COVID-19 Crisis. *Asian Journal of Distance Education*, 15(2), 147-158. <http://www.asianjde.com/ojs/index.php/AsianJDE/article/view/504>
- Sali, A. H. A. (2020). Rethinking Distance Education in COVID-19 Pandemic: Perspectives on Education Equity in the 'New Normal'. *Jayapangus Press Books*, 33-55. <http://book.penerbit.org/index.php/JPB/article/download/464/459>
- Tanhueco-Tumapon (2020). *Education and the New Normal*. Manila Times. <https://www.manilatimes.net/2020/06/04/campus-press/education-and-the-new-normal/729288/>
- Toquero, C. M. (2020). Challenges and Opportunities for Higher Education Amid the COVID-19 Pandemic: The Philippine Context. *Pedagogical Research*, 5(4). <https://doi.org/10.29333/pr/7947>
- Toquero, C. M., & Talidong, K. J. (2020). Webinar Technology: Developing Teacher Training Programs for Emergency Remote Teaching Amid COVID-19. *Interdisciplinary Journal of Virtual Learning in Medical Sciences*, 11(3), 200-203. <https://www.sid.ir/paper/784334/en>
- Tria, J. Z. (2020). The COVID-19 Pandemic Through the Lens of Education in the Philippines: The New Normal. *International Journal of Pedagogical Development and Lifelong Learning*, 1(1), 2-4. <https://doi.org/10.30935/ijpdll%2F8311>
- Tuah, N. A. A., & Naing, L. (2021). Is Online Assessment in Higher Education Institutions During COVID-19 Pandemic Reliable?. *Siriraj Medical Journal*, 73(1), 61-68. <http://dx.doi.org/10.33192/Smj.2021.09>
- Viner, R. M., Russell, S. J., Croker, H., Packer, J., Ward, J., Stansfield, C., ... & Booy, R. (2020). School Closure and Management Practices During Coronavirus Outbreaks Including COVID-19: A Rapid Systematic Review. *The Lancet Child & Adolescent Health*, 4(5), 397-404. [https://doi.org/10.1016/S2352-4642\(20\)30095-X](https://doi.org/10.1016/S2352-4642(20)30095-X)
- Wang, Y., Han, X., & Yang, J. (2015). Revisiting the Blended Learning Literature: Using a Complex Adaptive Systems Framework. *Journal of Educational Technology & Society*, 18(2), 380-393. <https://www.jstor.org/stable/jeductechsoci.18.2.380>
- Wang, X., Hegde, S., Son, C., Keller, B., Smith, A., & Sasangohar, F. (2020). Investigating Mental Health of US College Students During the COVID-19 Pandemic: Cross-Sectional Survey Study. *Journal of medical Internet research*, 22(9), e22817. <https://doi.org/10.2196/22817>
- World Health Organization (2020). *Corona Virus Disease (COVID-19): Question and Answer*. Available online: <https://www.who.int/ar/emergencies/diseases/novel-coronavirus-2019/advice-for-public/qa-coronaviruses> (accessed on 17 May 2020).
- Yang, L., & Wang, J. (2024). Exploring the Causes, Consequences, and Solutions of EFL Teachers' Perceived Technophobia. *The Asia-Pacific Education Researcher*, 33(4), 931-942. <https://doi.org/10.1007/s40299-023-00780-8>
- Zhang, C. (2020). From Face-to-Face to Screen-to-Screen: CFL Teachers' Beliefs About Digital Teaching Competence During the Pandemic. *International Journal of Chinese Language Teaching*, 1(1), 35-52. <https://pdfs.semanticscholar.org/1d49/19cbb0deb8d9a4325b5480678804bcd94ace.pdf>