

# Challenges and Opportunities of Online Learning among Students of Central Mindanao University Philippines during COVID-19 Pandemic

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**Abstract:** *The COVID-19 pandemic has affected how online learning is delivered and has become a serious worldwide health concern. This study sought to determine the opportunities and challenges of online learning faced by the undergraduate students of Central Mindanao University during the pandemic. To address this problem, a mixed research approach was used, combining a qualitative (narrative) and a quantitative non-experimental descriptive approach. The study found that the CMU students' opportunities for online learning are enhanced technical skills; avail learning resources from anywhere in the world, developed self-discipline, improved virtual classroom interaction, flexibility and time management, reduced educational cost, drive for self-motivation and lenient quality education were deemed to be beneficial. Online learning strengthened the students to analyze the subject matters thoroughly while responding in writing instead of discussing and freely picking and choosing from diverse learning approaches. However, its weaknesses are the critical communication gap between students and teachers, lack of focus, lack of social support, unhealthy online learning environment, lack of social support, technological constraints, and lack of time management. The challenges of online learning are slow and no internet connection, self-discipline, unhealthy online learning environment, fewer interactions with teachers and classmates, heavy workloads, dealing with subjects with laboratories, resistance to online learning, mental health, emotional and psychological anxieties, depression and financial constraints are found to be the challenges and barriers in online learning. Keywords: Online, Learning, Challenges, Opportunities, Weaknesses*

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## 1. Introduction

The COVID-19 pandemic has affected how online learning is delivered and has become a serious worldwide health concern. Consequently, at the midpoint of the second semester of the 2019–2020 academic year. Physical separation and infection control measures are necessary to prevent the virus from spreading further and to assist in controlling the pandemic situation (WHO, 2020) (2020) [2]. Online distance learning was used to provide methods of learning approaches [1]. In many nations, like the Philippines, the policy of required physical distance has been set in place, resulting in the closures of all schools and universities nationwide

On the other hand, information and communication technologies (ICTs) are used in education and are referred to as “e-learning.” As a consequence of the integration of technical resources and cutting-edge educational practices, the methods of instruction and learning underwent tremendous change. Previous studies have shown that a variety of e-learning and online learning materials are beneficial for both teaching and learning, such as those of Moazami (2020) [3]. blended learning is said to improve student performance, motivation, and all other aspects of student happiness. This strategy, which has gained favor in education as a complement to traditional learning, encourages active and self-directed learning [4].

Moreover, the World Health Organization has identified the COVID-19 pandemic as a current hazard to humanity. The pandemic's effective global shutdown of many activities, including educational activities, sparked a major crisis-response action by institutions with online learning serving as the online learning platform. Schools have been forced to close because of the widespread acceptance of the social distance policy. Schools switched instructional activities to remote learning platforms, which also presented several logistical challenges. However, one big concern is that the movement has forced education administrators, instructors, and students to shift their perspectives on the significance of online learning [5]. Thus, the focus of this study was the opportunities and challenges for university-level online students during the pandemic. The researchers deemed this study necessary because the result of the study can be a potential benchmark for solutions to solve the challenges of CMU online learning.

## 2. Literature Review

Higher education has been affected by the phenomena of digital transformation. Institutions have long practiced this [6]. Since the ability to use ICT in all facets of life is developing, academic institutions are a topic that many participants in education have to be concerned about [7]. In response to this change, solutions have been suggested that must be capable of enabling aspiring professionals to confront challenges and integrate sustainable management to enable the transition to the changes imposed by current pandemics and innovative technology [6].

The culmination of all the digital procedures required to complete the processes of change that give higher education institutions the chance to employ digital technology efficiently and beneficially may be seen as the term "digital transformation" concerning educational institutions [8]. This procedure also calls for effective long-term planning, the growth of trust, consideration of options, the fusion and bolstering of all parties involved, as well as distinctive, cooperative, and knowledge management [9]

The modern transformation has moved face-to-face instruction courses using objectivist, teacher-centred teaching techniques for thousands of home-grown, provincial, and national

universities to online and mixed initiatives using digital technologies in enhancing learning [13]. These changes will be seen as ground-breaking changes in the necessities of university education as a procedure and as an educational establishment in the next 50 years.

These researchers also stated that although online learning is seen as a replacement for traditional face-to-face instruction and has been labelled disruptive, it has grown in popularity as an alternative. developments in higher education that typically require several years owing to various management requirements have been presented quickly within a short number of days because of the catastrophe that the COVID-19 pandemic created [14]. As a result, online learning is no longer seen as disruptive but rather as the "messiah" of education.

The presumptions encompassing the digitalization of colleges and universities and identified five preconceived notions that are seen as more obstacles than enablers of this transformation [8]. These presumptions are related to (i) transformation, (ii) work rate, (iii) future technologies, (iv) key competencies, and (v) financing. Since online learning is just one of many aspects of higher education institutions' digital transformation, it is not appropriate to refer to this process as e-learning. The use of technology in education is known as an online learning tool, as well as the web (Means et al., 2009) [15]. Talent-Runnels et al. (2006) [16] also noted that since the turn of the millennium, the motivation for online courses has increased. Online learning forbids in-person contact among students, students, and instructors; its instructional effectiveness is in doubt [17].

A distinction between online courses that were launched in response to the crisis and those that were carefully planned [18]. These academics even went so far as to label the pandemic's use of online education as "emergency remote teaching," although the latter is not the same as effective or high-quality online education. As it has been demonstrated, successful online learning is a result of careful design and planning of teaching with the use of a structured model for creating and developing online courses, effective online education entails online teaching and learning, consisting of numerous research studies, concepts, theories, ethics, and compare that emphasize functionality online course design, teaching, and learning.

## **2.1 Challenges**

The COVID-19 pandemic has increased awareness of the educational system's susceptibility to external attacks [19]. the digital revolution of instructional delivery was accompanied by several logistical challenges and mentality shifts [5]. Feldman (n.d.) notes that (i) pandemic-related fear will harm students' academic performance, (ii) racial, economic, and shortages of resources may have an impact on student's academic execution, and (iii) the majority of instructors were not adequately prepared to provide excellent instruction. These factors are discussed concerning how districts may develop equitable and impartial assessments based on these guidelines. The challenges discussed here are those that stem from the COVID-19 epidemic's digitization of educational activities.

## **2.2 Opportunities**

Universities are now adopting online learning at a higher rate due to their desire to harmonize their actions with national and international policies and procedures to prevent the spread of the COVID-19 global pandemic and maintain the academic calendar [10]. The challenges and opportunities of online learning during Covid-19 pandemic, self-pacing and possibilities offered by it [10]. Schools and other learning facilities have been forced by the epidemic to swiftly convert to digital teaching methods. Universities have significant social responsibilities in the international battle to end the pandemic in addition to their involvement in education and the economy [6].

Universities play significant social roles in the international drive to end the epidemic [6]. The chief information officer at Baldwin Wallace University in Ohio said that "Digital training has offered an easy roadmap that educators need to enjoy the advantages of and participate important players in educational achievement to create a novel marketplace for the instructional process"[12]. The more time the global epidemic lasts, the more probable it is that distance education will become a popular strategy for instructing and learning.

### **3. Methodology**

The goal of this study is to determine the possibilities and difficulties that Central Mindanao University online learners had during the pandemic in the second semester of 2021–2022 and to examine potential solutions and proposals for subsequent virtual learning. There were 403 CMU students in the sample. Based on Slovin's formula, the total number of responders was calculated. The data was gathered using a survey questionnaire using Google Forms and interviews.

To address the study of the research problem, a mixed research technique was used, combining a qualitative (narrative) and a quantitative non-experimental descriptive approach. The following scale was used to interpret the data gathered from the respondents: 4.5-5.0 for strongly agree; 3.5-4.49 for agree; 2.5-3.49 for undecided; 1.5-2.49 for disagree; and 1.0-1.49 for standard deviation. Moreover, Johnson and Christianson's (2010) experiences as online learners during the COVID-19 epidemic were examined by the researchers through the use of a qualitative research method of inquiry and a narrative model. Additionally, a qualitative technique is appropriate for this study to comprehend participants' perspective who explain these subjective experiences and have a common understanding (Creswell, 2013). The research adopted the explanatory sequential design in presenting the analysis of the research study.

### **4. Results and Discussion**

The participants in this research study agreed that among the opportunities that they have experienced in online learning during the pandemic are enhanced technical skills; avail learning resources from anywhere in the world, developed self-discipline, improved virtual classroom interaction, Flexibility and Time Management, Reduced Educational Cost, drive for self-motivation and lenient quality education.

Student participants agreed their skills in email/internet apps have increased since attending online classes; learning several interaction and educational approaches; the flexibility of schedule and convenience; presence and display of small group discussions (chat rooms); online instructors encourage course participants to explore new concepts in their course; important due dates and periods for learning exercises are provided by the online teacher; video lectures and relevant materials help students to understand their lessons; learning via the web is helpful to generate explanations or solutions in online courses; and develop web navigational skills (e.g., being able to locate what they're looking for) and self-learning and Time Management.

Student participants agreed that the COVID-19 pandemic allowed them to acquire technical skills and use it as an opportunity to advance their future careers using online technology. Based on interviews, they joined webinars to get more knowledge from various speakers and other relevant issues while studying. They also joined online classes (short courses from other schools), attended webinars from other schools received certificates, and were able to work and do online business. They developed and enhanced technical skills to connect friends with teachers and classmates despite the distance during the pandemic. Some students reported that COVID-19 helps in the transition from classroom-based-learning to

online-based-learning, thus, giving them opportunities to meet different people virtually across the globe with different backgrounds. They were able to explore new things, access online references, and discover new sources of materials and convenience in doing assignments and activities. They explored more topics discussed using the websites. Online learning helps them to improve their skills in email, PowerPoint, and video presentation and discover new talents in digital arts.

They agreed that several methods exist for communicating and learning. Respondents reported that they found more freedom to access learning materials since recorded videos can be downloaded and watched anytime. They were able to advance their research skills and have opportunities to search for answers online. It helped them to learn new methods of learning, more information in searching for assignments, and find web searching better than library book reading. They also developed self-discipline and accountability to have a deeper understanding of the lessons through self-learning without being competitive with their classmates;

Student respondents agreed that flexibility of schedules is convenient and found it simple to locate sources of information through web searching. Students reported that through the flexibility of schedule, they found a venue for social relaxation by having virtual interaction with friends and relatives through online Apps (Messenger, Skype, Viper, and Facebook, able to reflect and find time to balance their studies and home responsibilities. The flexibility of the schedule gave them ample time to work on assignments and activities. For them, they find it convenient since it reduces the cost of education without compromising quality education since they do not need to pay for the boarding house and save on the cost of their food. Student respondents agreed that online learning also provided small group discussions (chat rooms). Students reported that small group discussions are an effective tool for sharing ideas through virtual discussion and interaction. They learned a lot by participating in asking questions, answering questions posted on the stream, doing a reflection video, group video, and other academic tasks.

Table 1. Respondent Frequency

Age Range	Frequency	Percentage
15-20	316	78.4
21-25	85	21.1
41-45	2	.5
Total	403	100.0

Table 1 shows that out of 403 respondents, the majority (316 or 78.4%) belong to the age bracket of 15-20 years old. Table 2, shows that out of the 143 respondents' majority (295 or 73.2%) are 1<sup>st</sup>-year college students. 44 or 10.6% are 2<sup>nd</sup>-year students; 37 or 9.1% are 3<sup>rd</sup>-year students and 26 or 6.4% are 4<sup>th</sup>-year students.

Table 2. Year Level

Year Level	Frequency	Valid Percent
1st year	295	73.2

2nd year	44	10.9
3rd year	37	9.1
4th year	26	6.4
Total	403	100.0

Table 3 shows that the bulk of a greater number of student respondents are from the College of Arts and Sciences, College of Agriculture, and College of Veterinary Medicine with a range of percentage from 26 to 31 %.

Table 3. Distribution of Respondents per College

College	Number of Respondents	Percentage
College of Agriculture	18	4.4
College of Arts and Sciences	125	31.0
College of Engineering	106	26.3
College of Information Technology	34	8.4
College of Nursing	2	.04
College of Veterinary Medicine	118	29.2
Total	403	100.0

Table 4, shows that out of 403 students, the majority (324 or 77.9%) have 6-10 classes during the 2<sup>nd</sup> semester of 2021-2022

Table 4. Distribution of Number of Classes Attended by the Respondents

Number of Classes	Frequency	Valid Percent
1-5 classes	56	13.5
11-15 classes	17	4.1
6-10 classes	324	77.9
1-4 classes	8	1.9
Total	403	100.0

Table 5, shows that out of 403 student respondents' majority (376 or 93.5%) are full-time students and 27 or 6.3% are working students.

Table 5. Distribution of Students of Status of Students

Status of Students	Frequency	Percentage
Full-time Student	376	93.5
Full-Time (Working)	7	1.7
Part-Time (Working)	20	4.8
Total	403	100.0

Table 6. Respondents' Perceptions towards Online Learning Opportunities

Themes	Statements	Mean Value	Verbal Interpretation
Enhance Technical Skills	1. Since taking online classes, my technical proficiency with emails and internet applications has improved	4.15	Agree
Avail learning resources from anywhere in the world	2. I may research issues raised in virtual classrooms using a range of information sources.	3.83	Agree
	3. Various methods of communication and education are available.	3.78	Agree
	4. I can create explanations and solutions for online courses with the use of online learning activities.	3.70	Agree
	5. navigation (e.g., being able to find what you want)	3.78	Agree
Accessibility of Online Learning Materials	6. Understanding the lessons is aided by relevant materials and video lectures.	3.80	Agree
	7. Online chats are useful for teaching me to understand many viewpoints.	3.76	Agree
	8. My learning was aided by the online instructor's ability to keep the conversation on topics that were important to me.	3.75	Agree
	9. Comfort and a flexible schedule	3.76	Agree
Develop Self-Discipline	10. Self-learning and responsibility	3.58	Agree
Virtual Classroom Interaction	11. I feel that I am part of the class as I get to know my classmates	3.64	Agree
	12. I find that participating in online forums fosters a sense of teamwork.	3.51	Agree
	13. Compared to classroom instruction, taking online classes has helped me understand the course material.	2.80	Moderately Agree
	14. Compared to a classroom setting, the online environment makes it easier for me to communicate with my instructor.	2.67	Moderately Agree
	15. The online lecturer kept the class in focus and helped me to learn.	3.70	Agree
	16. The online course offers chances for in-depth reflection on the material.	3.66	Agree
	17. Instructors are providing feedback	3.60	Agree
	18. Students in the respective course are encouraged by the online lecturer to investigate novel ideas.	3.82	Agree
	19. Important due dates and time frames for learning exercises are communicated by the online teacher.	3.81	Agree

	20. There are conversations in small groups (chat rooms)	3.91	Agree
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*4:21- 5:00 Strongly Agree; 3:41 - 4:20 – Agree; 2.61 - 3.40 - Moderately Agree; 1.81 - 2.60 – Disagree; 1- 1.80– Strongly Disagree*

Students agreed that online instructors encouraged course participants to explore new concepts in their respective courses. Students reported that online learning during the pandemic had allowed them to meet and learn from their instructors virtually who are experts in their respective fields of specialization. The knowledge they gained helped them expand their knowledge and perspectives of the course subjects. Instructors also provided links and websites of their courses for them to explore where they are made to make reflection videos. They think they are having deep interaction with their professors by watching their video lectures and studying the PDF/PowerPoint shared in the classroom. They reported that even during the pandemic they received quality instruction from their skilled instructors even if they also encountered a lot of challenges.

Student participants agreed that CMU Online Learning provided a venue to do collaborative tasks and critical activities that stimulate the student's interest with the help of technology today and important deadlines and time frames for learning tasks are communicated by the instructors. They reported that some of their instructors are more lenient in giving and grading their group academic activities and even extending deadlines for students to cope with the missing activities. The group activities are convenient for groups who have good internet connections but for students with slow internet connection is more challenging to comply with group activities where they cannot communicate with their group mates. Some students even negotiated with their instructors to comply with the given requirements individually. The lenient instruction is giving them opportunities to get higher grades during the pandemic and to be included in the honor roll of the university.

Students agreed that the video lectures and relevant materials uploaded in the Google Classroom help students understand their lessons. Students reported that some teachers are hardworking and give their best efforts to teach and share their knowledge. Online learning activities helped them find explanations/solutions in online courses through watching video lectures and web searching. They also reported that they developed self-learning and responsibility in doing assignments, especially essay assignments. They were able to study well because the materials uploaded in their Google classroom were complete and the online (synchronous and asynchronous) class sessions helped them to gain different insights into dealing with the lessons and situations during the pandemic.

Many participants acknowledged that using the internet to navigate helped them to find what they wanted gave them opportunities to navigate answers for their online assignments, discover various sources of material, and explore more about the topics discussed in the class using different websites.

Participants of the study agreed that self-learning and time management taught them to become responsible and motivated to learn more about their courses, improve their technical skills, and develop their time management and self-discipline. They even learned how to prioritize and deal with their struggles (economic constraints, mental, physical, psychological, and emotional well-being) during the pandemic. Some of them learned the art of separating family responsibilities (household chores and work) and student responsibilities. The full-time and working student participants of the study reported that online learning gave them opportunities to become independent and economically self-sufficient. They were able to help their families financially but at the same time pursue their



education through online learning. The uploaded learning materials (PowerPoint, PDF files, video lectures, and shared videos) helped them pass their subjects during the pandemic.

### A. Strengths Of Online Learning

Student participants also claimed that based on their experiences CMU online learning during the pandemic allowed them to reduce educational expenses. They reported the reduced cost of education helped their families during the pandemic since they do not need to spend fares from commuting to school, paying for boarding houses, spend the cost of food and allowances, spending on photocopies, and buying books since Online learning materials are provided by their instructors. Some even claimed that they become financially resourceful by engaging in work online (English tutor for Chinese students, online selling, bloggers, and having employment with foreign employers). For them, they save on educational costs and CMU still provides and maintains quality education.

Table 7. Strengths and Weaknesses of the Online Learning

Theme	Statements	Mean Values	Verbal Interpretation
Deep Self-Learning	[When I have to write on the paper, I feel there is something that compels me to think more carefully about some topics.]	3.86	Agree
	[I found that when I responded in writing rather than verbally, I developed an impulse to think about the topics in more depth	3.85	Agree
	I am free to select the methods of many learning experiences that will help me learn the most.	3.85	Agree
	[I read and respond to comments made by the instructor in online discussions at times that are convenient for me, such as in the early morning or late evening]	3.85	Agree
	[The discussion postings on Google Classroom are visible and always accessible, I can constantly reflect on the answers of my classmates	3.81	Agree
Flexibility of Time	[I have the flexibility of time to do my exams and assignments]	3.78	Agree
	[asynchronous environment allowed me to write carefully the ideas in the online discussions]	3.73	Agree
	[I take part in online debates when it's most convenient for me, like on weekends.]	3.55	Agree
	[The use of online technology helped me to reflect more than in-person classroom discussions.]	3.38	Agree
	Working in collaborative activities in a virtual classroom was easier for me because it wasn't necessary to change everyone's schedule.	3.08	Agree

The strengths of online learning are deep learning, flexibility of time and convenience, attending classes even when mobile and in public places, and improved virtual communication. Respondents agreed that they spend more time thinking about the subjects when writing than talking and freely picking and choosing from the approaches of diverse learning experiences. Students reported that they think their ideas are deep and richer when responding to questions in writing since they can browse the web for answers and gain ideas. Further, uploaded videos that are linked to YouTube or other websites are more convenient and accessible. To maximize the participants' enjoyment, Johnson et al. (2008) research demonstrates the need to design and select a diverse learning area inside a digital learning setting. The advantage of online classrooms was also noted as the flexibility of the schedule for tests and assignments. Poole (2000) discovered that students frequently used their home computers, which were the most practical for them, to access course materials. As a result, uploaded videos with links to YouTube or other websites are more practical and accessible.

The student agreed that working in collaborative activities in a virtual classroom was easier because therefore it was unnecessary to change everyone's schedule. A study demonstrates that working in a group collaboratively throughout an online course was more convenient than having to reorganize everyone's calendar as in a typical classroom setting [20]. Although some CMU students reported that collaborative activities are challenging for students with slow or no internet connections which contributed to their mental health problems during the pandemic.

Table 8. The Weaknesses of Online Learning

Themes	STATEMENTS	Mean Value	Verbal Interpretation
Critical Communication Gap	➤ Due to a lack of interaction between the student and instructor, it was challenging to receive clarity on assignments, etc	4.03	Agree
	➤ ["I still feel like I know a little bit about my instructor, but not the same way that I would if I were in a class. I don't know much about her personality at all"]	3.90	Agree
	➤ The teacher's inability to provide feedback immediately. One participant stated, "It might take hours, maybe a day or so before you get an answer back for the question"]	3.89	Agree
	➤ [The lack of face-to-face interaction between the student and the instructor contributed to many students' unfavourable opinions]	3.88	Agree
	➤ [Students felt unconfident in guidance when the feedback from the instructor was delayed]	3.88	Agree
	➤ [there were instances where there was less promptness in responding in the online context than what would generally take place in an organized face-to-face class discussion]	3.85	Agree

	➤ They felt disappointed since they didn't receive responses from the instructor promptly.	3.80	Agree
	➤ A crucial problem was the lack of communication between students and between students and professors.	3.74	Agree
	➤ Students frequently complained that message board postings were inefficient and that they were dissatisfied with the quality and calibre of communication.	3.56	Agree
<b>(Based from interviews)</b>			
Lack of Focus	➤ Distraction from other social media platforms like TikTok, YouTube, and Facebook and patience with unstable internet connections		
	➤ Difficulty in separating household chores responsibilities and academic workloads		
	➤ Difficulty in separating personal, family, and academic problems.		
Unhealthy Online Environment	➤ The noisy environment during synchronous classes and the unhealthy environment		
Lack of social support	➤ Difficulty in handling depression and mental health problems		
	➤ Difficulty in reaching out for support, especially if there are changes in schedules based on the COR		
	➤ Need social support from classmates and friends for motivation to learn the lessons		
Technological constraints	➤ lack of resources like gadgets (computer and laptop) and poor internet connection		
Lack of Time Management	➤ Lack of sleep because of heavy workload and lots of assignments to accomplish		
	➤ Difficulty in coping with deadlines and the weight of activities		
	➤ Disrupted sleeping and eating schedules		

*Legend: 4.5-5.0- Strongly Agree; A; 3.5-4.49- Agree; 2.5-3.49- Moderately Agree; 1.5-2.49- Disagree 1.0-1.49- SD*

The weaknesses of online learning are the critical communication gap between students and teachers, lack of focus, lack of social support, unhealthy online learning environment, lack of social support, technological constraints, and lack of time management. Student participants of the research study agreed that one of the weaknesses of online learning was “It was difficult to get clarification on assignments, etc. due to lack of communication between student and instructor” Some students encountered a lack of communication between their instructors and not receiving timely feedback (or no feedbacks) regarding their

work assignments. With less interaction with teachers and classmates, they have less motivation to study and learn.

Many of the participants also agreed that *“I still feel like I know a little bit about my instructor, but not the same way that I would if I was in a class. I don't know much about her personality at all”*. For instance, research shows that students were most attached to direct interaction with the instructor and other students rather than specific teaching methods. Some students who are most critical of online classes are those who demand higher levels of participation and instructional sophistication, go beyond being concerned with mechanical technological connection, and lose the opportunity for physical interaction. Additionally, they criticize the lack of online social comfort and cognitive presence. Strong social presence and instructional support are what they seek[20].

Participants of the study agreed that there is a delay in immediate feedback from instructors and the absence of face-to-face interaction between students and instructors contributed to negative perceptions of online learning. Some students even mentioned, *“It will take hours or days before they get feedback from their instructors.”* The delayed feedback caused their feeling of neglect, frustration, and procrastination. A lack of immediate access to responses to their questions was also discovered to be a problem with online learning [21]. Participants in online courses must be kept interested and engaged by regular, worthwhile activities that keep them on track.

Student participants in this research study reported that based on their experiences, one of the reasons they have delayed responses from their instructors and have no interaction through synchronous classes and live chat is because of technological constraints (lack of resources like gadgets (computers, and laptops) and a poor internet connection. Some students may not be able to take online programs since they don't have access to the Internet [12]. Accessing course platforms and resources might be challenging with slow connections. Only if all learners have access to the internet and the classes are equitable and affordable will online learning be successful. Students reported that the weakness of online learning is less connection between teachers and students along with the commitment and passion of teachers to make online learning engaging. Fewer online challenging activities can stimulate students' interest and active participation. The checking of class attendance should be done oftentimes, assigning class reactors for discussion and requiring students to open their cameras during classes which is an effective way to regulate class movement and secure greater concentration for the subject [22]. Research shows that in social science classes at least, "good" classes must foster significant learner-to-learner relationships in addition to a comfortable environment. Most students at the time of the research thought they could have a successful class without a lot of interaction using pre-recorded video and video conferencing. That might alter when different video media's technological boundaries grow more accessible, dependable, and commonplace in the future.

Based on interviews, aside from technological constraints, students had struggled to separate household chores and academic responsibilities. Since they are at home and their parents are busy with their work, they are burdened with household responsibilities and have a weak online learning environment. Students are distracted from other social media platforms like TikTok, YouTube, and Facebook while synchronous classes are ongoing. Some students reported that the heavy workload at home and academic requirements contributed to their lack of motivation to study, depression, and mental health problems. Some students mentioned that the quality of online learning is dependent on the technical support, learner and instructor characteristics

Table 9. Challenges and Barriers to Online Learning

THEMES	STATEMENTS	Mean	Verbal Interpretation
Technological Constraints	1. Insufficient/ unstable/slow Internet connectivity	4.51	Strongly Agree
	2. [Technical problems]	4.40	Strongly Agree
	3. [Inadequate computer facilities at home]	4.10	Agree
	4. Lack of Gadgets (computers/ laptops, android cell phones]	3.88	Agree
	5. [Limited technology skills]	3.80	Agree
Self-Discipline	6. [Intense requirement for self-discipline]	4.29	Strongly Agree
Online Environment	7. [Lack of suitable online environment at home (e.g. presence of children, other family members)]	4.28	Strongly Agree
Self-motivation	8. [Difficulty in motivating oneself in a virtual setting when compared to in a conventional setting.]	4.26	Strongly Agree
Synergy	9. [Difficulty in interacting with classmates when divided into subgroups for group task working]	4.21	Strongly Agree
	10. [Online course interactions with teachers are less frequent than those in conventional face-to-face classes.]	4.20	Agree
	11. [Little/no face-to-face interaction]	4.19	Agree
	12. It is more challenging to get teacher feedback in an online course than in a conventional face-to-face session.]		
Heavy Workloads	13. [Heavy workload of the online courses]	4.13	Agree
The difficulty of applying online learning to laboratory courses	14. Difficult applying online learning with subjects having laboratory and practical sessions	4.13	Agree
Resistance to online learning	15. [Resistance and negative attitude towards online learning]	3.71	Agree

: 4:21- 5:00 – Strongly Agree; 3:41 - 4:20 – Agree; 2.61 - 3.40 - Undecided  
1.81 - 2.60 – Disagree; 1- 1.80– Strongly Disagree

The challenges and barriers of online learning are technological constraints, self-discipline, an unhealthy online learning environment, fewer interactions with teachers and classmates, heavy workloads, dealing with subjects with laboratories, resistance to online learning, mental health, emotional and psychological anxieties, depression, and financial constraints.

Participants in this research study acknowledged that technological constraints (slow internet connection and technical problem) is the biggest challenge in online learning. Students cited that an unstable internet connection hinders their progress when making assignments, and answering their quizzes, and exams. Group tasks are hard to accomplish and communication is hard to establish since some are not online for hours or even days. An unstable internet connection is one of the reasons why students skip online classes and have a hard time catching up with lessons. Poor internet connections are one of the reasons for submitting their exams and assignments late. They have difficulty keeping up with the heavy workloads, especially the activities that require expertise or skill in technical matters. There are times that they cannot open their emails and cannot understand what their instructors are saying because of unstable internet. Lack of internet access will prevent certain students from participating in online classes. Accessing course platforms and resources might be difficult with slow connections. Only if all individuals have access to the internet and it is both fair and affordable can online classes be successful.

The extreme need for self-control and time management, as well as creating a welcoming environment for learning or a sense of community in the online environment are also found to be challenging in online learning. Students struggle to focus on the screen with their gadgets for long periods and are easily distracted by social media or other sites. One of the respondents said, "*The teachers must keep their online classes engaging, and interactive to help students stay focused on the lesson*". Students who are working and helping their families financially have a hard time balancing work and study since it is physically and mentally draining. Students reported that online classes are not the same for everyone, some might have all their time focused on their online classes while some have to manage time between work, household chores, and school responsibilities. They admitted that have experienced the feeling of anxiety because of their hectic schedules, and the feeling that they need to learn something more about their courses, especially laboratory classes. They encountered stress in submitting school requirements on time because of the heavy workload and no/lack of internet connection. They felt they needed to gain back their social connections and interactions because they lacked communication with friends, classmates, and teachers during the pandemic. Students reported that they experienced confusion about their economic situation, burdened with household chores and academic workload. They experience mental stress that contributes to their laziness in performing their academic requirements. The lack of motivation disrupted sleeping schedules and normal routines. Students reported that they are more productive, and motivated and absorb more information during the face to face classes compared to online learning platforms. Some students expressed that they were mentally exhausted due to the heavy requirements to be submitted and felt that studying is more equated to submitting requirements than learning the necessary lessons.

Student participants agreed that in online learning, the absence of an appropriate online environment at home (e.g., kids, other family members, noisy environment) and distractions exacerbate their procrastination. Late submissions of requirements are disheartening and discouraging, especially when the reason for late submission or no submission is due to personal problems occurring at home. The difficulty in balancing workload (household chores and studies) and not motivating environment resulted in poor performance during their exams. The lack of motivation to study and unclear instructions from instructors greatly affect their view of their performance. Students viewed that online learning provides anxiety and less social interaction to everyone which hampered their development, especially in interpersonal communication. Students reported that they are burnt out since some of them are burdened with household chores, academic stress, and anxiety unlike in face-to-face classes where they can relax with their friends and be recharged when faced with anxiety and stress;

One of the challenges encountered in online learning is the slow internet connection. Although teachers are uploading video lectures, some students cannot easily access, focus, and understand when watching recorded lecture videos. They need reinforcements of lessons discussed in the recorded videos. It is also challenging to reach out to instructors on online platforms to ask for clarifications when internet connectivity is slow. One of the respondents said *“Nothing is wrong in online learning but teachers sometimes do not teach the lesson in a way that we can comprehend it easily. Some teachers only give us videos coming from the internet. It is okay only if they are the ones doing the video lecture, however, it is a video from another source”*. It is hard for them to connect and ask for clarification from teachers through emails, and when they reply it is late.

Students agreed that the absence of personal interaction fosters a lack of motivation to study. Further, they are distracted by family problems and lose focus on studying. Students reported that they have encountered anxiety and depression and need to reach out to their friends and teachers for proper instruction, social interaction with their classmates, and support in doing group or individual tasks. Freshmen students were embarrassed to chat with their classmates and teachers they barely knew. Students agreed that they have difficulty applying distance learning for practical sessions, especially laboratory classes. They find that doing the experiments and activities on their own is very tedious, expensive, and tiring to make video presentations as an alternative to the actual experiments in laboratories. Some reported that: *“The activities given by the instructors are somewhat more difficult than performing it in the face-to-face setting. But as we are in the online learning platform we took the responsibility to find ways to perform the activity given. Online learning limits our learning and personal experience about laboratory exercises because we are sitting and watching videos from the internet instead of doing it personally.”*

Students agreed that they have inadequate computer facilities at home and are just using cell phones to do tasks, requirements, homework, exams, and quizzes. Some of them reported that the purchase of computer facilities is an economic issue because of lack of funds, hence using a limited type of gadget for online classes is a bit difficult. The lack of gadgets (computers/ laptops, android cell phones) is very challenging and affects their performance. Students also agree that they have resistance and a negative attitude toward online learning. Students reported especially those who are living in far-flung areas/ rural areas with no or slow internet connection are greatly challenged with online learning. They have no/slow internet connection, lack devices, struggle with communicating with peers if there is a group activity, have difficulty in achieving the expectations from their professors, and have difficulty in separating household chores and student responsibilities. Students reported that their greatest challenge is overcoming the mental, financial, social, and emotional health challenges during the pandemic.

## **5. Conclusion**

The structure of the educational system is shifting, with online education replacing traditional classroom instruction as part of measures to stop the new coronavirus from spreading during the pandemic. To keep up with the curriculum, universities and other institutions are switching to online platforms including Central Mindanao University. Based on the findings, students find online learning both opportunities and challenges. Students adapt to online learning; the study made an effort to capture their perceptions of online learning.

Based on the findings, the opportunities for flexibility and convenience that online learning offered the students were deemed to be a benefit. Students appreciated the acquired technical skills for their use to advance their future careers. Students valued the content videos of

lectures that had been recorded. They also pointed out the necessity for interactive sessions with special and difficult tasks that might pique students' interest and encourage more active engagement to maximize the learning experience. But students also mentioned that due to technological limitations slow feedback from the instructor, and a slow internet connection. It is hard to effectively manage information and communication technologies, thus, online programs may be more difficult than traditional classroom ones. Online learning gave opportunities for students to cultivate their self-discipline, self-learning, time management, and advanced technical skills, hone research skills, extend social networks and connections, and develop their self-reliance and independence. However, the barriers or challenges which are slow internet connections, lack of motivation, lack of interaction with their classmates and instructors, heavy workloads from house chores, and academic responsibilities have negative effects on students in terms of academic performance, social, mental health, and physical well-being. Further students living in far-flung areas encountered difficulties in online learning because of a lack of slow internet connection, and a lack of gadgets (computers, laptops, and Android cell phones).

Online learning have also strengths, writing responses forces students to reflect more deeply on the subjects than verbal responses do and freely picking and choosing from the approaches of diverse learning, uploaded videos that are linked to YouTube or other websites are more convenient and accessible, and flexible for the schedule. However, its weaknesses are delayed feedback from their instructors, a major problem was the lack of communication between students and between students and professors. Mental health and students often reported that the message board posting was ineffective and they were disappointed in the level and quality of communication

All these elements should be considered while creating an online course to increase its value and effectiveness for the learner. It's feasible that school systems may continue to employ online platforms for study aids after the COVID-19 pandemic passes but in a hybrid fashion in addition to normal classrooms. This study will therefore help update higher education to include components that use the online mode.

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