

# Communication barriers in learning during pandemic and its pedagogical approaches

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## ABSTRACT

Communication is an essential element of life. It is crucial when it comes to education which is a tool for the welfare of society. People socialize via communication and thus perform desired behaviors. Because of these reasons, preventing communication barriers will provide a more specific field of experience between the sender and the receiver. The study sought to determine the communication barriers among students of Capiz State University, Mambusao Satellite College, Philippines, learning during the pandemic. The study used descriptive and qualitative methods. An in-depth interview using a semi-structured questionnaire was the researcher's data-gathering instrument. Eight students were the study participants chosen based on the criteria. The study shows that communication between students and teachers has shifted to the digital realm using cell phones and social media. The primary focus of these conversations is module-related matters, and the students initiate the conversation due to module-related problems. Different pedagogical approaches highlight the need to improve communication and effective teaching and learning in the new normal. Despite the pandemic, it is recommended that students and teachers continue to communicate and collaborate. Teachers must also promote creativity in their classes and conduct intervention activities to help students overcome communication barriers.

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## 1. INTRODUCTION

Communication is a process where people exchange feelings, opinions, and information. It plays a pivotal role in building a sound and harmonious relationship. It remains the primary recipe for maintaining a healthy working atmosphere between learners and teachers [1].

In recent years, the medium people use to communicate has changed rapidly. Communication technologies have become an integral part of people's lives nowadays. Conversely, in this pandemic with quarantine protocols, modern technology has a very important role in the everyday life of every individual. As a well-developed idea in sociology, technology, and society can influence each other. That is, technology to make people's life easier, such as in communication, business, daily life, and now, education [2].

The COVID-19 pandemic and the resulting stay-at home orders provided an ongoing real-time, real-world lesson in contingency planning and finding alternate resources to complete projects. This situation was used as a learning opportunity (without causing additional stress to students) [3]. The COVID-19 pandemic has forced educational institutions worldwide to shift to modular or online learning to ensure the continuity

of education. The Commission on Higher Education in the Philippines adopted different learning modalities in the new normal education. One of which is the modular learning modality primarily intended for learners who do not have internet connectivity. Printed or digital modules are delivered or picked up by their parents or guardians at designated places within given schedules. Learners under Modular Distance Learning (MDL) use other resources such as learner's materials, textbooks, activity sheets, and study guides [4].

In whatever modality schools implement, teaching and learning require effective communication, especially in classroom activities, because it guarantees fruitful learning. However, communication becomes ineffective when there are barriers. Effective communication between teachers and students is intended to create a positive classroom environment, an element usually inhibited by teachers' failure to engage their students. The result is a situation in which students are forced to struggle unduly to focus on the subject matter [5], thus, resulting in ineffective communication. Communication barriers, on the other hand, as in any communication process, exist in distance education because of the physical distance between members, the difficulties of dealing with new media, time constraints, and restrictions, background knowledge of distance education, incompetence in using technology, and the interactivity level in the process [6]. Put all together, an effective distance education process becomes almost impossible the significant constraints that halt.

There are identified challenges which include limited internet access, limited availability of electronic devices, lack of technical skills, and limited interaction between students and teachers [2]. Another study in Pakistan found that students faced psychological barriers such as anxiety, lack of confidence, and fear of failure when communicating with their teachers online. The researchers suggested that teachers should provide emotional support and build trust with their students to overcome these barriers [7]. Anjum *et al.* [8] identified various communication barriers that can arise in distance education, including physical distance, lack of immediate feedback, technical problems, and cultural differences. They propose a framework for analyzing student interactions in distance education and suggest strategies for overcoming communication barriers, such as providing clear instructions, using multiple communication channels, and promoting student social interaction. Students encountered communication problems, including trouble asking questions and needing more teacher feedback [9]. The researchers recommended that teachers encourage two-way student engagement using various communication techniques.

Effective communication is a technical and web-based issue. However, as telecommunication systems improve, new types of communication barriers emerge, such as the need for online training and guidance, ignorance of new technology, a lack of satisfactory technology, participants who resist technological change, difficulty accessing the internet, difficulty analyzing teachers' perspectives, and difficulty delivering system. However, these barriers may differ in various institutions, programs, and delivery systems. Educators must create efficient communication techniques to get around the challenges given by modular learning during the pandemic. Preventing these barriers in communication can provide a more evident field of teaching and learning experience between the teachers and the learners. It is on this premise that this study was conducted to communication barriers in learning during pandemic and its pedagogical approaches. Specifically, to determine: i) how do students communicate with their teacher/s; ii) what issues and concerns do students discuss with their teacher/s; iii) how do students discuss the said concerns with their teacher/s; iv) what are the communication barriers confronting students and their teacher/s; and v) what pedagogical approaches may be proposed to overcome the barriers in communication.

## 2. RESEARCH METHOD

This study used the descriptive method for narrative research inquiry. A qualitative approach was employed in the study to deal with each student's stories for having a modular mode of learning. Descriptive research is devoted to the gathering of information about prevailing conditions or situations for the purpose of description and interpretation [10]. The study participants were identified using a purposive sampling method based on the following criteria: i) currently enrolled in Capiz State University-Mambusao Satellite College; and ii) willing to participate. There were eight participants included in the study. The researchers identified individuals who are qualified as participants with use of snowball sampling. Afterwards, researchers contacted each student and were asked for their permission to participate. The researchers asked for their permission before they were considered participants. The researchers used the semi-structured interview protocol as a tool for gathering data. Data was gathered from interviews and focus group discussions. The researchers used guide questions throughout the interview, which helped in the flow and continuity of the activity. While the other researcher was doing the interview, the other researcher was assigned to take down notes to assure that all data expressed by the participants will be documented. Follow-up questions were also asked depending on the participants' answer to the researchers. The researcher utilizes the coding manual for qualitative researchers serves as guide for the researchers to determine the different levels of coding [11]. Computer data analysis was also utilized with the use of NVivo12.

### 3. RESULTS AND DISCUSSION

#### 3.1. How students communicate with their teachers

The use of Facebook Messenger was the main theme. It was supported by significant statements that were ferreted from their responses. Results revealed that most students usually communicate with their teachers through Facebook Messenger since it was the first social media tool available and is commonly used by many nowadays. One participant stated, *"I am communicating with my subject teachers through a messaging app during modular learning since it is easy to reach them."* All participants said that their teachers and classmates had group chats where they could discuss concerns regarding their subjects. Teachers could use these tools during the pandemic to communicate with their students individually and in groups through group messages or chats.

Another theme that resulted from the analysis was using interactive platforms. This was supported by significant statements generated from the participants' responses. The students were given supplemental activities, further readings, and other social media sites to understand the lessons better. Students and teachers interact through Facebook Groups, Messenger, email, and Google Classroom. Results further revealed that students could communicate through phone calls, text messaging, email, and social media platforms, whichever is accessible. These tools enabled the students to send queries and raise issues and concerns they wanted to convey. As one of the participants shared that, *"I communicate with my teachers through chatting using Facebook and Messenger. My teachers sometimes make time and effort to discuss issues and concerns regarding our modules."* With this, the researchers saw that the teachers tried to stay connected with their students even in modular learning despite this pandemic. This supports the claims of Natividad [12] that teachers should be in charge of guiding, supporting, and encouraging students to build knowledge in order to meet the demands of the distance education course, as well as to develop learner autonomy so that learners will be able to achieve their goals.

Dabaj and Yetkin [6] claimed that distance education institutions try to find the most effective program and ensure that it adequately replaces face-to-face instruction. Thus, based on the previous themes derived from the significant statements, technology through computer-mediated communication as the means of communication plays a vital role in this new normal education. Tananuraksakul [13] investigated Facebook Messenger as a medium of academic consultation between teachers to students. He concluded that students have a positive attitude towards Facebook Messenger as a medium of scholarly discussion that positively affects the body and mind with confidence, convenience, less travel time, and saving money.

Based on the findings, educators must understand the value of communicating with their students through interactive digital platforms, such as Facebook Messenger, throughout modular learning. These resources give students an easy and fast way to contact their instructors and voice concerns about their course material. In order to help their students comprehend the teachings, teachers can also use these tools to assign supplementary exercises and additional readings. Teachers should also set up group chats or texts where students can freely interact with their teachers and one another. Teachers can improve communication and contact with their pupils by adopting these digital channels, making studying more efficient and exciting throughout the pandemic.

#### 3.2. Issues and concerns students discussed with their teachers

Results revealed two significant statements, which state that: students inform their respective teachers if they cannot submit their modules in the given time, and Students communicate with their teachers if they cannot finish their modules, comes up with the theme submission of modules as one of the issues and concerns discussed by the students to their teachers. Most participants are away from school and mostly live in rural areas. They often communicate with their teachers on how they can submit their modules. As one participant shares, *"I message my teachers every submission of answer sheets since I cannot go to school to submit it personally."* Some participants also deal with time management and other home-related activities, so they must wait to submit their modules. As it states, *"Sometimes I ask for the extension of submission time because I have not yet finished my modules."* Teachers are constantly supporting and catering to the needs of the students despite the distance. This agrees with the statements of Khan *et al.* [5] who stated that students' success is directly related to the effective communication of the teacher.

Another theme brought from the results is the lessons clarification. Significant statements support this theme: students discuss with their teachers some topics they cannot understand very well; students communicate with their teachers to clarify instructions in their modules; some modules do not have clear instructions and explanations, so students have a hard time answering them. Most of the student teacher conversation is about lesson clarification. One participant stated, *"I am communicating with my subject teachers if there is ambiguous direction, confusing typo errors, and activities that have not been explained well; so that I can understand and answer my module correctly."* Further, all participants said they usually communicate with their teachers when they cannot understand some of their modules. Almost all of them had the same experience. Students also adapted to the situation they had.

Regarding the concerns that were asked of them, most of them are module-related concerns. As one participant shared, *“I communicate with my subject teachers in such time that I do not understand the tasks given to us. Also, it is an effective way to get along well with our teachers, making an effort to learn, and they will be able to give more help.”* The researchers saw that the students were still eager to learn despite the pandemic. Teachers managed interactions to improve students' knowledge to reduce the transactional distance in modular learning. On the other hand, students are free to ask for clarifications regarding the instructions given in their modules or the learner's packets. The distance learning approach promotes student-centered pedagogy and prepares students for ongoing self-learning, which is necessary for professional development and mobility in the labor market.

The findings have important implications for educators using modular instruction during the pandemic. One implication is that teachers should be readily available to their pupils via email, social media platforms, and other contact channels. Students can lessen their anxiety and stress by communicating their worries about their modules. To ensure clarity among their students, teachers should also include clear directions and explanations in their courses. They can also urge students to ask questions or clarify instructions if they need help understanding the assignments provided to them. Another implication is the teachers' responsibility to comprehend the students' circumstances and adjust. While submitting modules, they have the flexibility to be flexible and, if required, to offer extensions. Also, teachers can use interactive platforms to offer extra exercises and readings to assist students in better understanding their teachings. Finally, good communication between teachers and students is essential for modular learning, and teachers should always work to develop this skill. This can foster a favorable learning atmosphere and lessen the transactional distance.

### 3.3. How students discuss their concerns with their teachers

Respectful manner is the only theme that emanates from this problem with significant statements that follow: students discussed concerns properly; being respectful and polite was instilled in students, and students are hesitant to ask. It was discussed that the students communicate with their teachers, especially if they have concerns regarding their modules. However, the limited time with each other made the students say the crucial matters only. The participant states, *“Well, I always tell the issues directly to the point because I do not want to waste their time, and most importantly, I never forget to speak correctly.”* Another participant stated, *“I usually sent a chat message in the messenger app. I start with a greeting and then explain my concerns.”* This shows the students' respect for their teachers was still there through the Manner message and reply to every question.

As other participants share, *“As a student, I observe proper ways/attitudes of messaging to my teachers. I let them know my intentions of chatting with them, providing and explaining all the details of my concerns.”* Students still treat their teachers with politeness, considering that it is one of the values instilled in us by our parents since childhood; it is one of the Filipino values that are still present. One of the participants stated that, *“I usually discuss the issues by approaching them respectfully, being wary of the words I use, and asking them my concerns without forgetting our relationship as a student and teacher.”* Students and teachers established a meaningful and respectful relationship. However, sometimes, students need more time to ask questions to their teachers. One participant shared, *“There are many things I want to discuss, but I am shy, and the main reason is that we are trying to avoid misunderstanding, especially since we are graduating.”*

With this, the researchers saw the difference between face-to-face and mediated communication. It can be derived from the statement that two people communicating in a mediated communication can make excuses if they are shy to ask the person they are talking with. On the other hand, although it could still occur in face-to-face communication, there is little chance it will happen because you are talking face-to-face, and you cannot easily find excuses to end your conversation. Zarzycka *et al.* [14] stated that online communication and collaboration require typing the responses and explanations and can take considerably more time and be less effective sometimes. Written messages must be carefully constructed to avoid sending an undesired message or unintentionally offending the recipient, often taking longer than a conversation. Communicators ought to take great care when expressing their thoughts to avoid unintended consequences of communication. Finally, generational differences in collaboration and communication tendencies may appear.

The study's findings emphasize the value of polite dialogue between teachers and students, particularly regarding online learning. The results imply that even in mediated communication, students continue to cherish and uphold the Filipino value of respect for their professors. Since this can positively affect students' willingness to learn and engage in their studies, teachers must build respectful and meaningful relationships with their students. The study also emphasizes the difficulties of mediated communication, including the chance for misconceptions and the demand for carefully crafted written statements. In order to prevent unwanted signals and ensure that their instructions and justifications are understandable, teachers should use extra caution when communicating online.

The research concluded by emphasizing the significance of instructors' strong communication abilities in developing a successful teaching and learning environment for their students. It is easier to convey knowledge and create a favorable learning environment for students when teachers are skilled communicators. To promote the learning and achievement of their students, teachers must constantly improve their communication abilities.

### 3.4. Communication barriers confronting students and their teachers

Figure 1 shows the communication barriers confronting students and teachers in modular learning despite the pandemic, the need to maintain quality education merely inflicts communication gaps between teachers and students as they try to maintain connections through computer-mediated communication. However, being physically apart still produced communication gaps. Based on the results, psychological, organizational, physical, and emotional barriers were the communication barriers confronting students and their teachers. These communication barriers were identified based on the generated themes of the study, supported by significant statements created from the participant's responses.

Busy schedule is the first theme generated from the significant statement that conflict exists between the student and teacher schedules. The communication of the students with their teachers dwindled due to the busy schedules of the latter. Since teachers are busy with other school work, they only sometimes can communicate with their students and cater to their needs. One participant stated, *"Sometimes they are busy and offline to chat, so I need my patience to wait to ask about the issues and concerns in my modules."* This communication gap needs more attention to the psychological barriers to communication. The lack of attention states that as the receiver of the message is preoccupied with some other important work, he/she cannot focus on the conveyed message towards him/her. It was greatly bestowed in the students' current situation towards their teachers. In fact, theirs were more complicated than the implicit explanation of the communication barrier because the communication between them was not happening when it was supposed to happen.

Time constraint is also a result of the busy schedules of the teachers. Teachers and students only communicate for less than an hour, and it is more than one lesson clarification. *"I just wait for my teacher/s to reply to my message. It takes an hour or a day, mostly when they are busy."* From those mentioned earlier, communication can be successful if both infer that a communication process could convey their messages as they want them to be perceived. Thus, it can be achieved if sufficient time is allotted for the students and teachers to communicate.

Further, email becomes problematic because of expecting immediate feedback. In addition, support centers are considered the main factor in enhancing distance-learning courses. In overcoming troubles in the delivery of online courses involving access to resources, students' communication with the instructor and other students plays a significant role in fostering qualified communication.

According to the study's findings, the pandemic-related transition to modular learning has resulted in communication gaps between professors and students, which have led to several psychological, organizational, physical, and emotional difficulties. Due to time limits and few possibilities for communication, the study's first important subject was the busy schedules of students and teachers. Both parties must allot enough time for efficient communication to take place in order to overcome this lack of attention to communication.

The study also emphasizes the necessity of timely feedback and the value of face-to-face connection in remote learning, both of which can be difficult to provide through online communication. Support centers and teacher-student engagement must be stressed to create quality communication and learning to overcome these obstacles. Since the pandemic has expedited the adoption of online learning and good communication has become essential for student achievement, these findings have significant ramifications for the future of education. Instructors must receive training on successfully using online resources and allot enough time for interaction with their students. Students must also develop efficient time management skills and learn to express their demands and concerns to teachers. The study's findings can guide educational policies and procedures to maintain high standards of instruction even in difficult situations.

Another theme generated from this study is the availability of communication mediums supported by a significant statement that students have poor internet connections and only limited communication resources. Capiz is situated in a rural area with minimal access to communication mediums. The students and teachers face several communication interferences as they convey messages or transmit information to each other. The most common dilemma during the communication process was the poor internet connection in the place. Even though it is a progressing province, and most of the students' houses are situated on high lands, they still need to establish a good internet connection, which significantly interferes with their conversation or interrupts it. One participant said, *"Most of the time, I need to go to our rice field just to find a signal."* As of 2015, the Philippines has the slowest internet speed in Southeast Asia and one of the slowest in Asia. Not only is it one of the slowest, but also one of the most expensive in Asia. It was also found that Internet growth in the Philippines could have been improved by many obstacles, including unequal distribution of Internet infrastructure throughout the country, its cost, and corruption in the government.



Another dilemma that some students encountered was that they needed to be provided with the communication mediums like laptops and Android phones; thus, the chances to talk with their teachers became limited. In return, they only use the communication medium available in their house to maintain communication with their teachers. As one participant claimed, *“I hesitate to join particularly in discussion or meeting through virtual/online is most difficult in a given time because you need to afford to buy load. It is a poor thing. We do not have laptops at home; when I communicate with my teacher, I borrow the cellphone of my older sister.”* This communication gap falls under the organizational facilities of the organizational communication barrier. This entails how an organization's availability and sufficient facilities can significantly contribute to timely and clear communication. Therefore, these facilities can lead to meaningful communication. The findings Khanna and Prasad [15] showed that most people faced internet challenges and needed to learn how to use and solve technology-related issues.

The study findings have several implications for stakeholders, including educational institutions and policymakers. First, institutions should consider investing in accessible and reliable communication tools for teachers and students. This involves giving kids who lack these resources access to the internet, laptops, and smartphones. Educational institutions should also consider giving teachers and students the necessary training to use technology effectively and troubleshoot its problems. Second, authorities and government organizations need to address how uneven internet infrastructure is distributed in rural areas, where students need help getting online. To support online learning and communication, they should also prioritize enhancing the quality and affordability of internet services in the Philippines.

Finally, all parties involved, including educators and students, should take the initiative to remove barriers to successful communication. For instance, educators can designate times to speak with their students and give pertinent comments. Conversely, students can learn excellent communication techniques, such as summarizing their messages and being patient while waiting for responses. It takes a team effort from all parties involved, including educational institutions, policymakers, students, and teachers, to solve communication hurdles. Even in difficult times like the COVID-19 pandemic, students can receive a decent education by enhancing communication.

Further, another theme generated is proximity. This is supported by the significant statement stating that most students live in rural areas and far-flung barangays. The geographical distance between the students and their teachers needs to improve communication. Despite the communication mediums they use to converse with one another, it does not replace the closeness the students feel when talking together. They are always longing to talk with their teachers face-to-face. One participant stated, *“During face-to-face, we can get the response immediately, especially when we need it, but now that we have to do it online, it takes time because all of our subject teachers are busy with their respective duties.”* The physical presence of the person saying the message to the receiver dramatically contributes to the effectiveness and realness of the message. With computer-mediated communication, although it serves as the student's way of maintaining their relationship with their teachers, the students still cannot feel the presence of their teachers with the conveyed messages towards them while they are communicating. The statement from one participant supports this, *“Compared to online, face-to-face is the most effective in consulting our concerns to our teacher. It allows us to quickly exchange ideas between students and a teacher. While online, it takes a minute or hours until our concerns will be responded to because of the busy time of both students and teachers.”* Although computer-mediated communication aided the students and the teachers in reaching out to one another, it still needs to substitute for the feeling of conversing face to face. The closer the distance, the higher the possibility of interaction; the farther the distance, the lesser the interaction. Proximity, therefore, is a physical barrier to communication. This communication barrier implies that as long as there is an existing hindrance between the two people involved in the communication process, communication is not as effective. Considering that it is one of the significant communication barriers, it is also a factor in building communication gaps between students and their teachers.

This study implies that closeness and distance influence communication in a distance education situation. According to the research, a student or teacher physical separation from one another can create impediments to good communication. It emphasizes the significance of considering the obstacles to communication in remote education programs and the necessity for educational institutions to find solutions. One answer could be creating possibilities for in-person encounters between students and professors, particularly for crucial talks or consultations. In addition to addressing the students' need for a closer relationship with their professors, this can enhance communication. The physical communication barriers can also be overcome by providing enough communication facilities, such as dependable internet connections and necessary communication gadgets. Overall, the study underlines the significance of comprehending and overcoming the communication hurdles in a distant education situation. By removing these obstacles, educators can give students access to a more productive and fulfilling learning environment.

Further, as the lack of communication continues due to their various interferences, students tend to keep their feelings instead. Since the student is all in the stage of maturity, the researchers observed that they

could understand the situation and adapt to this new normal education. The students remained silent about their problems and hesitated to communicate with their teachers. Hence the theme of repressed feelings was generated. As the participant states, *“There are times that I feel shy about initiating a conversation with them, or sometimes I struggle to ask for help from them. That is why instead of asking, I prefer to base on my understanding, although the topic was unclear to me.”* From the statement above, the researchers can say that students tend not to say things directly and not to share problems because they are too shy to discuss some personal academic-related matters with their teachers. This falls under the emotional barriers of communication; if someone does not feel good, they will likely speak less or negatively. A mental limitation prevents you from openly communicating your thoughts and feelings. It can prevent you from being authentic, affecting your emotions and feelings.

The implications of the findings indicate that communication barriers, such as a poor internet connection, a lack of resources for communication, physical distance, and emotional barriers, can significantly impact how effectively students and teachers communicate in a distance education setting. These obstacles may result in a breakdown in communication and the suppression of emotions, making it difficult for students to open up to their professors about issues relating to their academic performance. It looks like barrier-free communication is impossible to happen in future. However, communication barriers could be slashed significantly. Firstly, people should constantly endeavor to enhance the messages they dispatch. Secondly, people should constantly endeavor to enhance their perception of the messages they receive. Thus, people should not only strive to be understood but also, they try to understand in a society [16]. In order to increase communication and foster a positive learning environment for students in distant education, it is crucial to identify and remove these hurdles. Educational institutions and policymakers should take the appropriate steps to enhance internet access, provide communication tools and facilities, and foster chances for direct interactions between students and professors. Teachers should also receive training in recognizing and addressing emotional barriers to communication, such as shyness and anxiety, and encouraging open dialogue and discussion among students. By addressing these communication hurdles, educational institutions can ensure effective communication and foster a positive learning experience for remote learning students.

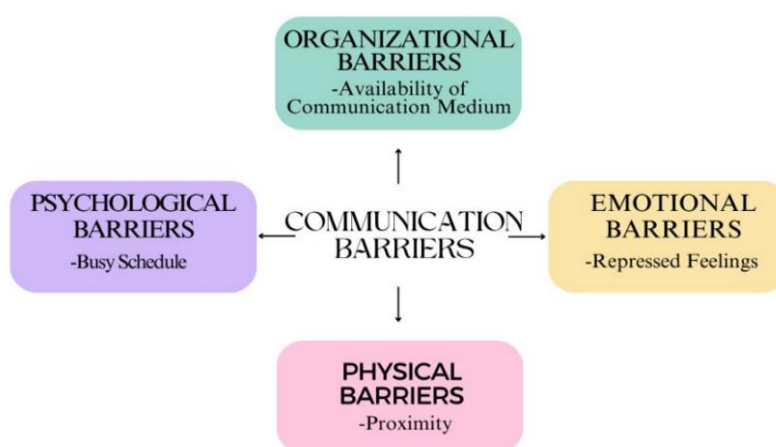


Figure 1. Communication barriers confronting students and teachers in modular learning

### 3.5. What pedagogical approaches may be proposed to overcome the barriers in communication?

#### 3.5.1. Learning pedagogy

Based on the study's results, the researcher developed these pedagogical approaches that could overcome the communication barriers in modular learning in times of pandemic. Learning pedagogy for overcoming communication barriers in modular learning based on the results are as: constructivism; inquiry-based learning; self-directed learning; problem-based learning; experiential learning; collaborative learning; and adaptive learning.

One of the most popular and widely recognized pedagogical approaches in the field of education is constructivism. It is commonly praised as a probing strategy to the level of comprehension of children and how this knowledge can be brought to greater level thinking [17]. Constructivism is a learning theory that knowledge is best gained through reflection and active construction in mind. Thus, knowledge is an intersubjective interpretation. The learner must consider the information being taught and construct an interpretation based on past experiences, personal views, and cultural background. Students can actively

engage in their education by developing their knowledge and comprehension. This can be achieved through engaging in dialogue with instructors and peers, expressing thoughts and opinions, and asking for clarification when required.

Inquiry-based learning involves “A range of instructional methods in which learners are engaged in exploring and solving complex problems or questions that are relevant to their interests and experiences” [18]. Inquiry-based learning aims to promote deeper learning and knowledge and develop abilities, including teamwork, creativity, and communication. To better comprehend the module subjects, students might do research, gather information, and ask questions. These abilities can also be used to express thoughts and opinions to peers and teachers successfully.

Self-directed learning, according to Loeng [19], is a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, and identifying learning materials. Students can take responsibility for their learning by setting goals and identifying the resources and strategies needed to achieve them. They can communicate with their teachers for feedback and guidance on their progress and seek additional resources and support when needed.

Problem-based learning (PBL) is a learning method based on using problems as a starting point for acquiring and integrating new knowledge [20]. By working collaboratively with their peers, students can develop effective communication and teamwork skills and gain a deeper understanding of the module topics. Through PBL, students strengthen their teamwork, communication, and research skills and sharpen their critical thinking and problem-solving abilities essential for life-long learning.

Experiential learning is learning through experience, reflection, and action. According to Kolb [21], a prominent theorist, experiential learning involves a cycle of concrete experience, reflective observation, abstract conceptualization, and active experimentation. Students can apply their knowledge and skills in a practical setting through this pedagogy. By engaging in hands-on activities and real-world projects, they can develop effective communication skills and better understand the module topics.

Major [22] emphasizes “the importance of actively engaging students in the learning process and providing opportunities for them to interact with one another to construct their knowledge and understanding. Students can work collaboratively with their peers to complete module assignments and projects.” This can help them develop effective communication and teamwork skills and better understand the module topics.

Adaptive learning is a method for individualizing the educational process by adapting pedagogical strategies and resources to the specific characteristics of each learner and by providing each student with a personalized learning environment. Adaptive learning has received an increasing attention over the last decade. It basically adapts learning courses to meet the student’s characteristics. It also provides flexibility, as students are not constrained to a specific class schedule or a predefined content [23]. Students can use adaptive learning to tailor their learning experiences to their needs and preferences. They can use online resources and tools to assess their learning needs and adjust their study strategies accordingly. They can also communicate with their teachers for feedback and guidance on their progress. Using this pedagogy in their learning, students can overcome communication barriers in modular learning. They can develop effective communication and teamwork skills, better understand the module topics, and actively participate in their learning. Figure 2 shows the learning pedagogy to overcoming the communication barriers in modular learning during the pandemic. Based on the results, the researcher developed these pedagogical approaches that could overcome the communication barriers in modular learning in times of pandemic.



Figure 2. Learning pedagogy



### 3.5.2. Teaching pedagogy

On the other hand, teaching pedagogical approaches requires a flexible and adaptable teaching pedagogy accommodating various student needs and learning styles. Teaching pedagogy for overcoming communication barriers in modular learning based on the results are as: personalized instruction; active learning; online instruction; flipped classroom; competency-based instruction; inquiry-based instruction; collaborative instruction.

Personalized instruction involves developing and implementing instructional strategies and materials that address individual differences in learning and that help students to take an active role in their learning [24]. Teachers can provide individualized instruction tailored to students' learning needs and preferences. Teachers can use various tools and resources to help students master each module.

Active learning instruction is a teaching method that involves students actively engaging in their learning process through hands-on and participatory activities. It is "Anything that involves students in doing things and thinking about what they are doing" [22]. This pedagogy encourages students to engage in learning by participating in hands-on activities, discussions, and problem-solving exercises. Teachers can create learning activities to help students apply their knowledge and skills to real-world problems.

Online instruction refers to teaching and learning delivered entirely over the internet, using various digital tools and resources to facilitate communication, interaction, and collaboration between instructors and students [25]. It is innovative and creates more opportunity for the students with diversified leaning content and personalized learning, online learning is useful to develop the technological competence and improves communication skills [26]. The online instruction is no not only a new concept to many teachers, students, parents and educators; in addition, the COVID-19 pandemic has introduced an unprecedented and global need to explore online teaching-learning opportunities within the entire field of education. Online education is not only about the integration of technology in education which can replace teachers and physical presence in educational institutions with the technological gadgets [27]. Moreover, modular learning is often delivered through online platforms and resources. Teachers can adapt different materials and resources, such as videos, to deliver instruction and engage with students.

Flipped classroom is a teaching approach that reverses the traditional order of content delivery and homework assignments. In a flipped classroom, students watch video lectures or complete readings at home. In contrast, classroom time is used for more interactive, hands-on activities and discussions that reinforce and apply the material learned outside of class. In this pedagogy, students receive instruction outside of class through online resources such as videos and readings and use class time to engage in collaborative activities, discussions, and problem-solving exercises.

Students are empowered daily to make important decisions about their learning experiences, how they will create and apply knowledge, and how they will demonstrate their learning [28]. This approach aligns each module with specific competencies or skills students must master to progress to the next module. Teachers can utilize different assessments and feedback mechanisms to help students monitor their progress and identify areas for improvement.

Inquiry-based instruction involves asking questions, gathering and analyzing data, designing and conducting experiments, investigating phenomena, and constructing new understandings and knowledge [29]. This pedagogy encourages students to ask questions, investigate problems, and explore new concepts through research, experimentation, and critical thinking. Teachers can provide guidance and support to help students develop their research skills and construct their understanding of complex topics.

Collaborative instruction involves a structured approach to instruction where students work together in small groups to help one another learn academic content and develop social skills [22]. Collaborative instruction is often combined with other instructional methods, such as direct instruction and inquiry-based learning. In collaborative instruction, students are responsible for their learning but also the learning of their peers. This pedagogy emphasizes the importance of collaboration and teamwork in learning. Teachers can create opportunities for students to work together in groups to complete modules, with each student contributing their unique skills and perspectives. Teachers can provide guidance and support to ensure students work effectively together.

By using these pedagogies, teachers can overcome communication barriers in modular learning. Teachers who employ evidence-based instructional practices, offer personalized feedback, and differentiate instruction to meet individual needs can have a positive impact on students' reading comprehension skills. By fostering a supportive and engaging learning environment, teachers can empower students to become proficient readers and critical thinkers [30]. They can provide personalized and active learning opportunities, use technology to facilitate online instruction, implement the flipped classroom model, focus on specific skills and competencies through competency-based instruction, encourage students to investigate real-world problems through inquiry-based instruction and promote collaboration among students. Figure 3 shows the teaching pedagogy to overcoming the communication barriers in modular learning during the pandemic. This

teaching pedagogical approaches requires a flexible and adaptable teaching pedagogy accommodating various student needs and learning styles.



Figure 3. Teaching pedagogy

#### 4. CONCLUSION

In conclusion, the study shows that communication between students and teachers has shifted to the digital realm using cell phones and social media sites. The primary focus of these conversations is module-related matters, and the students initiate the conversation due to module-related problems. Communication barriers in modular learning must be addressed to ensure effective communication. Different pedagogical approaches highlight the need to improve communication and effective teaching and learning in the new normal. Despite the pandemic, it is recommended that students and teachers continue to communicate and collaborate. Teachers must also promote creativity in their classes and conduct intervention activities to help students overcome communication barriers.

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