

Faculty Strategies and Institutional Responses to Distance Learning Implementation During COVID-19

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ABSTRACT

The study investigates the involvement and adaptive approach of the faculty members along with the implementation of the various formulated learning modalities during the COVID-19 pandemic. The research objective is to deliver a comprehensive evaluation of how educators have responded to the adapted system of instruction including online and modular forms while simultaneously addressing the dilemma posed by the sudden transition from traditional classroom setting. Employing a grounded theory approach, this study conducted a semi-structured interview set-up with twelve licensed professional teachers from six higher education institutions (HEIs). The development of themes into patterns that reflect the modifications in instructional implementation leads to a theoretical framework that enlightens future educational practices. The findings feature how the HEIs have substantially adapted to new pedagogical strategies warranted by the new normal setting with the integration of synchronous and asynchronous learning mechanisms. The participants manifested a strong reliance on digital platforms for instructional delivery, emphasizing both the challenges and successes encountered. Furthermore, while most faculty initially are crucial with technology-based platforms, progress was observed through time, aided by training sessions and collaborative working environments. An efficient institutional support and drive are essential for enhancing faculty readiness and involvement, ultimately leading to enhanced student learning outcomes. Demonstrated flexibility in teaching execution is noted as HEIs continue to respond and resolve the complexities of distance learning. Qualitative analysis further reveals that sustained institutional commitment, resource accessibility, and faculty professional growth collectively contribute to the long-term viability of distance education. With this, the Adaptive and Disruption-Responsive Institutional Framework for Teaching (ADRIFT) emerged, grounded from the data collected, offering a replicable model for future crisis-driven educational transitions.

Keywords: Faculty Strategies, Institutional Responses, Distance Learning, COVID-19 Pandemic

INTRODUCTION

Fundamental changes brought by the ongoing COVID-19 pandemic pushed educational operations, curriculum, instruction, and student learning and welfare to their limits. The questions as to how students are educated, how solutions are generated, and how school operations are modified as among the most pressing concerns that alarmed the entire education sector and, perhaps, the whole world, not to mention the increasing demand for innovation and the growing backwash of the so called digital divide (Tam & El Azar, 2020). These challenges call for extensive preparation for changes in the educational landscape to ensure that learning of children continues (Benson et al., 2011). In so doing, in the Philippines, the Commission on Higher Education (2020) responded to the state's call to suspend face-to-face classes and resolve to remote learning mode while the entire country is in lockdown.

With this, higher education institutions (HEIs), with faculty members as its backbone, were tasked to prepare for alternative learning modalities, including online, modular, or flexible, before the start of the academic year 2020-2021. Higher education institutions need to assess various methods of learning to provide solutions to growing concerns about the suitability of these learning approaches without compromising the quality of education in this unprecedented academic disturbance. This includes evaluating the readiness of faculty members, their capabilities based on internet connectivity and digital knowledge, and reliability on local power

supplies (Barton and Dexter, 2020). Failure in the implementation of these learning modes disengages students in the reality of learning and results in an underserved and underperformed student percentage (OECD, 2020).

Teaching has always been a multidimensional process that requires deep knowledge and understanding about the profession. With a wide range of contents, instructors need an ability to properly synthesize, integrate, and apply this knowledge in different conditions. They also expose themselves in varying circumstances with diverse individuals and groups (Onyishi and Sefotho, 2020). Faculty performance, particularly their strategies and involvement, and the implementation of different higher education institutions of the new normal learning modes have been tested.

The changes that are unfolding are perceived to be inevitable. The field of education is compressed with health protocols, emerging technological improvements, and various curriculum enhancements. These prompted school administrators and faculty members to consider innovative ways to formulate, establish, deliver, and evaluate learning materials and learning delivery approaches (Johnson et al., 2016). With this sudden shift from the traditional classroom-based, the performance of faculty members are expected to be greatly challenged. The readiness to teach students is influenced by their preparations as perceived in their ways of implementation of the different learning modalities.

These circumstances bid a challenge to formulate viable steps that will propel educational pursuits functional at the least. Assessment of faculty proficiencies and strategies along the transition process of HEIs to the various learning formats is a move towards the goal to improve the delivery and development of the programs for the faculty members' overall capacity.

While the faculty members' previous teaching background serves as a foundation to educate in the new normal, necessary calibrations are deemed significant in terms of their engagement abilities through virtual classroom setting, management approaches, along with their instructional time and space. These identified phenomena have led the researcher to pursue and conduct this study. The inevitable changes in pedagogical background have required regular monitoring, pointing to the need for flexibility in teaching manner. The assumption of blended learning systems in education which synergizes online and modular methods, enhance student engagement and simultaneously allow educators to adjust to different learning preferences (Marshall-Stuart, 2018).

The study aims at providing a comprehensive assessment on the strategies and involvement of faculty members in the implementation of different learning modalities employed in higher education institutions in Iloilo City, Philippines for the Academic Year 2020-2021. The intended outcome fits in gathering facts using qualitative data on the basis of grounded theory. This would generate narratives and themes about the impact of COVID-19 pandemic on the modalities during instructional implementation.

METHODOLOGY

The study was anchored in the Glaser and Strauss (1967) as cited by Carlin and Kim (2019) descriptions and procedures of Grounded Theory under qualitative studies. The grounded theory methodology is designed to conceptualize the identified social phenomena. This enables the inductive emergence of theory from the multilayered process of systematically gathered and analyzed data, rather than testing pre-existing hypotheses (Strauss & Corbin, 1998). It explains and also describes specific conditions of the identified variables. According to Lewis-Pierre et al. (2017), this requires an investment of a significant period of time to understand the required steps for data analysis. Continuous review of data is actively used to ensure true meaning including the accuracy of the participants' experiences. This approach is suited particularly to this study as it allows the construction of a theoretical explanation of how faculty members and institutions adapted from the sudden shift to distance learning from the traditional face to face approach.

The study involved twelve licensed professional teachers as respondents (Table 1), from six identified HEIs in Iloilo City, Philippines that implemented multiple distance learning modalities in the event of the COVID-19 pandemic. The respondents were mainly selected purposively, specifically under theoretical sampling. A purposive sample is a non-probability sample that is selected based on characteristics of a population and the objective of the study. A theoretical sampling, as a type of purposive sampling, helps the researcher to elicit,

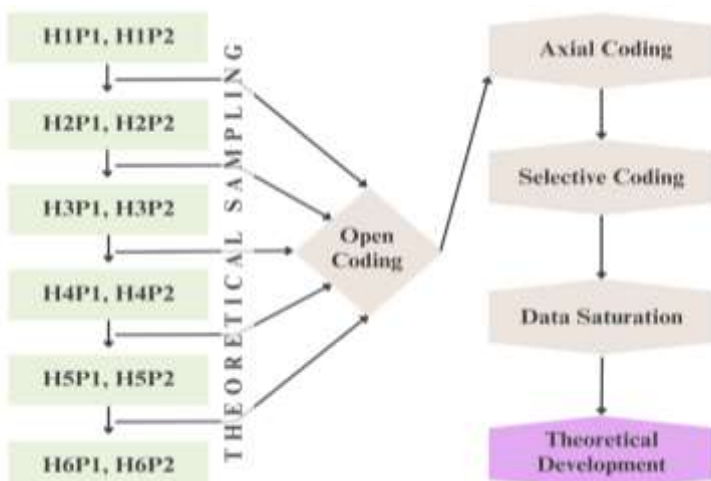
understand, and conceptualize a selected concept (Fraenkel et al., 2012). The researcher carefully chose the participants considering the grounds of the study with the expectation that every participant will be able to supply distinctive and rich data that are relevant to the topic (Suen, Huang & Lee, 2014).

Table 1. Information of participants.

Pseudonym	Gender	School
H1P1	F	HEI-1
H1P2	M	HEI-1
H2P1	M	HEI-2
H2P2	F	HEI-2
H3P1	F	HEI-3
H3P2	M	HEI-3
H4P1	F	HEI-4
H4P2	M	HEI-4
H5P1	M	HEI-5
H5P2	M	HEI-5
H6P1	F	HEI-6
H6P2	F	HEI-6

The three stage coding process of open coding, axial coding, and selective coding as outlined by Strauss and Corbin (1998) was followed in the analysis of data (Figure 1). During open coding, the interview transcripts were read line by line to generate initial labels capturing the essence of participants’ experiences in relation to distance learning implementation. The initial labels were then subjected to axial coding to correlate and group similar concepts, wherein codes were examined in terms of contexts and conditions (Charmaz, 2014). During selective coding, core categories were identified and emerging themes were integrated into a coherent theoretical explanation. Recurring categories were continuously refined and elevated into theoretical constructs that together form the grounded framework established in this study. The constant comparative technique employed ensures that newly collected data were systematically analyzed as to their relation to previously coded segments, which further allowed the categories to be enhanced and to deepen conceptual density (Glaser and Strauss, 1967).

Figure 1. The grounded theory approach allows the systematic exploration and identification of key themes and patterns that emerged from multi-layered sampling leading to the development of a theoretical framework.



The study employed and combined several strategies aligned with Guba and Lincoln's (1994) criteria of credibility, dependability, confirmability, and transferability. Prolonged engagement with the data and member checking was established to ensure the credibility of the presented data. Key themes and researcher interpretations were shared with participants for accuracy of representation and verification (Creswell & Poth, 2018). Audit trails were conducted to address dependability, as methodological decisions employed were documented including necessary changes in the interview guide and coding categories to allow external panel to review and evaluate the research process. Confirmability was ensured by maintaining a reflexive journal in which recorded potential biases that could influenced the data was done throughout the study. Providing thick descriptions of the research context of participants and institutional background enabled the assessment for transferability of the findings to their own circumstances (Guba and Lincoln, 1994). While the study was conducted within a specific geographic context of six higher education institutions in Iloilo City, Philippines, the contextual depth reported allows faculty and researchers in similar educational settings to determine the extent to which the research findings may be relevant to their own situations (Creswell and Poth, 2018).

Data collection and analysis were simultaneously conducted until theoretical saturation was achieved. As defined by Glaser and Strauss (1967), theoretical saturation refers to the point at which no new properties or dimensions emerge from the collected data. In this study, saturation was achieved after twelve semi-structured interviews as no new codes were identified on subsequent interviews. Saturated data produced integrative theoretical constructs. These represents the consolidation of selective codes into a theoretical framework detailing faculty strategies and institutional responses to the implementation of distance learning modes during COVID-19 pandemic. This rigor process from raw interview data subjected into successive layers of coding to eventually developed theoretical constructs, highlighting the grounded theory inquiry in the study (Strauss and Corbin, 1998; Charmaz, 2014).

RESULTS

Integration of Diverse Distance Education Modalities

Teaching in flexible approach

The results imply that the institutions have resorted to a flexible mode of teaching involving both online platforms and modular systems. This setting has allowed both the teachers and students their freedom of time and use of resources for an effective deliverance of their classes and maximize their learnings:

“We have what we call flex learning, ...where students are given freedom in how, what and when they are learning. In the context of our school, classes are being conducted through home-based learning.” (H1P1)

“Well like other schools we are also using both the online and the use of modular approach, flexible learning.” (H2P2)

“Here we are using the blended learning which are online video conferencing and digital module.” (H3P1)

“We subscribe to the definition of flexible learning..., we allow flexibility in time, place and audience so therefore we subscribe to both synchronous and asynchronous sessions.” (H4P1)

Delivery of online learning method

The participants highlighted the implementation of online learning platforms in the conduct of classes with the supplementation of electronic modules. Due to the challenges of the pandemic, educators rely on this approach as the most appropriate and feasible alternative method to traditional classroom learning:

“All university units are implementing the online modality, we are using the module which we call e-learning, so we are not using other kinds of modalities aside from this online via module.” (H3P1)

“Where I am teaching we have a pure online modality.” (H3P2)

“Having the pandemic right now we cannot really conduct face-to-face classes, so we have online classes but of course previously before this pandemic we also had face-to-face classes.” (H5P1)

“So the learning modality being implemented in our school is only online learning.” (H5P2)

“As of now we are having this online teaching modality, purely online. I think as far as I know all departments and colleges in the university where I am in now are also using the same teaching modality.” (H6P1)

Overcoming the Challenges of Technology Based Teaching

Utilizing and accessing digital applications

With the implementation of online mode of learning, the findings demonstrated a mixed response in that although equipment and online applications are readily available, others were unfamiliar and had to take an added effort to learn while some are equipped and ready in this new system:

“In terms of online classroom and Google Mail, I am equipped, I am ready enough in terms of using this platform of modalities.” (H1P2)

“When we started just like everyone else I feel uncertain as the modalities is something new, the environment is different although I was thankful that I am digitally literate.” (H3P1)

This adaptive approach has posed a dilemma to the participants yet the students who were long exposed to these applications and have mastered this technology had been their partners in troubleshooting:

“Maybe at my very young age, I know how to use a computer, that is why I can easily adapt.” (H2P1)

"At first I had a problem with Google Meet, but now I can share my screen and manage with ease. Sometimes, when I encounter new features, the students help me. It has become a collaborative learning experience for all of us." (H6P2)

Adapting to online formats

The transition from traditional classroom set-up to remote learning have posed difficulties to the educators as there are a lot to learn and manipulate. The beginning has been challenging but adaptation to online modality disclosed a more convenient process and automated systems favorable to many.

“At first I have found it difficult to create online quizzes, however now it is more efficient for me. I really like how the system works, it automatically grades multiple choice questions.” (H3P2)

“I think as a millennial teacher, I believe that I am more competent in terms of computer skills, computer literacy; I’m ready about this format so I can adapt easily.” (H5P1)

It has been revealed that adaptability and competence comes with literacy to recent digital platforms and applications, although external factors like internet connectivity hinders, digital proficiency of the teachers has evolved:

“Sometimes technology does not cooperate, especially here in our country where the Internet does lag.” (H6P1)

“I have now got into the habit of converting all my physical materials to digital format. At first it was very overwhelming, but now I think I am capable enough to handle it.” (H5P2)

Faculty Preparation in Instructional Modes

Engagement on trainings, seminars and dry runs for an enhanced teaching approach

A notable impact on the faculty's confidence and preparedness for utilizing teaching platforms are brought by seminars and training conducted. These orientations and workshops provide thorough review of the learning system ensuring that teachers are equipped to navigate it for successful course delivery:

“I can say much about the use of this software for my online class because I underwent training and workshop on the use of the modalities of this software learning system, the ten percent remaining is for the connectivity related concern.” (H1P1)

“We have an orientation where everything in the program is being reviewed so that we would be ready and it could be easier for the teachers concerned to implement.” (H4P1)

“We underwent seminars or orientations before we start our classes to implement this modality. So far the training helped, and has contributed in our implementation.” (H5P1)

Self-assessment method on effective deliverance of learning objectives

Self-doubt regarding the effectiveness of teaching modalities are often experienced by teachers in the new normal, particularly the challenges brought by transition from face to face to distance learning. Faculty expresses desire to ensure that all students are learning despite the set up:

“There were times I feel like I am not delivering the lessons well to my students due to the change in modes of teaching. I think we can all say that it is tough to gauge student learning through a screen.” (H2P2)

“Like there is a part of me wishing I could do more to make sure that every student is keeping up, would it be through hard copy modules or online lectures.” (H3P1)

“I ask my students to do a feedback survey on my teaching, this allows me to get their insights for improvement of my teaching approach.” (H4P2)

Free access to online resources to enhance teaching approach

Personal initiatives to look for resources including online tutorials played a role in improving faculty readiness to handle distance education:

“To quantify my readiness it is around 80%, and to be honest youtube videos on how to use applications or software have helped me a lot actually.” (H1P2)

“Good thing about the internet is that many free resources online are available to access like pdf and videos that I think help me deliver lessons and help students understand the topic more.” (H2P1)

Provision of institutional access to essential educational platforms is contributory to lesson delivery and efficient teaching:

“The school has brought and provided institutional access to some essential educational platforms..., these have helped us prepare for our classes.” (H4P1)

Fostering Effective Communication and Teamwork

Readily available electronic communication media

Became more integral for information sharing during the pandemic are the pre-existing communication platforms such as faculty group chat. With regular online meetings conducted to address ongoing teaching and student issues:

“Before the pandemic the college faculty already had a Messenger group for communication, but its use was strengthened during the pandemic.” (H6P1)

“The dean holds two Zoom meetings per month, this enables us to raise our present teaching and student concerns.” (H5P2)

While email remains a very common mode of communication, the overwhelming messages make it difficult to keep track and prioritize information. A timely response is the creation of university learning management systems for facilitating academic workload:

“Emails are kind of hard to keep track nowadays, so many emails. I think this is where the learning management system comes in, it is so helpful.” (H3P2)

Open consultation and evaluation among colleagues

Indicative of strong collaborative culture among faculty members were the active support given by more techy colleagues and sharing of materials. Occasional difficulty in maintaining effective communication due to pandemic restrictions hinders optimal cooperation:

“The techie faculty, those younger and more exposed to computer applications, are willing to help.” (H3P1)

“There is sharing of materials and resources within the faculty, ... I think all of us are challenged by this pandemic.” (H5P2)

“The college, the university, is trying to create a collaborative environment, but sometimes it's hard to communicate properly given the social restrictions happening from time to time.” (H6P2)

The qualitative findings capture the deliberate adjustments made by institutions in instructional modes and faculty members in their teaching styles and revealed that adaptation to new distance learning modes was neither immediate nor uniform in nature. Rather this showed a progressive pattern of pedagogical adjustment as educators navigated the initially unfamiliar digital platforms and redesigned course materials. Faculty members also recalibrated their teaching styles to suit both synchronous and asynchronous set up. This noted pattern of gradual educational transformation puts forward the concept that technology-integrated modes of teaching requires the dynamic integration of technological, pedagogical and content knowledge. Teaching force develop technological pedagogical competence primarily through experiential learning and co-worker collaboration, more of this is described as trial-and-error rather than through formal pre-implementation preparation.

This presented shift toward flexible learning modalities combining both modular and online approaches reflects the capacity of blended learning to accommodate diverse set of learners. The core advantage of distance learning modes is that it ensures that students are still managed with instructional continuity despite their social background and economic status. This theoretical construct of Adaptive Pedagogical Approaches documented here represent not merely a crisis response but an emergent pedagogical orientation that has implications for how higher education institutions can conceptualize teaching and institutional preparedness in an unpredictable learning environment.

Flexibility in Teaching Demands

Struggle in module creation

The findings reveal that module production faced challenges due to lack of experience and limitation of resources. A need for enough time and support for module creation would ensure a standard educational medium:

“At first, when we were assigned to create the modules it was very difficult since it was our first time and limited resources in addition to the unstable internet connection.” (H1P2)

“Actually the hard part is the making of the actual module as teachers should be well trained. However, we have no choice as the module will be uploaded on the learning system and it's really hard to make modules as we are pressured to upload it before the class starts.” (H3P1)

Crafting modules under time pressure with inadequate training raises concern for its quality. This constraint of time in module preparation leads to confusion and encountered error within the materials:

“There should be time especially in the preparation of the modules. The modules are sometimes quite confusing.” The participant added, “the modules sometimes contain mistakes, I think also because of the preparation, very limited time in preparing the modules.” (H3P2)

“I think we need to have more time in preparing and editing the modules and to also shoot the needs of our students.” (H4P2)

Conduct of systemic consultation among students

Individual consultation among students can be challenging, maintaining open lines of communication would be essential for student support especially for those struggling. While many students are reluctant to initiate conversation, a prompt from faculty member would encourage for open dialogue:

“Consultations to students individually is hard, but I open my lines of communication for students who are struggling to contact me freely.” (H1P1)

“Listening to students' concerns gives a way to identify and address their learning concerns.” (H4P1)

“Most students are shy to initiate or say things or ask for help online, we need to prompt them to communicate openly and give feedback.” (H5P1)

Difference in individual student resources

Disparities in student resources emphasized the need for a flexible and considerate approach to student learning and assessment. By taking into account the not every student have a reliable internet connectivity, flexibility in attendance and reducing workload during the pandemic sustains academic performance:

“What we need now I think is widened consideration to students, given that not all students are of the same resources.” (H1P2)

“As defined in the flex learning, we are flexible in terms of the attendance of the students considering that not all of them have good internet connections, so we consider it as no students should be left behind and of course still trying to maintain quality learning education.” (H2P1)

“We are advised that during these pandemic times we need to limit the load of work of students, little bit considerate with the students because of limited resources.” (H4P1)

Being more understanding due to the varying limitations of each student extenuate the need for further considerations to be given such as offering extensions and non adherence to deadlines:

“As teachers we should give consideration, understanding the students and giving them extensions and everything for them to maintain their grades.” (H2P1)

“We are giving considerations like you don't adhere to deadlines.” (H3P1)

Alternative learning materials and assessment modes including handouts and recorded lectures were provided to students who cannot attend synchronous sessions. By considering students individuality, this prioritizes academic welfare and reinforces the commitment of higher education institutions to equitable learning experience:

“Where students cannot attend in their class because of many reasons ... I am posting the powerpoint presentation in the classroom and providing them with handouts so that they can still know the topic and review it and for example students who missed a quiz or exam we are also giving them special exams or time to consider.” (H4P1)

“Some of the students don’t have internet so we need to be flexible, we need to be considerate to them. We need to consider the electricity, the type of gadget they use, we should give them enough time for their next class, I put the welfare of students first.” (H5P2)

Changes in Student Learning Conditions

Student assessment and requirement completions

The shift to distance learning modalities still warrants a criteria for students assessment. Weekly tasks and alternative evaluation forms have been used by faculties as imposed by the respective educational curriculum. The usage of online testing platforms for long and periodic examinations highlights digital integration despite varying technological conditions:

“Students answer their weekly task where they submit it for completion..., sometimes when they have a good internet connection they submit their completed modules through google mails.” (H3P2)

“For the assessments at every end of the lessons, we are giving alternative assessments and periodical examinations including long quizzes through google quiz using google forms.” (H5P2)

Involvement of less demanding and cost-effective laboratory activities

Given the limited resources and financial constraints, modified laboratory activities were designed to allow students and faculty to utilize home-based resources. Instructors lead the demonstrations through pre-recorded videos that are accessible to the students and supplemented with laboratory manuals and modules:

“Some laboratory activities are still assigned to students in selected subjects, which they can do at home. We can also see how creative they are in those simple activities given the limited resources they have.” (H1P2)

“We ventured to open lab class, it’s really challenging because in my case I teach ecology which should have fieldwork,” the participant added “still online, it’s like modular, they can work online although the laboratory activities they can do is only limited, those activities that can be done by students in their homes.” (H4P1)

“We don’t have face-to-face laboratory activities, all are done through demonstration which we teachers record and send to the students, then after that they can demonstrate it at their houses, take a video of it then we professors will check or try to recheck if they conducted their laboratory activities properly.” (H6P1)

Unlike the traditional laboratory experiments, educators also ventured on a transformed approach where real-time observation of an experiment is done through video conferencing allowing students to explore and pose questions:

“Instructors lead the laboratory online via zoom we are the one performing they have to observe and they could ask question to us ..., but the difference is we are the one performing unlike in face to face..., so this time they are the one observing and we are the one performing.” (H6P2)

The findings demonstrate that student engagement under the different distance learning modalities was a continuously negotiated process, with multiple factors contributing such as disparities in technological access, and absence of physical connection to learning environment that traditionally inform student pacing in face to face setting. This shows that flexibility in e-learning and modular learning must be appropriately structured to maintain student engagement and support academic performance. The move beyond accommodating student limitations evident in the actively designed alternative assessments, deadline extensions, recorded and easily accessed online materials, and initiation of consultation to ensure equitable participation. These factors portray equity-centered approaches to distance education which has now been noted to be increasingly practiced.

The dynamic nature of this learning modes is further evidenced by feedback loops established between faculty and students, wherein student evaluations are subsequently used for instructional adjustments. This cycle extends

it by situating cognitive engagement within educational materials and technological inequalities that are particularly linked to the context of developing countries such as the Philippines. This theoretical construct of Dynamic Student-Engagement Mechanisms, reflects the range of responsive strategies that faculty and institutions employed to sustain meaningful student participation despite the constraints of remote learning. The construct thus contributes a more socially grounded understanding of student participation that acknowledge resource disparities as central factor in evolving instructional design.

IT Support Fosters a Collaborative Environment

Establishment of Learning Management System

To assist in a comprehensive and coherent integration of pedagogical functions, the institutions have provided a Learning Management System set for a convenient deliverance of modules and learning material, together with activity and assessment tools designed to create a centralized platform for faculty and students:

“This learning system established by the university for us is very comfortable and teacher friendly, it makes teaching very easy because the lessons are embedded in the LMS, then you’ll be giving activities in the LMS, the submissions are also there, the scores are also there to retrieve.” (H3P1)

“The school provided and purchased a learning system where it is linked to a certain app that is downloaded by the students, so whatever we upload in the learning system automatically reflects in the app.” (H3P2)

This versatile learning management architecture is equipped with security through a restricted access, and accountability feature where academic officials can join to observe virtual classroom events and classes thereby ensuring a quality and safe learning environment:

“We have our own learning management system.... Only students and teachers of the university can open that, those enrolled in that subject.” participant added “but we are enrolling our area head and dean and the program head in our class so that anytime they can just join the zoom for class observation.” (H2P1)

“We are uploading our module with different activities on the LMS, we provide a worksheet, references with sample activities, we also use youtube, videos, video clips and also webinar.” (H5P1)

Visibility of technical support teams

To optimize the educational environment, institutions have established accessible technical support mechanisms manned by information and technology experts who provide quick and real-time guidance in resolving digital challenges:

“For teachers we are having GCs where technology experts or knowledgeable persons are present, for example I experience a problem during the use of the application so I can chat in the GC to ask for guidance and clarification on what I should do.” (H1P1)

“The college created this committee to assist the teaching needs of the faculty, just for example I am not that techie ... we can make inquiries and ask questions if we have problems with this software.” (H3P2)

This systematic response had been facilitated by communication channels formed with specialized committees to ensure a smooth integration of technology in teaching and learning tools:

“We have this module developer wherein they also provided us with a contact number, for us to ask regarding the module, so this makes my implementation easy.” (H5P1)

“Offices were created to help us, like the office of educational technology support, although we had an IT office before it’s responsibility was expanded to provide expertise for the proper use and maintenance of the technological platforms.” (H6P2)

Strategic School Initiatives

Facilities and gadgets rendered for faculty

Institutions have established responsive technological support and financial assistance mechanisms to accommodate the needs and preferences of the faculty. The provision of this comprehensive approach included laptop loan programs, distribution of peripheral devices like pens, headphones, digital notepads, and connectivity essentials with an added electric and load allowance in support of the remote teaching program:

“We were granted a computer or laptop loan last semester..., then we were given this note pad and headset for free.” (H2P1)

“There were laptop loans provided for those who do not have and we were given pen tablets which we use during discussions, it is where you write if you’re presenting on the screen.” (H2P2)

“The management offered a gadget loan, for those who don’t have that kind of facility. The students and teachers are also provided with a free sim card where they can avail free loads every month.” (H5P1)

“The university provided financial assistance to the faculty members without a laptop. They also provide load allowance and electric allowance for the faculty, that somehow helped.” (H5P2)

While these financial aids are available, institutions also initiated the creation of fully-equipped workstations and office essentials to back up those who opted not to utilize the loan programs:

“The school is providing a loan for those who don’t have a laptop, for those who will not avail, there are rooms in the school where a computer, headset and webcam is available.” (H1P1)

“If the faculty is more comfortable to work in school, cause everything is there already, the school allows it.” (H3P1)

Flexible Working Environment

To ensure an operational efficiency, flexible office reporting and remote work options have been executed to respond to both faculty and students needs. This working mode required the faculty for an onsite presence to address institutional requirements, and a home setting in response to faculty preferences and comfort with a warrant of proper documentation of attendance and virtual discussions indicating a sustainable approach to accountability:

“We are required to report in school at least four times a week then we are allowed to have one day of work from home, we have faculty that are working from home as supported by attendance and zoom screenshots.” (H2P1)

“We are obliged to report everyday, during the first semester that is Monday to Thursday,” the participant added “I like to hold classes at home, ... I will just close the whole room, no disturbance and I am not wearing a face mask.” (H4P2)

Moreso, while others are equipped, some have lacking personal equipment to conduct this learning approach thus, an onsite attendance guarantees a conducive environment where internet connectivity and teaching paraphernalia are provided. This has granted the faculty with the freedom of having a home or school setting without compromising the continuity of education:

“It depends if you want to go to school or choose to stay at home. It depends if when you want to go.” (H1P2)

“We are allowed to [work from home], but for example if you don’t have laptop or you don’t have internet connection, the school also allows us to go to school and then have our class there because they also provide PCs where we can use in our class.” (H3P2)

Evaluation of Implemented Practices

Feedbacking system for improvement

A feedback system was deemed crucial for the continuous improvement of the distance learning modalities. Institutions adopted their own approach to evaluate and gather feedback. Immediate supervisors actively communicate with faculty members for teaching and learning environment, and technical challenges:

“One part of the coaching is that we are being asked by immediate supervisor, our dean, in terms of the learning environment and in terms of the medium and channels of communication..., what are the technical problems and so forth, with this we are able to address what are the things we need to improve.” (H1P1)

“This semester the university implemented this, the review of evaluation, the review of the modalities implemented in the previous semester.” (H3P1)

This is complemented by regular meetings for consolidation of issues and development of solutions:

“The module is evaluated regularly, then we need to revise based on the input evaluation.” (H2P2)

“During this semester the school conducts meetings where in the problems were consolidated, the faculty gives suggestion where the best solution will be decided to address the problem.” (H3P2)

Students play a vital role in shaping the subsequent semester modules, with faculty regularly incorporating student suggestions for possible modification and enhancement of learning and teaching experience:

“We try to gather comments and suggestions from the students about the modalities implemented, then we try to integrate it in the next semester activities, do we need to correct, do we need to reduce, do we need to improve the activities like that.” (H4P1)

“Student evaluation related to the modalities is very important, for them to evaluate the strategies, teachers, especially the platforms being used and activities and teaching strategies used.” (H4P2)

The findings highlight that institutional support operated across multiple institutional sectors including infrastructure, financial assistance, professional development, flexible work arrangements, and systematic feedback and evaluation processes, are collectively reinforcing faculty capacity and morale. This multidimensional institutional support extends the concept of teacher professional development and emphasizes that sustainable improvements in teaching practice not only require training but also a collaborative feedback oriented environment of teaching structure and expert coaching while adding the reality of crisis contexts including material and logistical support. Multiple factors including gadget loan programs, load allowances and on-site workstations which are noted as institutional scaffolding that extends the concepts of existing professional development models. Establishing LMS or Learning Management Systems as centralized platforms for instruction, communication, and assessment is identified as a key institutional enabler of technological adoption in higher education.

The theoretical construct of Institutional Support Systems encompasses organizational mechanisms including resources and structures that HEIs mobilized to enable faculty professional development and sustain educational continuity. This study position support systems not as a background condition but an active and ever-changing concept that shapes the quality and sustainability of adaptive pedagogical approaches and dynamic student engagement mechanisms. This triadic interdependence suggests that institutional investment in support infrastructure is not supplementary to educational quality during crises rather than foundational, a finding that carries significant implications for policy formulation and institutional planning in anticipation of future disruptions.

Table 2. Presented are the saturated data grounded from the responses of participants.

Selectives Codes	Theoretical Integration
Integration of diverse distance education modalities Overcoming the challenges of technology based teaching Faculty preparation in instructional modes Fostering effective communication and teamwork	Adaptive Pedagogical Approaches
Flexibility in teaching demands Changes in student learning conditions	Dynamic Student-Engagement Mechanisms
IT support fosters a collaborative environment Strategic school initiatives Evaluation of implemented practices	Institutional Support Systems

The categories identified across the nine themes do not operate in isolation but are conceptually interrelated, which collectively give rise to an emergent theoretical framework centered on pedagogical and institutional adaptation during crisis-driven disruption. As illustrated in Table 2, the selective codes converge into three overarching theoretical constructs: Adaptive Pedagogical Approaches, Dynamic Student-Engagement Mechanisms, and Institutional Support Systems. These constructs are mutually reinforcing that faculty members' capacity to adapt to flexible and technology mediated instructional strategies was directly conditioned by the availability and responsiveness of institutional resources, such as Learning Management Systems and technical support teams.

Simultaneously, all constructs were directed toward and measured against the quality of student engagement, as faculty consistently calibrated their approaches in response to disparities in student access, participation, and feedback. This triadic relationship reflects what Strauss and Corbin (1998) describe as the conditional matrix in grounded theory, where micro-level individual responses are embedded within and shaped by macro-level institutional and instructional conditions. The resulting framework therefore moves beyond a descriptive account of teaching adjustments, offering instead a conceptual explanation of how adaptive agency at the faculty level, when supported by institutional infrastructure, produces dynamic and responsive learning environments even under conditions of severe disruption.

DISCUSSIONS

The study explored how teachers adapted their instructional methods and how institutions supported flexible learning during the COVID-19 pandemic, focusing on changes in education and responses to new teaching challenges. The findings shown in Table 2 highlight key areas including how teachers adjusted to new teaching approaches, the various methods used to keep students engaged while ensuring high quality learning, and the institutional support systems that facilitated remote education. These interconnected elements worked together to advance and reinforce educational practices.

The shift to flexible teaching methods, including blended learning that combined modular systems with online platforms, proved essential for both teachers and students. Flexible learning environments enhance student participation by allowing personalized learning experiences that suit different learning styles (Sadeghi et al., 2019; Gonzales et al., 2019). This flexibility became especially important during the pandemic, as it enabled both real-time and self-paced learning, which maximized available resources and improved learning results

(Fabriz et al., 2021). When face-to-face classes were suspended, online platforms became the primary method for delivering education. Research shows that strategic use of online platforms can significantly enhance student achievement when properly incorporated into course design (Hofer et al., 2021; Kintu, 2017). Higher education institutions widely turned to online teaching and learning approaches, viewing them as the most practical and reasonable option to replace traditional classroom instruction during the worldwide health crisis.

The rapid transition to technology-based instruction exposed varying levels of preparedness among faculty members in using digital tools. While some teachers were comfortable with technology, others faced technical difficulties due to limited experience with new software and equipment (Hodges et al., 2020; Zhao et al., 2018; Moorhouse & Kohnke, 2021). The findings show that digital competence is a crucial factor influencing teachers' capacity to transition to online instruction, with joint problem-solving between teachers and students proving helpful. To ensure quality teaching, adapting to online and digital formats required educators to quickly acquire new competencies. The initial obstacles reported by faculty members gradually decreased as they gained familiarity and confidence with digital resources (Moorhouse & Kohnke, 2021; Guilbaud et al., 2020). The growth in educators' digital skills demonstrates the importance of continuous professional training in promoting successful online teaching methods.

Workshops and hands-on demonstrations were essential in preparing faculty members for online teaching. Organized training initiatives substantially improved teachers' confidence and ability to use educational technology effectively (Martin et al., 2019; Hofer, 2021). This highlights the need for institutional support through comprehensive training and workshops that develop educators' skills for effective online instruction. Reflective self-evaluation proved beneficial for educators assessing how well they taught through digital means (Pitsoe & Maila, 2013). Student feedback and assessments indicate that educators recognize the need for ongoing improvement and consequent changes in their teaching approaches. Availability of digital teaching materials significantly aided faculty members in preparing for remote education (Chan et al., 2021; Zhao et al., 2018). Giving teachers no-cost access to educational platforms enhanced their capacity to provide strong instruction while supporting their ongoing professional learning.

Electronic communication tools became crucial for sharing information among faculty members (Fu, 2013; Ontario College of Teachers, 2017; Sadeghi et al., 2019). Frequent online meetings enabled teachers to promptly address current challenges and develop solutions together. A cooperative practice developed among faculty members through open discussions and the sharing of teaching materials (Darling-Hammond et al., 2017; McAleavy, 2018; Ontario College of Teachers, 2017). This cooperative setting proved vital for creating support networks and resilience among educators during the crisis.

Keeping an open communication channels with students proved essential for supporting their learning in remote settings (Anderson & Rivera-Vargas, 2020; Salamondra, 2021). Teachers' initiatives to provide consultations and feedback showed dedication to meeting each student's needs. The difficulties encountered while creating learning modules underscore the necessity for proper training and quality materials for teachers shifting to blended teaching methods (Dayagbil et al., 2021; Ancheta & Ancheta, 2020). Insufficient preparation can lead to substandard instructional content, which raises questions about maintaining educational quality in remote setting. Acknowledging the differences in student access to resources required flexible and adaptable approaches to grading and attendance requirements during the pandemic (Kokoc, 2019; Dayagbil et al., 2021; Brand-Gruwel et al., 2014; Williams et al., 2021). Educational institutions must ensure fair access to learning opportunities by accounting for students' varying situations.

Adopting new evaluation approaches during remote instruction demonstrated how traditional assessment methods were adjusted for the new context (Madenyska et al., 2020; Deeley, 2021; Salamondra, 2021). Teachers' use of digital platforms showed their efforts to uphold academic honesty while accommodating different levels of technological access. Redesigned laboratory exercises allowed students to participate in practical coursework using materials accessible at home (Kokoc, 2019; Gogolou & Grigoriadou, 2021). This creative strategy highlights how adaptable teaching methods became necessary during difficult circumstances.

Implementing Learning Management Systems (LMS) became vital for supporting effective remote instruction by organizing course content and enabling communication in one centralized location (Fearnley & Amora, 2020; Nadeem et al., 2021). A well-functioning LMS enhances how institutions operate and encourages collaborative learning experiences. Dedicated technical assistance staff play an important role in helping faculty members solve technology challenges and troubleshoot problems that arise during online teaching (Johnson et al., 2016; Carstens et al., 2021; Fu, 2013). Offering quick support builds teachers' assurance as they work through unfamiliar instructional formats.

Institutional efforts to supply essential equipment and materials proved crucial for preparing and assisting faculty members during the transition to digital instruction (Deeley, 2021; Jones, 2021; Guilbaud et al., 2020). Providing technology access enabled teachers to meaningfully interact with students across various platforms. Creating adaptable work arrangements during this challenging period became necessary to address educators' requirements while teaching remotely (Anand & Bachmann, 2021; Chan et al., 2021; Kraft et al., 2021). Schools that encouraged balance between work responsibilities and personal life saw beneficial effects on teachers' morale and overall effectiveness.

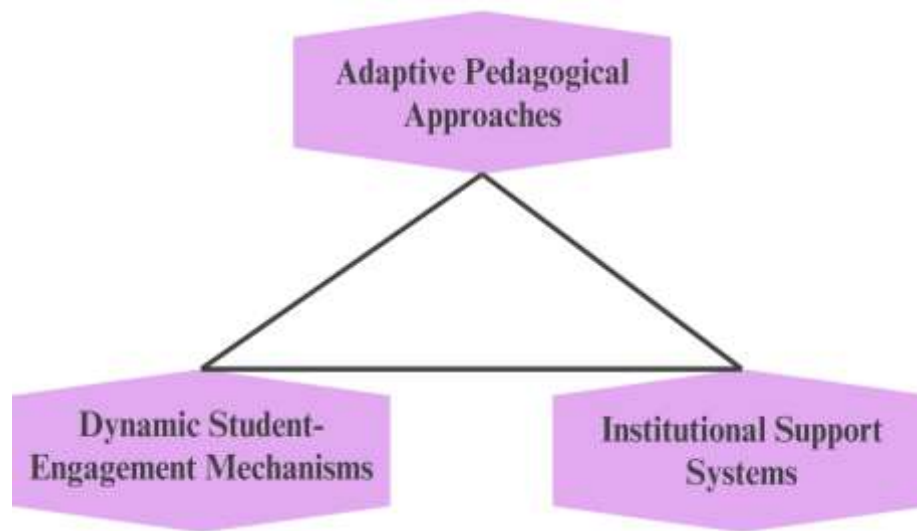
Establishing feedback channels and assessment procedures enables schools to regularly evaluate what works well and what needs improvement in online teaching methods (Alharbi, 2017; Coll et al., 2013). Frequent discussions with concerned stakeholders support making timely adjustments, which contribute to better instructional quality and higher student satisfaction.

The theoretical constructs generated from this study, namely Adaptive Pedagogical Approaches, Dynamic Student-Engagement Mechanisms, and Institutional Support Systems, extend and refine known conceptual models of distance education and institutional adaptation in several aspects. Garrison, Anderson, and Archer's (2000) Community of Inquiry (CoI) model proposes that effective online teaching rests on teaching, cognitive, and social presence as its foundational elements. The present framework agrees that teaching presence plays a central role and situates it within a broader institutional environment, specifically demonstrating that teaching presence on its own is insufficient without an equally associated institutional scaffolding that reinforces what teachers practice, a dimension that this study account for in crisis contexts.

Similarly, Hodges et al. (2020) make an important distinction between emergency remote teaching, which is driven by immediate necessity, and intentional online learning, which is carefully planned and purposeful. While Engestrom's (2001) theory of expansive learning proposes that transformative learning occurs not through pre-planned instruction but through the resolution of contradictions that emerge within activity systems. The higher education institutions (HEIs) that participated in this research gradually shifted over time toward more thoughtful and deliberate approaches to instructional design. This shift was not accidental but was shaped by ongoing feedback from students and teachers, as well as a growing culture of collaboration among faculty members. This accounts for the process of gradual experience-driven improvement, where individuals collectively navigate tensions between existing practices and new contextual demands. In this regard, the present framework offers a flexible and process-sensitive perspective that captures how institutions move from simply reacting to a crisis toward genuinely adapting to it over an extended period of disruption.

The present theoretical integration also deepens Mishra and Koehler's (2006) Technological Pedagogical Content Knowledge (TPACK) model. TPACK emphasizes the integration of technology, teaching strategies, and subject matter knowledge, there is limited attention as to how the surrounding conditions shape whether such integration is actually achievable in practice. The study highlights those conditions, detailing how factors such as peer collaboration among faculty, access to reliable technical support, and flexible work arrangements can either open up or close off opportunities for teachers to translate their technological knowledge into meaningful instructional practice. The framework moves beyond individual teacher competence and draws attention to the institutional and relational teaching environment. The constructs emerging from this study offer a grounded and empirically supported account of how higher education institutions adapt their distance education practices during periods of prolonged disruption, one that both complements and meaningfully extends the theoretical models that have long guided the field.

Figure 2. Data categorization from the systematic exploration of distance learning in the new normal enabled the establishment of a theoretical framework.



The theoretical framework presented in Figure 2 represents the culmination of the grounded theory analytical process undertaken in this study, conceptually illustrating the interconnected relationship among the three core theoretical constructs: Adaptive Pedagogical Approaches, Dynamic Student-Engagement Mechanisms, and Institutional Support Systems. At the center of framework is the premise that these three constructs do not function independently but operate as a mutually reinforcing system, where each construct both informing and being informed by the others in a cyclical and dynamic fashion.

Adaptive Pedagogical Approaches presents both faculty and institutional level dimension of the framework, encompassing the instructional decisions, technological integrations, and flexible teaching strategies that was developed in response to the demands of distance learning. This construct feeds directly into Dynamic Student-Engagement Mechanisms, which captures how faculty-initiated strategies were continuously adjusted based on student responses, resource limitations, and participation patterns, reflecting an ongoing process of responsive and equity-conscious instructional calibration. These constructs are embedded within and sustained by Institutional Support Systems, which represents the organizational infrastructure, including Learning Management Systems, technical assistance, professional development, financial provisions, and evaluation mechanisms, that higher education institutions mobilized to enable and maintain educational continuity.

From a policy standpoint, the formulated Adaptive and Disruption-Responsive Institutional Framework for Teaching (ADRIFT) carries concrete implications for institutional planning and crisis preparedness in higher education. Policymakers and academic administrators are urged to invest proactively in all three dimensions of the framework rather than treating them as isolated operational concerns recognizing that sustainable distance education capacity is built through the simultaneous development of faculty instructional competence, student-centered engagement infrastructure, and robust institutional support ecosystems. In anticipation of future disruptions, whether arising from public health crises, natural disasters, or other emergencies, institutions that have cultivated the triadic integration represented in this framework can better positioned to transition swiftly and equitably to alternative learning modalities without compromising educational quality or faculty and student well-being.

CONCLUSIONS

The research centers on the transition to distance learning from traditional classroom settings in relation to faculty readiness, strategies, and institutional implementation. The context focuses on the navigation of HEIs in the complexities in delivering education through distance modalities and the dynamic nature of pedagogy.

The findings of this research revealed that the educational mechanisms of both teaching and learning went through an extensive transformation as HEIs adjusted to the new norms of COVID-19. The execution of a

flexible learning approach exhibited its crucial significance through the incorporation of modular and online platforms allowing the application of both synchronous and asynchronous modes to adapt to the instructional demands. In addition to responding to the immediate challenges, this reform shows how instructional modalities that put emphasis on learning outcomes and student involvement are constantly evolving. The flexibilities imposed by the faculty and HEIs boost student interests, participation, and constructive perception by accommodating the broad range of learners' preference with consideration of home conditions including resources. The faculty members' call towards a collaborative environment was facilitated by ensuring open communication through digital platforms, and learning materials sharing emphasized the effectiveness of teamwork to ease the processes in navigating changes in the teaching set up.

Moreover, the results emphasized the significance of institutional assistance in effective implementation of these pedagogical techniques. Access to training workshops and instructional resources further equipped faculty members with relevant skills and essential tools to successfully deliver and adapt to changes in their fields of work. In addition to strengthening teaching preparedness, institutional support fosters collaborative culture among faculty and between departments which eventually develops teaching engagements, student participation, and academic pursuits. As illustrated in Figure 2, the interplay of appropriate flexible teaching methods, effective student-engagement techniques, and strong institutional support are the foundation in the establishment of Adaptive and Disruption-Responsive Institutional Framework for Teaching (ADRIFT) framework to maintain and ensure effective deliverance of quality education even during the times of crises or emergencies. Despite the ongoing difficulties, educators' experiences reflect resilience and adaptability. As the systems implemented by HEIs appear to be dynamic to adapt to the changing educational landscape, these conclusions contribute valuable insights in crafting necessary reform and recalibrations in pedagogical structure to guarantee quick response to faculty and student demands in future learning scenarios. Future research should keep investigating and explore these dynamics as learning institutions strive for progressive working environment and professional advancement.

Limitations and Future Studies Recommendations

This study offers valuable insights into faculty strategies and institutional responses to distance learning implementation during the COVID-19 pandemic. The study heavily relied on theoretical sampling drawn from a pool of twelve faculty members across six higher education institutions. The study is geographically specific to Iloilo City, Philippines, a setting with its own distinct social, cultural, infrastructural, and policy characteristics. The unique characteristics of the Philippine higher education landscape and localized institutional capacities have necessarily shaped the findings. Researchers seeking to apply or extend this framework in other contexts are therefore encouraged to conduct their own evaluation of how well the local conditions in their own setting align with those described in this study. Future studies would benefit from longitudinal or real-time data collection across multiple points during an academic year, such as reflective journaling or repeated interviews, to better capture the evolving nature of faculty adaptation and institutional responses as they happen.

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Data Availability: The data supporting the findings of this study cannot be made publicly available due to ethical limitations and restrictions imposed by participant consent agreements.

Conflict of Interest: The author declares no conflict of interest that could have influenced the work reported in this paper.

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REFERENCES

1. Alharbi, W. (2017). E-Feedback as a Scaffolding Teaching Strategy in the Online Language Classroom. *Journal of Educational Technology Systems*, 46(2), 239-251. <https://doi.org/10.1177/0047239517697966>
2. Anand, N. & Bachmann, A. (2021). Teacher's Working Condition and Hybrid Teaching Environment: A Narrative Case Study. *IAFOR Journal of Education: Studies in Education*, 9 (6). <https://doi.org/10.22492/ije.9.6.09>
3. Ancheta, R.F. & Ancheta H.B. (2020). The New Normal in Education: A Challenge to the Private Basic Education Institutions in the Philippines. *International Journal of Educational Management and Development Studies*, 1 (1). <https://iiari.org/wp-content/uploads/2020/09/The-New-Normal-in-Education-1.pdf>
4. Anderson, T. & Rivera-Vargas, P. (2020). A Critical Look at Educational Technology from a Distance Education Perspective. *Digital Education Review*, 37. <https://doi.org/10.1344/der.2020.37.208-229>
5. Andy Hargreaves. 2021. What the COVID-19 pandemic has taught us about teachers and teaching. *FACETS*, 6: 1835-1863. <https://doi.org/10.1139/facets-2021-0084>
6. Barton, E.A., Dexter, S. (2020). Sources of teachers' self-efficacy for technology integration from formal, informal, and independent professional learning. *Education Tech Research Dev*, 68, 89–108. <https://doi.org/10.1007/s11423-019-09671-6>
7. Benson, V., Anderson, D., & Ooms, A. (2011). Educators' perceptions, attitudes and practices: Blended learning in business and management education. *Research in Learning Technology*, 19(2), 143-154. <https://doi.org/10.1080/21567069.2011.586676>
8. Brand-Gruwel, S., Kester, L., Kicken, W. & Kirschner, P. (2014). Learning Ability Development in Flexible Learning Environments. https://doi.org/10.1007/978-1-4614-3185-5_29
9. Carlin, A.P. & Kim, Y. H. (2019). Teaching Qualitative Research: Versions of Grounded Theory. <https://groundedtheoryreview.org/index.php/gtr/article/view/296>
10. Carstens, K.J., Mallon, J.M., Bataineh, M. & Al-Bataineh, A. (2021). Effects of Technology on Student Learning. *The Turkish Online Journal of Educational Technology*, 20 (1). <https://files.eric.ed.gov/fulltext/EJ1290791.pdf>
11. Chan, R., Bista, K., & Allen, R. (2021). *Online Teaching and Learning in Higher Education during COVID-19: International Perspectives and Experiences* (1st ed.). Routledge. <https://doi.org/10.4324/9781003125921>
12. Charmaz, K. (2014). *Constructing grounded theory: A practical guide through qualitative analysis* (2nd ed.). SAGE Publications.
13. Coll, C., Rochera, M. J., de Gispert, I., & Diaz-Barriga, F. (2013). Distribution of feedback among teacher and students in online collaborative learning in small groups. *Digital Education Review*, 23. <https://files.eric.ed.gov/fulltext/EJ1013721.pdf>
14. Commission on Higher Education. (2020). *Guideline on the Implementation of Flexible Learning*. <https://chedro3.ched.gov.ph/wp-content/uploads/2020/10/CMO-No.-4-s.-2020-Guidelines-on-the-Implementation-of-Flexible-Learning.pdf>
15. Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.
16. Darling-Hammond, L., Hyler, M.E., Gardner, M., & Espinoza, D. (2017). *Effective Teacher Professional Development*. Learning Policy Institute. https://learningpolicyinstitute.org/sites/default/files/product-files/Effective_Teacher_Professional_Development_REPORT.pdf
17. Dayagbil, F.T., Palompon, D.R., Garcia, L.L. & Olvido, M.M.J. (2021). Teaching and Learning Continuity Amid and Beyond the Pandemic. *Front. Educ.* 6:678692. <https://doi.org/10.3389/feduc.2021.678692>
18. Deeley, R. M. (2021). Teachers' Perceptions of Factors that Contribute to Technology-Infused Instruction: A Qualitative Descriptive Study. *Northcentral University ProQuest Dissertations & Theses*, 28713779. <https://www.proquest.com/openview/4b9cbb9af0d4ea83ada54140c6160337/1?pq-origsite=gscholar&cbl=18750&diss=y>
19. Engeström, Y. (2001). Expansive learning at work: Toward an activity theoretical reconceptualization. *Journal of Education and Work*, 14(1), 133–156. <https://doi.org/10.1080/13639080020028747>

20. Fabriz. S., Mendzheritskaya, J. & Stehle, S. (2021) Impact of Synchronous and Asynchronous Settings of Online Teaching and Learning in Higher Education on Students' Learning Experience During COVID-19. *Front. Psychol.* 12:733554. <https://doi.org/10.3389/fpsyg.2021.733554>
21. Fearnley, M. R., & Amora, J. T. (2020). Learning Management System Adoption in Higher Education Using the Extended Technology Acceptance Model. *IAFOR Journal of Education: Technology in Education*, 8(2). <https://doi.org/10.22492/ije.8.2.05>
22. Fraenkel, J. R., Wallen, N. E. & Hyun, H. H. (2012). *How to Design and Evaluate Research in Education*, 8th Edition. McGraw-Hill.
23. Fu, J. S. (2013). ICT in Education: A Critical Literature Review and Its Implications. *International Journal of Education and Development using Information and Communication Technology*, 9, 1, pp 112-125. <http://ijedict.dec.uwi.edu/viewarticle.php?id=1541>
24. Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, 2(2-3), 87-105. [https://doi.org/10.1016/S1096-7516\(00\)00016-6](https://doi.org/10.1016/S1096-7516(00)00016-6)
25. Glaser, B.G. and Strauss, A.L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago, IL: Aldine Publishing.
26. Gogolou, A. & Grigoriadou, M. (2021). Educating Students in Technology Enhanced Learning Design by Interweaving Instruction and Assessment. *Informatics in Education*, 20, 3, 421-438. <https://doi.org/10.15388/infedu.2021.17>
27. Gonzalez, M.L., Rivilla, A.M., Garrido, M.C., and Dominguez, M.M. (2019). The Learning Platform in Distance Higher Education: Student's Perceptions. *Turkish Online Journal of Distance Education*, 20 (1), 5. <https://doi.org/10.17718/tojde.522387>
28. Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.). *Handbook of qualitative research* (pp. 105-117). SAGE Publications.
29. Guilbaud, T.C., Martin, F., and Polly, D. (2020). Examining the Digital Professor's Use of Technology and the Required Support. *International Journal of Teaching and Learning in Higher Education*, 32 (3), 376-387. <https://files.eric.ed.gov/fulltext/EJ1299932.pdf>
30. Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The Difference between Emergency Remote Teaching and Online Learning. *EDUCAUSE Review*. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
31. Hofer, S. I., Nistor, N., & Scheibenzuber, C. (2021). Online teaching and learning in higher education: Lessons learned in crisis situations. *Computers in human behavior*, 121, 106789. <https://doi.org/10.1016/j.chb.2021.106789>
32. Johnson, A. M., Jacovina, M. E., Russell, D. E., & Soto, C. M. (2016). Challenges and solutions when using technologies in the classroom. In S. A. Crossley & D. S. McNamara. *Adaptive educational technologies for literacy instruction*, pp. 13-29. New York: Taylor & Francis. <https://files.eric.ed.gov/fulltext/ED577147.pdf>
33. Jones, M. (2021). *Technology as a Technology as a Tool for Support: Classroom Teachers and Resource Specialists in Collaboration and Communication Practices*. Master of Science in Education | Master's Theses. 40. <https://doi.org/10.33015/dominican.edu/2021.EDU.01>
34. Kintu, M.J., Zhu, C. & Kagambe, E. (2017). Blended learning effectiveness: the relationship between student characteristics, design features and outcomes. *Int J Educ Technol High Educ* 14, 7. <https://doi.org/10.1186/s41239-017-0043-4>
35. Kokoc, M. (2019). Flexibility in e-Learning: Modelling its Relation to Behavioural Engagement and Academic Performance. *Themes in eLearning*, 12, 1-16. <https://files.eric.ed.gov/fulltext/EJ1251161.pdf>
36. Kraft, M. A., Simon, N. S., & Lyon, M. A. (2021). Sustaining a sense of success: The protective role of teacher working conditions during the COVID-19 pandemic. *Journal of Research on Educational Effectiveness*, 1-43. <https://doi.org/10.1080/19345747.2021.1938314>
37. Lewis-Pierre, L.J., Kovacich, J., & Amankwaa, L. (2017). The Application of Grounded Theory: An Example from Nursing Workforce Research. *The Qualitative Report*, 22(5). <https://doi.org/10.46743/2160-3715/2017.2525>.
38. Madenyska, N.N., Sovtys, N.M., Halatiuk, M.Y., Symonovych, N.V. & Shurnyn, O.I. (2020). The Analysis of Alternative Distance Learning Implementation into the System of General Professional

- Training of Teachers. *International Journal of Higher Education*, 9, 4. <https://doi.org/10.5430/ijhe.v9n4p339>
39. Marshall-Stuart, D. D. (2018). Blended Learning as an Instructional Strategy to Improve Academic Performance. *Walden Dissertations and Doctoral Studies*. <https://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=6780&context=dissertations>
40. Martin, F., Budhrani, K., & Wang, C. (2019). Examining faculty perception of their readiness to teach online. *Online Learning*, 23(3), 97-119. <https://doi.org/10.24059/olj.v23i3.1555>
41. McAleavy, T., Hall-Chen A., Horrocks, S. & Riggall, A. (2018). Technology supported professional development for teachers: lessons from developing countries. Education Development Trust. <https://files.eric.ed.gov/fulltext/ED593386.pdf>
42. Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, 108(6), 1017–1054. <https://doi.org/10.1111/j.1467-9620.2006.00684.x>
43. Moorhouse, B.L. & Kohnke, L. (2021). Thriving or Surviving Emergency Remote Teaching Necessitated by COVID-19: University Teachers' Perspectives. *Asia-Pacific Edu Res* 30, 279–287. <https://doi.org/10.1007/s40299-021-00567-9>
44. Nadeem, A., Malik, N. and Noreen, S. (2021). Learning Management System: An Innovation in Teaching Learning Process at University Level. *Journal of Entrepreneurship, Management, and Innovation*, 3(2), pp. 409–428. <https://doi.org/10.52633/jemi.v3i2.106>
45. OECD. (2020). Education and COVID-19: Focusing on the long-term impact of school closures, OECD Policy Responses to Coronavirus (COVID-19). <https://doi.org/10.1787/2cea926e-en>.
46. Ontario College of Teachers. (2017). Maintaining Professionalism: Use of Electronic Communication and Social Media. <https://www.oct.ca/-/media/PDF/Advisory%20Social%20Media/ProfAdvSocMediaENPRINT.pdf>
47. Pitsoe, V.J. & Maila, M. (2013). Re-thinking Teacher Professional Development through Schön's Reflective Practice and Situated Learning Lenses. *Mediterranean Journal of Social Sciences* 4(3), 211-218. <https://www.richtmann.org/journal/index.php/mjss/article/view/466/496>
48. Sadeghi, M.A. (2019). Shift from Classroom to Distance Learning: Advantages and Limitations. *International Journal of Research in English Education*, 1 (4). https://www.academia.edu/62664847/A_Shift_from_Classroom_to_Distance_Learning_Advantages_and_Limitations
49. Salamondra, T. (2021). Effective Communication in Schools. *BU Journal of Graduate Studies in Education*, 13, 22-26. <https://www.brandonu.ca/master-education/files/2023/08/BU-Journal-of-Graduate-Studies-in-Education-2021-vol-13-issue-1.pdf>
50. Suen, L. W., Huang H., & Lee, H. (2014). A Comparison of Convenience Sampling and Purposive Sampling. *Hu Li Za Zhi*, 61(3). <https://dx.doi.org/10.6224/JN.61.3.105>
51. Strauss, A., & Corbin, J. (1998). Basics of qualitative research: Techniques and procedures for developing grounded theory (2nd ed.). Sage Publications, Inc. <https://doi.org/10.4135/9781452230153>
52. Tam, G. & El-Azar, D. (2020). 3 Ways the Coronavirus Pandemic Could Reshape Education. *The World Economic Forum COVID Action Platform*. <https://www.weforum.org/agenda/2020/03/3-ways-coronavirus-is-reshaping-education-and-what-changes-might-be-here-to-stay/>
53. Williams, T.K., McIntosh, R.W., & Russell, W.B. (2021). Equity in distance education during COVID-19. *Research in Social Sciences and Technology*, 6(1), 1-24. <https://doi.org/10.46303/ressat.2021.1>
54. Zhao, P., Kynäshlahti, H., & Sintonen, S. (2018). A qualitative analysis of the digital literacy of arts education teachers in Chinese junior high and high schools. *Journal of Librarianship and Information Science*, 50(1), 77-87. <https://doi.org/10.1177/0961000616658341>