

We are IntechOpen, the world's leading publisher of Open Access books Built by scientists, for scientists

6,700

Open access books available

182,000

International authors and editors

195M

Downloads

Our authors are among the

154

Countries delivered to

TOP 1%

most cited scientists

12.2%

Contributors from top 500 universities



WEB OF SCIENCE™

Selection of our books indexed in the Book Citation Index
in Web of Science™ Core Collection (BKCI)

Interested in publishing with us?
Contact book.department@intechopen.com

Numbers displayed above are based on latest data collected.
For more information visit www.intechopen.com



Chapter

Flexible Pedagogies During the Educational Disruption in Bicol, Philippines: Developing Practice-Informed Framework

Rebecca Rosario O. Bercasio

Abstract

The COVID-19 pandemic has tremendously changed the educational landscape worldwide. Education has drastically shifted from face-to-face instructional delivery to flexible learning modalities. At the center of this shift in the modalities are the teachers. This chapter analyzed the teachers' experiences in implementing flexible pedagogies in Bicol, Philippines, during the COVID-19 pandemic in 2021 using the SWOT analysis design, and they proposed a framework that explains the implementation of flexible pedagogies in a disruptive situation. Teachers' experiences reveal flexible schedules and availability of different platforms as among the strengths, and poor internet and lack of teacher support as weaknesses. Learning new technologies for pedagogical purposes and participating in community of practice for sharing resources are noted as opportunities. Leakage of tests and unavailability of experts to critique and validate lessons and materials before actual use, are among the threats. The proposed practice-informed framework for flexible pedagogies covers six factors that are character, context, content, condition, competence, and collaboration. All these factors relate closely to the use of innovative technologies to continue the delivery of learning amidst educational disruption. This proposed framework can serve as a guide in improving the implementation of flexible pedagogies.

Keywords: COVID-19 pandemic, flexible pedagogies, technologies in education, framework building, teachers, students, Philippines

1. Introduction

The unprecedented global crisis caused by the COVID-19 pandemic has significantly changed the educational landscape worldwide. Education across levels, even in countries with advanced school systems, has encountered challenges that affect the key players—the learners, the teachers, the school managers, the parents, and the governments. The United Nations [1] considers this COVID-19 pandemic as responsible for creating the largest disruption of education systems in history, affecting

nearly 1.6 billion learners in more than 190 countries and all continents and leading to the closures of schools and other learning spaces that have impacted 94 percent of the world's student population, up to 99% in low and lower-middle income countries. Additionally, UNESCO [2] estimates that 24 million additional children and youth (from pre-primary to tertiary) may drop out or not have access to school next year due to the pandemic's economic impact alone. These challenges need to be addressed to minimize the adverse effect of the pandemic on the global educational system since education has a critical role in attaining sustainable development [3]. In these critical times during the COVID-19 pandemic, according to UNESCO countries should:

“provide alternative modes of learning and education for children and adolescents who are not in school at both the primary and secondary levels and put in place equivalency and bridging programmes, recognized and accredited by the state, to ensure flexible learning in both formal and non-formal settings, including in emergency situations” [4].

Given the tremendous risk of the COVID-19 pandemic, conventional face-to-face is either not allowed by the authorities or remains impractical, if not intolerable. Thus, there is a need to adopt flexible learning to ensure that though regular in-school classes are disrupted, the learning is undisrupted. According to Lee and McLoughlin [5], flexible learning is a

“set of educational approaches and systems concerned with providing learners with increased choice, convenience, and personalization to suit their needs. In particular, flexible learning provides learners with choices about where, when, and how learning occurs by using various technologies to support the teaching and learning process.”

Flexible learning requires a balance of power between institutions and students and seeks to find ways in which choice can be provided that is economically viable and appropriately manageable for institutions and students alike [6]. The main types of flexible learning include accelerated study, part-time or extended study, work-based study, distance learning, and blended learning [7].

Closely related to flexible learning, flexible pedagogies may refer to ways of considering approaches to teaching and learning that enable such student choices [8]. Furthermore, Gordon [8] elaborates that flexible pedagogies and technology may be regarded as natural partners—flexible learning can be provided by and supported through technology, while conversely, technology can encourage flexible approaches to the delivery and assessment of learning. To Huang et al. [9], flexible pedagogies mean a learner-centered educational strategy that provides choices from the main dimensions of study, such as time and location of learning, resources for teaching and learning, instructional approaches, learning activities, and support for teachers and learners.

To ensure that teaching and learning continued despite the disruption caused by the COVID-19 outbreak, new models and methodologies for flexible teaching and learning needed to be established quickly. As the approaches and methodologies change alongside with the widespread adoption of technologies in education, teachers are expected to continue serving as learning facilitators [10, 11]. Consequently, they are confronted with a variety of technological, social, pedagogical, and cognitive challenges. Among the challenges encountered by the teachers include:

1. A balance between the use of technology and effective pedagogical approaches [12];
2. Expertise in and exposure to technology [13];
3. Effectively integrating technologies to enhance student learning [14];
4. Addressing the student's dissatisfaction with the implementation of online learning in general, particularly in the aspect of quality of learning experience, mental health, finances, interaction, and mobility [15], [16]; and
5. Quickly adapting to the emerging teaching methods and technologies for which there was no established guide that can be followed [17].

Notwithstanding the challenges that may be involved in flexible learning, literature reveals its benefits such as helping meet the needs of a diverse range of students, enabling part-time study that could be attractive for sponsors, allowing students to combine work, study and family, enabling students to develop skills and attributes to successfully adapt to change [18], facilitating a higher proportion of class time interacting, collaborating and engaging with the lesson content [19], improved learning outcomes resulting from evidence-based and technology-enabled teaching methods, more choices in different kinds of learning, more scheduling options, enhanced personalization of degree programs, more just-in time learning options for career learners, improved learning experiences, including more experiential and community-based learning options, more global learning options, and more open content—learning materials are often free and not restricted to students registered in a degree program [20].

In the context of the challenges to education brought about by the pandemic, and the challenges and opportunities in flexible learning and flexible pedagogies, there is a strong need to determine the strengths, weaknesses, opportunities, and threats in implementing flexible pedagogies based on the teachers' experiences. Likewise, it is important to develop a framework for flexible pedagogies that is based on this analysis of the teachers' experiences, challenges, observations, and insights.

2. Methodology

2.1 Research method

This research used a qualitative method to analyze the implementation of flexible pedagogies in the eight dimensions [9]. This analysis was conducted using SWOT analysis. SWOT analysis is used to address issues and is an important source of information in education [21]. It is a flexible model that can be incorporated with newer approaches and techniques [21, 22]. As a method in research, it is used as the method of research in the studies of Stotler [23], Sharma and Singh [24], Rios [25], Kenan et al. [26], Sarhan et al. [27], Pan and Su [28] to investigate different areas and issues in education. In this study, SWOT analysis was conducted to identify the strengths, weaknesses, opportunities and threats in the implementation of flexible pedagogies in Bicol, Philippines based on the teacher's experiences.

This study also used the developmental research method. Developmental research refers to the systematic study of designing, developing, and evaluating instructional

programs, processes, and products and often serves as a basis for model construction and theorizing [29]. In this study, this was used to develop a model or framework that explains the factors affecting the implementation of the flexible pedagogies based on the results of the SWOT analysis captured by the teachers' experiences related to the eight dimensions [9], which can be considered as a practice-informed framework [30].

2.2 Setting of the study

The study was conducted in the Bicol Region, the fifth region out of the 17 regions in the Philippines. The data gathering for the key informant interview (KII) and focus group discussion (FGD) was conducted from April 12, 2021 to May 26, 2021.

2.3 Respondents and key informants

The participants for the KII consisted of 20 full-time teachers from the elementary, junior high school, senior high school, college, and graduate levels during the COVID-19 pandemic. The participants in the FGD consisted of 15 teachers from different levels. The inclusion criteria are as follows: (1) Full-time teachers, (2) Taught during the COVID-19 pandemic through flexible modality, (3) The school where assigned is in Bicol, Philippines, and (4) Willing to participate voluntarily in interviews or FGDs.

2.4 Data gathering strategies and tools

Key informant interviews were conducted using digital platforms such as Zoom, Messenger, and Facebook. The interviews were done synchronously for some key informants and asynchronously for others, depending on their preferences. The focus group discussions were done virtually using Zoom. The SWOT analysis was used to determine the strengths, weaknesses, opportunities, and threats in implementing flexible pedagogies based on the teachers' experiences. Additionally, this study also used expert critiquing and validation of the proposed framework on flexible pedagogies.

The data-gathering tools consisted of the validated researcher-made interview guide, FGD guide questions, and SWOT Matrix. The interview guide was designed and developed guided by the handbook entitled *Facilitating Flexible Learning During Educational Disruption: The Chinese Experience in Maintaining Undisrupted Learning in the COVID-19 Outbreak* [9]. The interview guide consisted of eight questions about the teachers' experiences, challenges, observations, and insights related to the eight dimensions, explicitly dealing with the strengths, weaknesses, opportunities, and threats of implementing flexible pedagogies in Bicol, Philippines. Probing and follow-up questions were raised to clarify or to ask key informants to elaborate on their responses. Actual interviews were conducted using three languages: English, Filipino, and *Bikol* (the vernacular in Bicol, Philippines). The questions for the FGD focused on the teachers' experiences showing the strengths, weaknesses, opportunities, and threats in the implementation of flexible pedagogies covering the different dimensions. The SWOT Matrix is a tool for situation analysis that helps to identify organizational and environmental factors and considers both internal (strengths and weaknesses) and external (opportunities and threats) dimensions [31]. The SWOT analysis was done by examining the responses of the teachers for each of the eight dimensions of flexible pedagogies to the interview and FGD, and then grouping these responses under strengths, weaknesses, opportunities, and threats. One SWOT Matrix is used for each of the eight dimensions of flexible pedagogies. Then, a review

of the SWOT analysis results was collaboratively conducted with five randomly selected KII participants.

The proposed framework on flexible pedagogies was submitted to experts for critiquing and validation. Specifically, the development of the framework was done following these steps: (1) Collecting data from the FGDs and interviews, SWOT analysis, and reading of references and related literature, particularly on flexible pedagogies; (2) Creating the framework, which includes discussion and visual representation; (3) Critiquing of the draft framework two times by expert validators; and (4) Revision of the proposed framework.

2.5 Analysis of data

The data yielded by KIIs and FGDs were mapped in the SWOT Matrix. The analysis of data on the teachers' experiences, challenges, observations, and insights was conducted following the SWOT analysis design. This SWOT analysis was done for each of the eight dimensions of flexible pedagogy [9] and was reviewed to check its veracity.

3. SWOT analysis of the implementation of flexible pedagogy

The COVID-19 pandemic outbreak in 2020 and the lockdowns that followed it prompted education systems worldwide to quickly transform how they approach teaching and learning [32, 33]. With inadequate preparation, teachers were compelled to transition to online education, negatively impacting implementation quality [34, 35]. At such a period characterized by uncertainty, stress, and social distancing [36], many barriers must be overcome so as for innovative technologies to be successfully integrated into educational systems, and these barriers stem from three main factors [37]: (1) Most technologies were not initially designed for learning and teaching, so creating unique models and strategies for their use in education systems is necessary; (2) Technology changes quickly, necessitating constant updating of the models and strategies; (3) Most decision-makers and educators lack specialized training in technology-supported pedagogies, requiring an extensive amount of support in assimilating and utilizing it.

In Bicol, Philippines, the teachers' experiences, challenges, observations, and insights on the implementation of flexible pedagogies reveal valuable information in the eight different dimensions, namely, where and when learning occurs; what and how students learn; how to deliver instruction; what strategies are used to organize learning activities; what type of learning resources should be provided; what technologies are useful; when and how to provide assessment and evaluation; what kind of support and services should be offered to students and instructor. These experiences, challenges, observations, and insights reveal the strengths, weaknesses, opportunities, and threats in the implementation of flexible pedagogies from the teachers themselves amidst the numerous technologies applied in education (see **Table 1**).

3.1 Strengths in the implementation of flexible pedagogies during the COVID-19 pandemic

Implementing flexible pedagogies in the Bicol, Philippines, during the COVID-19 pandemic has strong points that should be sustained. The strong points regarding the place and time of learning and what and how students learn include flexibility in

schedule, flexibility in modality, and focusing on the most essential learning outcomes or competencies. Most teachers reported that they hold sessions flexibly during the specific official schedule and during their preferred time, provided that the students are informed and available depending on the situation, considering power interruption or internet disconnection. One teacher (high school) explained,

“Although there is less physical activity, I have come to like the flexible time because it allows me to do other tasks, especially if I am conducting an asynchronous class.”

Another teacher (college) narrated,

“For flexible learning, I cannot literally be late except when there is internet disconnection or weak internet. If I am disconnected during the synchronous session, I shift to asynchronous modality. We flip the e-classroom. Students can read the posted materials, view the video clips, or study the presentation. We can discuss it in the succeeding meeting, but we will do it fast. Of course, a few students may encounter problems connecting, so we will still discuss.”

Another teacher (elementary) shared

“We do flexible learning through modules combined with online classes. We only meet once a week. During the discussion, we tackle the salient points, and I clarify if there are questions. In the Department of Education (DepEd), we only have the most essential learning competencies, so the coverage is reduced.”

The flexibility in schedule and modality and focus on the most essential learning outcomes or competencies suggest that the work of the teachers during the COVID-19 pandemic became bearable and manageable. Flexibility implies the freedom to adjust schedules and modes of instructional delivery, and therefore it enabled the teachers to fulfill their roles when the conventional class set-up was disrupted. Moreover, reducing the competencies to be covered means reducing the load on the teachers and students. Incidentally, this partially addressed the observed crowded or overloaded curriculum in basic education that is challenging to fully cover within the approved number of school days.

In the dimensions of instructional delivery, strategies to organize learning activities, and learning resources, the identified strong points include the availability of different platforms in teaching, teachers' collaboration in developing learning activities, availability of different materials on the internet to suit the strategies, accessible open educational resources, sharing of learning resources or sources of the learning resources by colleagues. A teacher (college) mentioned,

“There are different platforms that I use: Zoom, Google Meet, Messenger, and Facebook room for synchronous discussion.”

Similarly, another teacher (college) said,

“We use the same syllabus for the course. We prepare collaboratively and then share the different materials and assessment tools. This collaboration among teachers is helpful because it reduces the time needed to prepare the materials and assessment tasks for the whole course.”

Dimensions	Strengths	Weaknesses	Opportunities	Threats
1. Where and when learning occurs	Flexibility in the schedule	Distractions at home Inadequate space for the work The physical exhaustion of teachers	Teachers can do other tasks while implementing flexible learning Time optimization	Multi-tasking due to household responsibilities The attendance issue of the learners becomes alarming
2. What and how students learn	Focus on the most essential learning outcomes/competencies Flexible modality	Some lessons/topics are not adequately discussed Not all teachers and students have a suitable device and internet for the flexible learning	Lessons can be simplified Redundancy/duplication can be reduced or addressed.	Time constraints due to paper works given to teachers
3. How to deliver instruction	Availability of different platforms for teaching	Disruptions in internet connection Modules come late Some teachers are not yet equipped with the knowledge of different teaching platforms	Innovative strategies can be developed	Different barriers in communication Errors in the content of some modules
4. What strategies are used to organize learning activities	Teachers can collaborate in developing learning activities Availability of different materials on the internet to suit the strategies	Some learning activities are boring to some students Similar strategies are used oftentimes	Teachers can tap other platforms in technology to develop learning activities	Limited storage capacity for learning materials Errors due to the absence of rigorous validation before actual use Unavailability of experts to critique learning activities before actual use Teacher's refusal to try out new strategies due to time constraints caused by the large volume of work
5. What type of learning resources should be provided	Open educational resources are available on the internet Colleagues share either sources of the learning resources or learning resources	Appropriateness of learning resources to lesson objectives is sometimes compromised Some ready modules or lessons and materials have errors Teachers need to spend personal money on the learning resources	Discover and innovate learning resources using technology and through collaboration	Lack of funds Lack of time to design and develop new learning resources due to paper works

Dimensions	Strengths	Weaknesses	Opportunities	Threats
6. What technologies are useful	Apps being used are free such as Google Classroom, Gmails/emails, Messenger, Facebook Softwares are generally user-friendly Tutorials on how to use the apps and software are available	Regular power interruption Intermittent internet connection Old/outdated device Some teachers are not yet knowledgeable about the technology	Learn how to use new applications Update the device Upgrade the memory	Technology gets outdated fast Access to the full features of an app requires a paid subscription
7. When and how to provide assessment and evaluation	The assessment focuses only on the most essential competencies/ outcome	The reliability and trustworthiness of student outputs are not guaranteed	Give authentic yet brief assessments which require the integration of specific skills and knowledge	Academic helpers for hire and other adults may perform the assessments Leakage of tests
8. What kind of support and services should be provided for students and instructor	School heads and department heads/ coordinators are available for a virtual consultation Academic-related support is provided, such as giving of sample modules, and instructional materials	Inadequate support to teachers in terms of financial, ICT materials, and psychosocial support	Form a community of practice – a small group where members can mutually support each other	Different schools have different capacities for supporting teachers

Table 1. *Strengths, weaknesses, opportunities, and threats in the implementation of the flexible pedagogies.*

Another teacher (high school) said,

“Most of the references I use are from the internet. I google free materials, PDFs, and open educational resources, which I can use for different learning tasks. I also download educational videos from YouTube to make the instructional delivery interesting. Sometimes, my colleagues share some materials or websites where I can access some relevant materials.”

Another teacher (college) said,

“We do not have an online library, so we cannot access materials from the library. But some of my co-teachers share some internet sources which can help me in my lessons.”

Another teacher (high school) said,

“For the second half of the year, we do not have modules anymore. So, I have to prepare LAS (learning activity sheets), so I usually google for references and resources to make the LAS.”

The teachers' experiences succinctly show that the current digital technologies used for teaching and learning significantly helped during the COVID-19 pandemic. The use of the internet, free applications or software, and learning resources were crucial tools used by teachers in instructional delivery. It can be discerned from their stories that they realized that there was a necessity to take advantage of these digital tools in order to connect with the learners and make learning possible. Since it was a period of adjustment in the use of digital tools, teachers learned to collaborate and share materials. Such collaboration and sharing led to a meaningful professional connection that was strengthened during a time when physical interaction was restricted. This can be seen as a genuine concern for colleagues, the learners, and the school. The difficult times during the COVID-19 pandemic prompted teachers to find ways to fulfill their functions through collaboration and sharing.

For the sixth dimension, the useful technologies, the good points noted are: Applications being used such as Google Classroom, Gmails/emails, Messenger, and Facebook are free; the software is user-friendly; and there are available tutorials. The teachers' responses show that almost all teachers that use synchronous and asynchronous sessions utilize multiple applications and different platforms to connect with the students. One teacher (from high school) shared,

"I use the LMS provided by the school. We use Aralinks. We use Zoom for synchronous discussion. We also use Gmail. I also connect with students and parents through mobile phone and Messenger."

Another teacher (high school) mentioned,

"We use Google Classroom and Google Meet. Then we also use Gmail and then Messenger. In fact, we have a group chat with students. We also have a group chat with parents."

The COVID-19 pandemic paved the way for the use of technologies to an extent like never before. Although technologies have been used for educational purposes before the COVID-19 pandemic, their utilization during the pandemic was phenomenal. Practically, the teachers were able to fulfill their teaching functions because of these technologies. Social media, emails, and other online platforms became common means to deliver instruction across different levels. As noted, the use of these technologies became fully mainstreamed in education in the region, which enabled the continuing of teaching and learning even when schools were closed.

Regarding assessment and evaluation, one good point noted was that assessment focuses only on the most essential competencies/ outcomes. Since the coverage was reduced, focusing only on the most essential learning competencies, the assessment tasks were also reduced, capturing only the most essential competencies or learning outcomes. One teacher (college) narrated,

"I reduced the number of requirements, but these requirements will already allow the integration of the different specific skills and content knowledge. In this way, I am able to address the different learning outcomes without the unnecessary repetition of assessment tasks."

Another teacher (elementary) said,

“The learning tasks indicated in the modules are repetitive, so what I did was to prepare my own. I decided to reduce the learning tasks and reduce the number of items.”

Another teacher (high school) narrated,

“Some modules are returned without answers. I need to return the modules to the students and make them perform the assessment tasks. Due to this experience, I decided not to adopt everything in the module. I choose some of the assessment tasks. Sometimes, I prepare my assessment tasks so that the students will not be overwhelmed by the several assessment tasks.”

The reduced coverage of the curriculum due to the adoption of the most essential competencies led to reduced coverage of the assessment. With reduced assessment, the teachers needed less time to prepare the assessment tools and to check and score the student's outputs. The reduced assessment tasks and requirements for the different subjects incidentally addressed the unnecessary and redundant assessments since the focus was on the most essential competencies. This decrease in the task of the teachers evoked positivity and reduced work concerns during such an extremely challenging time when they, too, had personal and familial concerns to take address.

For the eighth dimension on support and services to teachers and learners, the identified good points include the availability of school heads and department heads/ coordinators for a virtual consultation and the provision of academic-related support regarding sample modules and instructional materials. Several teachers reported having a group chat for their schools and their department or grade level, allowing virtual connections. They can connect with their school heads, department heads, or grade/ year level coordinators on these platforms. Additionally, they are allowed to connect privately with their immediate supervisors. One teacher mentioned,

“If I have concerns, I send a message to the principal, and I receive a response. I can ask questions, request help or give feedback through Messenger.”

Another teacher narrated,

“It is easy to connect to the department head; she is responding promptly.”

The experiences of the teachers during the COVID-19 pandemic show that the school officials rose to the challenge by making themselves available to the teachers. Even when the schools were closed, the connections between and among the school heads and officials, and teachers continued through the use of various social media platforms. The difficult situation served as a precursor to both professional and personal connections which sustained the teachers in fulfilling their responsibilities, helped in clarifying concerns, and even in enhancing their knowledge and competencies in various academic-related concerns.

Flexible pedagogies and technology are natural partners which means that technology can support the implementation of flexible pedagogies and can encourage

flexible methods for the delivery and assessment of learning [8]. The availability of technologies and the context or situations created by them allow the teachers to gain experiences such as flexibility in schedule, availability of materials on the internet such as open educational resources and free applications, and even making consultations with school officials possible virtually.

3.2 Weaknesses in the implementation of flexible pedagogies during the COVID-19 pandemic

Despite the strong points offered by flexible pedagogies, there are also weaknesses accompanying the implementation of the flexible learning modality. According to UNESCO [2], the number of children, youth, and adults not attending schools or universities because of COVID-19 was soaring. Governments all around the world have closed educational institutions in an attempt to contain the global pandemic. The strong measures of social distancing and lockdown during the COVID-19 pandemic have led to significant changes in social relationships, which, for many people, have created feelings of isolation and loneliness [38].

Regarding the place and time of learning and what and how students learn, the following weak points are noted: distractions at home, inadequate work space, and lack of good devices for some teachers and students. Most teachers said that they conducted classes in their room or bedroom where lack of space is a significant problem. One teacher said,

“It is difficult to identify as a teacher and a private person. Work and household chores. Also, my workspace at home is small, and I need to share it with my kids, who also have their online class.”

The economic challenge in the country means that families do not have separate rooms for everyone; thus, there was the use of shared rooms or spaces for educational purposes by the different members of the family. Distractions in small spaces or shared spaces are, therefore normal occurrences. It was also noted that the teachers lacked good and reliable devices and internet while some lessons and topics were not adequately discussed because of time constraints. A teacher narrated,

“At first, it was difficult; during summer vacation, I really worked on the modules. I did it little by little, for example, having the video clips embedded in the topics and simulations and games all added to the activities because it is really difficult to adjust.”

Physical exhaustion on the teacher's part is another downside of the new pedagogy. The teachers have faced significant stressors concerning their work as the pandemic required a sudden shift to remote learning. They were called upon to support student's academic development and well-being throughout this shift as they also navigate adversity and stress in their lives [39]. One teacher had to say,

“I spend more than eight hours a day preparing materials on the computer, and I find myself taking breaks for lunch or short meals just to rest my eyes. Another weakness of this kind of learning is the different distractions at home.”

One teacher narrated,

“One of the parents caught my attention, and according to her, the child is not submitting the requirements and found out that the child is addicted to computer games. So, in this kind of learning, we should closely supervise and constantly communicate with our learners.”

Teachers did not have high-quality devices to use for instructional delivery. This can be partly explained by the high cost of these devices and the limited financial capacity of many teachers. The laptops provided by the government were reported to be of inferior quality as these did not function well and did not last long. The same can be said of the students whose parents' financial capacities are inadequate to provide them with the necessary devices. Succinctly, the socio-economic factors underlie this identified weakness in the lack of high-quality devices.

The dimensions such as instructional delivery, strategies to organize learning activities, and learning resources include weak points such as disruptions in internet connection, late release of the modules, some activities are boring to some students, similar strategies being used oftentimes, some modules and materials contain errors, and some teachers need to spend their personal money for the learning resources. One teacher had to say,

“We take much time in looking for resources or gathering appropriate resources that would be helpful.”

Also, some teachers are not yet knowledgeable about different teaching platforms. One teacher mentioned,

“My experience as a teacher during this pandemic is a period of discovery. During the pre-pandemic phase, I was not equipped with distance set-up knowledge. It was challenging for me to absorb the important guidelines and learn the different processes so I could carry out my lessons in the set-up.”

Another teacher (elementary) said,

“My challenge is I don't know how to write modules, so what I did is to search and to ask the help of my companions in preparing modules, and it took me three days just to design one module. For the second semester, I used Google classroom. The problem was my learners since I was handling grade five; they don't know how to use it.”

A teacher (college) narrated,

“We take so much time looking for resources to gather appropriate resources that would be helpful only if the university can provide.”

The switch to emergency remote teaching (ERT) impacted the teachers' ability to support hands-on competency development due to inequitable student access to tools, materials, and resources, affecting student motivation and engagement [40].

The instructional delivery during the COVID-19 pandemic was a response to an emergency, and therefore, the school system was not totally ready for the changes and challenges. The internet connectivity in the region and even in the whole country was

generally weak, with several areas or places with almost no available connections. The instructional materials like modules were late and erroneous and some activities were noted as uninteresting to the learners and with repetitive strategies. This unpleasant experience with the instructional materials can be explained by the inadequate time involved in the development of instructional materials. Despite their financial limitations, the teachers were forced by the circumstances to spend personal money for the printing of modules for the learners and even for the home visits. These weaknesses added to the concerns of the teachers thus making their work challenging.

Regarding the technologies, the weak points include regular power interruptions, intermittent internet connection, old or outdated devices, and improper use of the technology. One teacher said,

“What I usually do is since my learners inform me ahead of the scheduled brownouts and add to that is the intermittent internet connection, so I postponed the supposedly synchronous classes that we will have. That is one of the most frustrating parts as a teacher.”

Another teacher (elementary) said,

“I send the modules online and no printed copies. The experiences encountered [is] complicated online than teaching in a face-to-face set-up.”

Some teachers, especially those at a late age, are not yet knowledgeable about technology. One teacher said,

“I’m not that techie, so I really have to study with the assistance of my kids. It is really frustrating at first, so stressful. It is difficult to adjust and teach using different kinds of platforms.”

Another teacher said,

“I did all this with someone’s help. My two daughters also help me in attending virtual meetings and even in uploading materials.”

With these identified weak points, it is important to develop the teacher’s digital skills, equip schools with the necessary computer hardware and software, and conduct more research on psychological factors contributing to teachers’ willingness to use technologies for remote teaching in the pandemic and beyond [41].

The regular power interruptions and the poor interconnectivity in the region adversely affected the implementation of flexible learning during the COVID-19 pandemic. These concerns were beyond the control of the teachers and even of the school officials. These could be addressed with the strong political will of the government, both at the national and local levels, and by service providers of the internet. With limited competition in the industry in the region, internet services were generally problematic yet expensive. The old and outdated devices can be explained by the limited financial resources of the school and of the teachers themselves who experienced difficulty purchasing up-to-date devices. The improper use of different technologies for educational purposes can be attributed to the lack of proper training of the teachers. The schools did not have comprehensive capacity-building activities on the use of the different technologies before the COVID-19 pandemic. Teachers reported they resorted to tutorials, self-learning, or consultation with younger colleagues who are more skilled in the use of technologies even before the global health crisis.

In assessment and evaluation, the weak point lies in the reliability and trustworthiness of students' outputs. One teacher said,

"I can see it in my neighborhood that the parents, lola (grandmother), are the ones who are answering the modules, even the test. So, it is a big challenge for me to know the validity of the assessment we give them. We do not know if such a child does all the outputs. So that's one of my problems."

Another teacher (elementary) shared,

"When I conducted a home visit, I personally saw that the learner was playing with a cellphone while the grandmother was answering the module."

Another teacher (college) narrated,

"I found out from my colleague that students hire someone to answer the module or test, even outputs like essays. And the payment is very affordable. It starts at Php 50.00 only. Payment is done via GCash."

The administration of assessment without the presence of the teachers can lead to issues on reliability and trustworthiness. Different forms of cheating could happen therefore compromising the validity of the results. The learners who did not answer the learning tasks themselves were deprived of the opportunity to practice a skill or apply the knowledge gained. Moreover, online assessments are not applicable to all types of learning, and administering online assessments on courses designed for face-to-face learning is challenging. Students and faculty are uncertain about the procedure for administering outstanding assignments, projects, and other continuous assessments [42].

Regarding support and services to teachers and learners, the weak points include inadequate support to teachers regarding finances, ICT materials, and psychosocial support. Almost all teachers reported that they did not receive financial assistance from the school. Most teachers reported that they experienced a lack of support, especially in terms of ICT materials for online classes. Some teachers had to spend their own money to cope with the new platform in teaching. Hence, continuous and personalized professional development should be provided, focusing on pedagogical and technological support [43].

3.3 Opportunities in the implementation of flexible pedagogies during the COVID-19 pandemic

Many opportunities were identified with the implementation of flexible pedagogies. The following salient opportunities are identified regarding the place and time of learning and what and how students learn. Teachers can do other tasks while facilitating flexible learning. In other words, they can take advantage of time optimization. One teacher said,

"That's hitting two birds with one stone; that's usually my style. The output is usually presented to me; they share it and post it. They share it with every group. And then, they post it in our Facebook group chat where everyone will learn."

Through this, the teachers managed to simplify the lessons and reduce or address the redundancies or duplications. Then, the teachers enhanced their collaboration. As this teacher had to say,

“We have at least six teachers, and then we divided all the topics in the modules into ten topics. It is manageable because two will be assigned for one module. So, it’s very manageable for me and the other teachers to combine the modular approach with synchronous and asynchronous discussion.”

This crisis allowed for the rethinking of how our schools should deliver a good education to our students, despite possible disturbances [44]. The narratives of the teachers reveal how they have become resourceful in delivering instruction. Though there were obvious challenges, they took actions that manifested resilience, positivity, and adaptability.

The flexibility regarding time and place for teaching allowed teachers to multi-task, optimize their time, and collaborate with colleagues while they were at home. While preparing a lesson, they could respond to students’ queries or ask a question from a colleague or school official. Besides, the teachers could do their work as teachers and at the same time, could attend to home and family concerns. Since there was a challenge in preparing modules or learning materials within a limited time, teachers spontaneously learned to reach out to one another and collaborate in order to complete the needed instructional resources. The challenging time during the pandemic led to these identified opportunities that may positively influence the teachers and their work.

Many opportunities were identified regarding instructional delivery, strategies to organize learning activities, and learning resources. During the pandemic, innovative strategies can be developed to implement flexible pedagogies. Though schools were closed, schooling went on, and it remained crucial that teachers find ways to see what students were learning [45]. A teacher said,

“I will describe this kind of set-up as a period of adjustment because we are facing many challenges. It is more on delivering learning competencies and, at the same time, being cautious and sensitive about the accessibility of students and their personal adjustment. So far, I have been able to adjust by using different platforms. Aside from Google Classroom, I used the Facebook group page for lessons, and group chats are for announcements.”

Teachers can tap other platforms in technology to develop learning activities. One teacher said,

“I used both synchronous and asynchronous discussions, and I use digital modules simultaneously. Then, during the demonstration classes, we also have the actual demonstration using the videos for their laboratory activities since they have their home laboratory.”

Another teacher said,

“As to my experiences, I used the modules from DepEd for the Technology and Livelihood Education (TLE) subject. I used them in websites or applications. I

modified them. I used the preview on YouTube and some activities online since my subject is Technology and Electricity, and I combined them with the simulations. There are also games in electricity connected to the subject.”

Teachers can also have the opportunity to discover and innovate learning resources using technology and through collaboration, which may motivate the learners to use their creativity. A teacher mentioned,

“I’m so excited to see their outputs every week because they are very innovative. They have done digital storytelling; they are doing some research related to their output in digital storytelling, a compilation of movie clips related to our lesson.”

The pandemic provided challenges to which the teachers responded positively and creatively through the use of the internet and computers. The teachers’ experiences reveal that they adopted innovative ways through the use of different websites, software, YouTube, and other online resources to make learning possible during the disruption. When the teachers recognized the challenges and then the needs, they applied their knowledge and skills so that learning could still be interesting and effective for the learners even when face-to-face classes were restricted. Although given paperwork and administrative tasks, the teacher reported the opportunities they have to make innovations in the lesson design and delivery. Truly, the pandemic has changed how teachers divide their time between teaching, engaging with students, and administrative tasks [46].

Regarding technologies, the opportunity is seen in the need for capacity-building. Teachers are challenged to learn how to use new applications. The new pedagogies have changed how a teacher teaches. An elementary and high school teacher narrated,

“It was first very difficult because I use digital modules in carrying out my lessons because I’m handling five subjects in elementary and in the high school department. At first, I found it very difficult because I’m not a writer, and I’m not good at gadgets. I am not a techie person. But it was a very challenging one as a teacher. Then, later on, I already adapted to the new system.”

Another teacher (high school) mentioned,

“I combined Google Meet and Google Classroom. I posted the link of the Google Classroom, the link to the website, or the link to the module so that it could be interactive.”

Another teacher (college) narrated,

“Flexible learning taught me to be more adaptive. It was quite intimidating, but I could create video lessons with my students’ suggestions. I learned to transcribe my discussions and maximize zoom as my video recording platform. They are also encouraged to update their devices and upgrade the memory of their devices.”

The implementation of flexible pedagogies revealed that digital technologies were fully utilized in education in the region during the COVID-19 pandemic. Although teachers generally have the skills in using the internet and the computer, their experiences revealed that they need comprehensive and continuing training on the use of ICT in teaching. This implies that schools need to provide devices and computers,

software as well as connectivity in order for the teachers to apply what they learn from the training.

Technology is the only means by which we can reach out to our students during school suspension due to COVID-19 [47]. Therefore, we must reconsider when, where, and how learning happens and adapt our approaches and strategies. Teachers need to become competent facilitators of learning that use technology-supported approaches and strategies.

In assessment and evaluation, the opportunity is seen in giving authentic yet brief assessments that require the integration of specific skills and knowledge. Authentic assessment is not a new practice, but in these times of distance learning, the assessments designed for students must demand that they apply their knowledge to new and novel situations [45]. One teacher narrated,

“Every month, we have a Google Meet, and I conduct a graded recitation so I can see who among them are learning, who among them are good in the class. That is how I determine, and it becomes one of the [evidence] of learning.”

Assessment is a necessary component of instruction. In flexible learning, an authentic assessment that does not focus on rote memorization and recall should be emphasized. The teachers can provide the learners with reality-based learning and contextual learning through varied and appropriate authentic assessment techniques. Miller [45] argued that as it is important to have routines and still have variety, selecting two to four tools that work well for the teacher and the students that fit the purpose will help.

Regarding support and services to teachers and learners, the opportunity lies in forming a community of practice—small groups where members can mutually support each other. A teacher mentioned that,

“There are challenges, especially the poor internet signal, but given the flexible time and due date, they could come up with instructional materials. The problem really is the time, but it was manageable because not all the modules were formulated by me. After all, we agreed on two modules for the entire semester.”

With the birth of informal groups, the sharing of resources and insights and the giving of suggestions and support to one another are noted in the teachers' experiences. This identified opportunity to sustain and eventually institutionalize the communities of practice will serve as a strong support to the teachers amidst their numerous concerns and challenges. Undoubtedly, teachers must be supported to enhance their pedagogical competence to ensure teacher effectiveness in instructional delivery. The teachers need professional support to assess students once they return to school to identify what key content and skills have been lost and need rebuilding, detect warning signs of dropping out and undertake effective remedial education [48].

3.4 Threats in the implementation of flexible pedagogies during the COVID-19 pandemic

Educational disruptions refer to the phenomena when a plan is created by an individual or school and interrupted by the unplanned with overlapping and intersecting effects along a continuum of physical, social, and emotional well-being that potentially result in individualized trauma [49]. Accompanying these disruptions are the threats in the whole

educational system that need to be addressed. Regarding the place and time of learning and what and how students learn, the identified threats include multi-tasking due to household responsibilities and time constraints due to paper works given to teachers. Decreasing attendance of the learners becomes an issue, too. A teacher (high school) said,

“For example, in grade 7, I have 26 students inside, but the attendance reaches only 15-18 maximum.”

Another teacher (elementary) narrated,

“At home when I do my work as a teacher, I am interrupted by my work at home. And I also have my own kids who seek my help.”

Likewise, in flexible learning, the teachers may encounter problems in class especially when the learners have divided attention due to different concerns, whether academic, personal, or family concerns. Therefore, teachers need to have clear guidelines for the class and regular reminders and announcements in order to ensure optimum participation in the different learning episodes.

In the dimensions such as instructional delivery, strategies to organize learning activities and learning resources, the following are the identified threats: (1) There are different barriers to communication; (2) There are also errors in the content of some modules; (3) There is limited storage capacity for learning materials; (4) Student engagement is also an issue; (5) There are also errors due to absence of rigorous validation before actual use and unavailability of experts to critique learning activities before actual use. A teacher (college) emphasized,

“All the parts should be understood by the students. Otherwise, they would disturb you from time to time. They would send your message ‘what is this?’”

Another teacher (high school) elaborated her experience,

“Many students do not turn on their cameras, although I remind them. Many students do not participate in the virtual discussion. To avoid more stress, I just think that they have weak internet because that is what they usually say.”

Another teacher (elementary) said,

“We have too much paper works aside from making lessons and modules. I already hired someone to print and staple the printed modules.”

Some teachers also refuse to try new strategies due to time constraints caused by the large volume of work. Another teacher said,

“Actually, I find it difficult because of my limited knowledge of technology.”

Another teacher elaborated on her concern,

“It is time-consuming for me to learn the new technology. I need more time because this is really my first time using the technologies in teaching. Good for those who are to retire, they can just retire.”

These threats in instructional delivery may result in problems and therefore should be addressed as soon as possible. The barriers to communication can be explained by the poor connectivity experienced in the region. The errors in the modules and materials pose a challenge to the accuracy and reliability of these instructional resources. These can be due to the absence of rigorous validation. For the digital formats of the materials, the schools and the teachers themselves did not have an adequate storage device. Lack of funds also underlies these concerns. There is also a lack of time to design and develop new learning resources due to paper works. During the pandemic, low learner participation is one of the most significant issues in online education, possibly caused by poorly designed interaction opportunities for learners [50]. One of the challenges of encouraging learner participation through purposeful and engaging interactions is that current online learning activities are primarily designed asynchronously [50], which was the case for most public schools offering basic education in the country.

The threats in terms of technologies include: technology gets outdated fast, and access to full features of an application requires a paid subscription. Aside from the cost of the technology, there is the possibility of not utilizing all its potential, which arise from a lack of training, the instructor's attitudes about using the technology, and hardware problems. [51]. The issues in the use of technology include insufficient equipment or connectivity, termed the access constraint; inadequate teachers' training related to technology; and support constraints or barriers to technology integration, such as inadequate technical administrative and peer support [52].

Assessing distance learning in a program with a competency-based approach poses numerous challenges to the stakeholders in regular or continuing education programs [53]. The threats in assessment and evaluation are the academic helpers for hire and other adults performing the assessments in terms of assessment and evaluation. A teacher (high school) said,

"In performance tasks in language, for example, I can assess the facial expression and emotion in the delivery. In written works, there is the question of authenticity or originality because I have encountered, one time, two identical answers. The phrases are exactly the same."

Another teacher (college) shared,

"When I read the written outputs of the students, there are exactly similar outputs. They just copied and pasted. I don't have [plagiarism checker but I am sure they were dishonest about their outputs."

Academic dishonesty results in the unfair distribution of ratings to students, and demotivates students who strive to acquire knowledge, and adversely affects the teaching-learning process [54]. An available option to minimize, if not prevent, cheating is to use originality-checking software and lockdown browsers. However, it is essential to know that high overlap with other works does not necessarily indicate plagiarized work, and there can be false positives [55]. Lockdown browsers, which can prevent the use of additional electronic materials during examinations, may not work if the students use a separate device like a cellphone or if they set the lockdown browser inoperative; thus, it should be used together with other examination security measures [56]. These lockdown browsers, however were not available to the teachers involved in this study.

The main threat regarding support and services to the teachers and learners is that some schools have capacities for supporting teachers while others do not have or have less. The teachers reported that a few schools might afford the cost of assistance, such as the monthly communication allowance, cell card, or internet load, but other schools do not have the financial resources at all. Other schools may be able to provide in-service training and professional development to teachers more effectively and efficiently than other schools. One teacher from a private school mentioned,

“We have provided ample training and mentoring, so we were more confident to prepare the modules and the instructional materials as well as conduct class using the virtual mode.”

Another teacher from a public elementary school said,

“We are always required to attend webinars and virtual training. Honestly speaking, sometimes I register and watch the webinar or virtual training while performing another function such as preparing my portfolio or narrative report.”

Another teacher assigned to the college said,

“We need to attend the enhancement activity for the faculty, but while attending, I also do something else like preparing the syllabus.”

Teachers' narratives show that they attend professional development activities while performing another function; thus, they cannot give full attention to either of them. Divided attention due to multi-tasking cannot be expected to result to mastery. When virtual trainings are held, it is important to provide the teachers with release time.

Other schools have enough personnel to provide psychosocial support, while others do not even have their school guidance counselor. One teacher assigned in a small school narrated,

“Most of our webinars are about the academic aspects; we rarely had webinars and activities on improving our knowledge and competencies as para-professional guidance counselors so we can better provide psychosocial support to the learners.”

Providing professional development opportunities to teachers and ensuring they are comfortable in their new teaching environment is essential [57] because these will make them more competent and confident in supporting the students. Teachers will be more successful at remote instruction if they believe they can do it, and school leaders can boost their sense of efficacy [58]. Yet, schools have different capacities to initiate professional development activities for the teachers, and this threat needs to be addressed by considering other means like partnering with other institutions whose mandates include capacity building or collaborating with non-government agencies or foundations whose mission includes enhancement of competencies of teachers.

4. Proposed framework for flexible pedagogies

When seen in the SWOT analysis frame, the teachers' experiences, challenges, observations, and insights on the implementation of flexible pedagogies provide

information that can inform a framework that explains the factors that influence the delivery of the teaching-learning process in a flexible modality. The results of this SWOT analysis provide experiential information helpful in designing a paradigm that will allow a better understanding of flexible pedagogies in the context of fast-evolving technologies.

During the COVID-19 pandemic, new models and approaches to online teaching and learning must be developed quickly [13, 59] to ensure that teaching and learning continue despite the disruption. As these models and approaches evolve, the teachers were expected to continue their tasks as facilitators of learning and were therefore faced with a range of technological, social, pedagogical, and cognitive challenges to the teachers [10, 11] amidst the widespread adoption of technologies in education. As teachers faced issues with the expertise and exposure to technology and thus struggled to adapt to the digital teaching-learning space [13], they were forced to balance the use of technology with effective pedagogy [12]. The teachers were confronted with the challenge of quickly adapting to the teaching methods and technologies for which no pre-prepared guide could be followed [17]. At a period characterized by uncertainty, stress, and social distancing [60], the teachers needed to effectively integrate technologies to enhance student learning by applying their current skills to support and promote learning [14], thus needing an adequate understanding of the affordances and constraints of the different technologies. As students expressed their dissatisfaction with the implementation of online learning in general, particularly in the aspect of quality of learning experience, mental health, finances, interaction, and mobility [15, 16], the teachers needed to find ways to address this dissatisfaction and support student learning in the online environment. As teachers tried to cope with the pedagogical and technological challenges, they, too, needed to deal with the stress and cognitive load involved in managing online teaching and learning [61, 62] and criticisms by parents.

The proposed framework for flexible pedagogies was based on the teachers' experiences in implementing flexible pedagogies, seen in the SWOT analysis frame. It is called the 6 Cs of Flexible Pedagogies. Its development went through a rigorous process with the following suggestions and comments on the draft framework (see **Figure 1**).

1. Add discussion from the work of Ryan and Tilbury [58], mentioning the new pedagogical ideas for the future of an increasingly "flexible" higher education, as follows: learner empowerment, future-facing education, decolonizing education, transformative capabilities, crossing boundaries, and social learning.
2. I commend the researcher for designing a comprehensive framework that considered the 6Cs of flexible pedagogies with the end view of improving the teaching-learning process by addressing the issues and circumstances of the teacher.
3. Consider the revision in the illustration or paradigm for the seamless presentation of the teacher, teaching-learning process, and flexible pedagogies.
4. Add some more references to elaborate on the discussions of the different factors affecting flexible pedagogies.
5. The discussion is clear and comprehensive. This framework is worthy of being disseminated to teachers, school heads, and researchers.

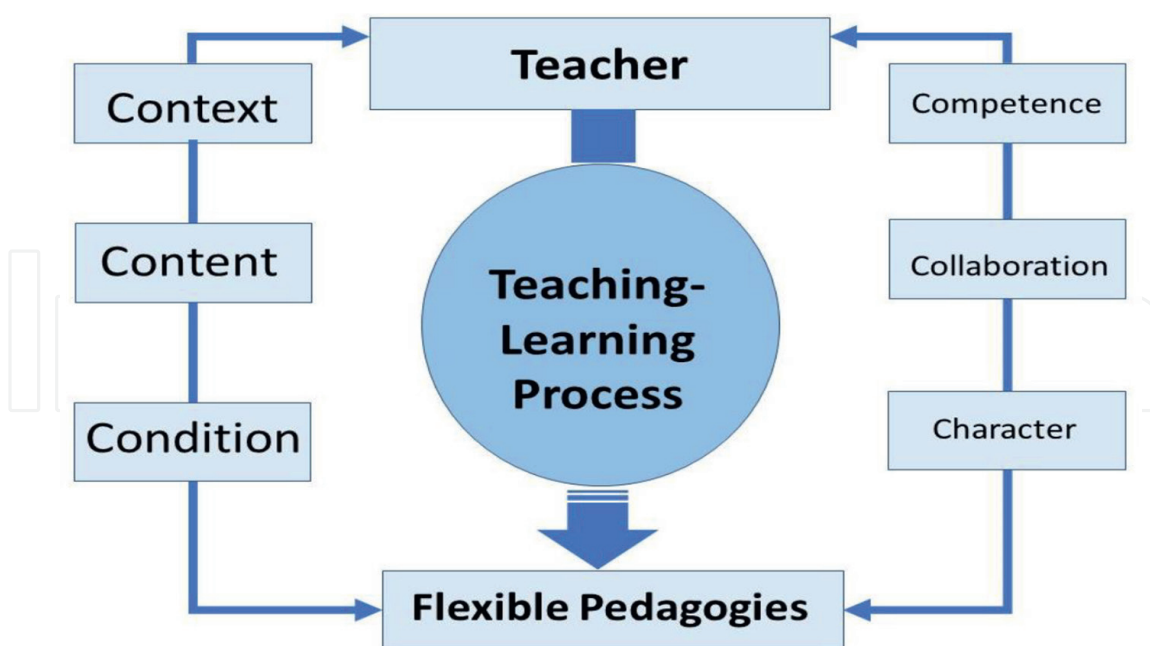


Figure 1.
The six Cs of flexible pedagogies (draft).

6. The proposed framework for flexible pedagogies is relevant and timely. It is an excellent scholarly output and should therefore be given the highest respect and recognition.
7. There is minor editing needed.
8. Change the sequence of the 6Cs to - character, context, content, condition, competence, and collaboration.

5. The six Cs of flexible pedagogies: a proposed practice-informed framework for flexible pedagogies

Society is characterized by disruption, volatility, uncertainty, complexity, ambiguity, and diversity (D-VUCAD). The continuing global health crisis caused by the COVID-19 pandemic has significantly changed and challenged the educational systems worldwide. This pandemic is responsible for creating the largest disruption of education systems in history, affecting nearly 1.6 billion learners in more than 190 countries and all continents and leading to the closures of schools and other learning spaces that have impacted 94 percent of the world's student population, up to 99% in low and lower-middle income countries [2].

At present and in the future, the educational system needs to adapt and adopt flexibility in instructional delivery. Implementation of flexible learning is a viable option to keep learning undisrupted. According to Lee and McLoughlin [5], flexible learning refers to a set of educational approaches and systems concerned with providing learners with increased choice, convenience, and personalization to suit their needs, providing the learners with options about where, when, and how learning occurs, by using a range of technologies to support the teaching and learning process.

With this at the mainstream, there is a need to fully understand flexible pedagogy for the institutions to support the teachers who support the learners and for the teachers themselves to understand and support themselves fully towards appropriate continuing development.

Flexible pedagogies may refer to ways of considering approaches to teaching and learning that enable such student choices [8]. Furthermore, Gordon [8] elaborates that those flexible pedagogies and technology may be regarded as natural partners—flexible learning can be provided by and supported through technology, while conversely, technology can encourage flexible approaches to the delivery and assessment of learning. Flexible pedagogies mean learner-centered educational strategies that provide choices regarding time and location of learning, resources for teaching and learning, instructional approaches, learning activities, and support for teachers and learners [9].

In an educational landscape deeply influenced by fast-evolving technologies, a practice-informed framework for flexible pedagogies is designed to present the factors that affect the delivery of the teaching-learning process, thus affecting the teachers and the performance of their functions. The teachers' experiences and the analysis of these experiences in the eight dimensions [9] informed the development of this framework. Essentially, the framework aims to cite the factors that affect the teachers when flexibility is adopted as an overarching principle in the entire educational system. In this way, the educational institutions will be able to see the teachers from their perspective and then provide the essential support that will optimize their performance for the direct benefit of the students.

The proposed practice-informed framework called the 6Cs of flexible pedagogies, purports that teachers are directly or indirectly affected, and so is the quality of their performance as facilitators of flexible learning by the following: character, context, content, condition, competence, and collaboration (see **Figure 2**).

Character refers to a distinguishing feature or attribute of an individual, group, or category, especially moral qualities, ethical standards, and principles [63]. This includes commitment and candor.

- Commitment is the dedication to a particular organization, cause, or belief and a willingness to get involved, and it grows within people over time.
- Candor is the sense of openness to changes, challenges, developments, trends, criticisms, or suggestions which connotes a willingness to adapt to the demands of teaching during a time characterized by D-VUCAD.

Context refers to the surrounding circumstances that affect the teaching-learning process. It covers both the social situation and the IT infrastructure.

- A social situation is an emergent configuration of people, cultural traits, specific meanings, relationships, time and place, and dynamic processes such as adjustment interaction, social control, social changes, and readjustment [64].
- Information technology infrastructure refers to the technology tools available to or being used by teachers and learners.

Content refers to what the teachers deliver to the learners using different modalities. It includes both the curriculum and the instructional resources.

- Curriculum refers to both the mandated curriculum and the implemented curriculum considering different factors such as the changes and challenges brought about by the COVID-19 pandemic and other issues.
- Instructional resources refer to the materials used by the teachers to attain the targeted learning outcomes, whether provided by the organization/institution, adopted or adapted from other sources, or specifically developed for the purpose.

Condition refers to the climate in the educational setting or academe as it is directly or indirectly influenced or impacted by other societal forces or actions of other entities. Under the condition, policies and governance are included.

- Policies are a definite course of action adopted for expediency, facility, and others. These are the guidelines or stipulations which directly or indirectly relate to education.
- Governance encompasses the system by which an organization is controlled and operates and the mechanisms by which it, and its people, are held to account. Its elements include ethics, risk management, compliance, and administration [65]. Governance has been defined to refer to structures and processes that are designed to ensure accountability, transparency, responsiveness, the rule of law, stability, equity and inclusiveness, empowerment, and broad-based participation [66]. Governance also represents the norms, values, and rules of the game through which public affairs are managed in a manner that is transparent, participatory, inclusive, and responsive [66].

Competence refers to the ability to integrate and apply contextually appropriate knowledge, skills, and psychosocial factors to consistently perform successfully within a specified domain [67]. It can be either individual competence that focuses on the personal and cognitive traits of so-called competent managers or employees in relation to their job performance or organizational competence that focuses on corporation-wide strategic competence and collective practices. It can also be comprehensive, integrating individual and organizational strategic competencies together [68].

- Faculty development refers to the process of enhancing the teachers' competencies as facilitators of learning in different modalities. It involves attendance at different training programs, conferences, webinars, lectures, and the like, as well as coaching and mentoring.
- Institutional expertise means the institution's collective competencies that serve as a source of experts that will assist different departments or faculty in their professional development, especially in flexible learning implementation.

Collaboration is a work practice whereby individuals work together for a common purpose [69]. It involves both communication and connectedness.

- Communication refers to the process of understanding and sharing meaning [70].

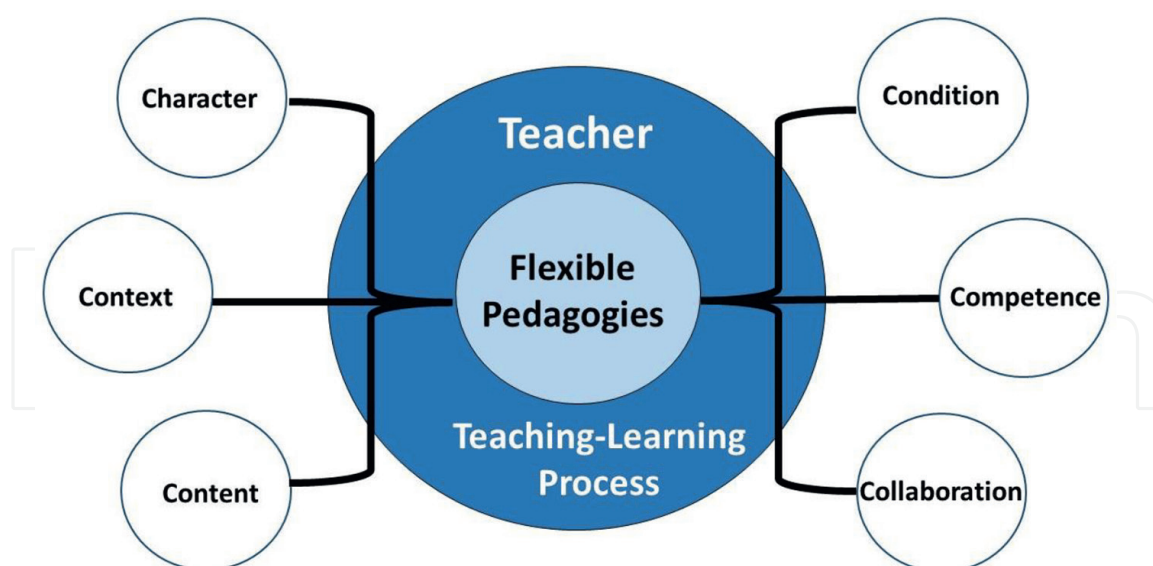


Figure 2.
The six Cs of flexible pedagogies (final version).

- Connectedness refers to being or feeling socially, emotionally, spiritually, or professionally linked with others or with another or the robustness of such relationships [71].

These six factors relate to each other directly or indirectly, but altogether they inform the teacher, his decisions, his choices, and his overall performance. In particular, all these affect the different dimensions such as where and when learning occurs, what and how students learn, how to deliver instruction, what strategies are used to organize learning activities, what type of learning resources should be provided, what technologies are useful, when and how to provide assessment and evaluation, and what kind of support and services should be provided to students and instructor [9].

Considering the 6Cs of flexible pedagogies, the teachers need to be mindful of the different “new pedagogical ideas” that offer new pathways for graduate attributes and capabilities, including learner empowerment, future-facing education, decolonizing education, transformative capabilities crossing boundaries, and social learning [58]. Flexible pedagogical ideas are explored with the learners in mind - to build the capability of the learners to think critically and creatively, develop intercultural competence, develop skills, adapt to the changing circumstances, and propose alternatives under the new normal, among others.

All these “new pedagogical ideas” are elaborated by Ryan and Tilbury [58], and are presented briefly below. Learner empowerment refers to actively involving students in learning development and processes of “co-creation” [58]. Future-facing education means refocusing learning towards engagement and change processes that help people consider prospects and hopes for the future globally [58]. Decolonizing education means deconstructing dominant pedagogical frames and creating experiences that extend intercultural understanding and the ability to think and work using globally sensitive structures and methods [58]. Transformative capabilities refer to creating an educational focus beyond an emphasis solely on knowledge and understanding, using pedagogies guided by transformative approaches to learning [58]. Crossing boundaries involves taking an integrative and systematic approach to pedagogy to generate interdisciplinary, inter-professional, and cross-sectorial learning [58]. Lastly, social learning means

developing cultures and environments for learning that harness the emancipatory power of spaces and interactions outside the formal curriculum [58]. All these pedagogical ideas on learner empowerment, future-facing education, decolonizing education, transformative capabilities crossing boundaries, and social learning by Ryan and Tilbury [58] significantly relate to and affect the 6C's of flexible pedagogies. Therefore, the teachers need to deeply appreciate and understand these pedagogical ideas so that the teaching-learning processes promote the transformative and holistic development of the learners through flexible pedagogies, a form of supportive pedagogies during disruptive times.

Thus, to address issues and concerns related to and to improve the quality of flexible learning, there is a need to seriously consider the teacher's circumstances and improve them, which necessitates looking into these six factors that affect flexible pedagogies. Similarly, these six factors may serve as inputs in designing and implementing a continuing development intervention for teachers, individually or collectively, to enable them to become effective facilitators of learning amidst the technological adaptations in education in a D-VUCAD context.

6. Conclusions

The drastic shift from face-to-face instructional delivery to flexible learning modalities due to the COVID-19 pandemic has posed challenges to the teachers, the facilitators of learning. The teachers' experiences, challenges, observations and insights reveal strengths, weaknesses, opportunities, and threats in the eight dimensions of flexible learning [9], which influence instructional delivery amid a wide variety of technologies during the COVID-19 pandemic. A proposed framework for flexible pedagogies covers factors affecting the teachers and the delivery teaching-learning process, namely, character, context, content, condition, competence, and collaboration, and serves as a means to better understand flexible pedagogies and the teachers during educational disruption when technologies in education have become undeniably pervasive. It is recommended that interventions or policy reforms be made to improve the situations of the teachers and address the identified weaknesses or threats in implementing flexible pedagogies. The proposed practice-informed framework for flexible pedagogies is recommended for further validation. Further studies on flexible pedagogies may focus on specific aspects such as assessment, collaboration with stakeholders, scaffolding the learnings, and other research designs such as case studies, phenomenology, and other qualitative approaches may be considered.

Acknowledgements

The researcher would like to thank the teachers for their voluntary participation in the interviews and focus group discussions and the jurors for critiquing the proposed framework for flexible pedagogies. This study, which is part of a research project Pedagogy, Innovations and Trends during the Educational Disruption, was funded by Bicol University.

Conflict of interest

The author declares no conflict of interest.

IntechOpen


IntechOpen

Author details

Rebecca Rosario O. Bercasio
Bicol University, Legazpi, Philippines

*Address all correspondence to: rrobercasio@bicol-u.edu.ph

IntechOpen

© 2023 The Author(s). Licensee IntechOpen. This chapter is distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. 

References

- [1] United Nations. Policy Brief: Education during COVID-19 and beyond. 2020. Available from: https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/08/sg_policy_brief_covid-19_and_education_august_2020.pdf
- [2] UNESCO. COVID-19 Education Response: How Many Students are at Risk of not Returning to School? Advocacy Paper. 2020. Available from: <https://unesdoc.unesco.org/ark:/48223/pf0000373992?locale=en>
- [3] SEAMEO-INNOTECH. Integrating Education for Sustainable Development into Secondary Education Social Studies Curriculum in Southeast Asia. 2010. Available from: http://www.seameo-innotech.org/wp-content/uploads/2014/01/PolRes_Integrating-Education-for-Sustainable-Development.pdf
- [4] UNESCO. Education 2030 Incheon Declaration and Framework for Action. 2016. Available from: http://uis.unesco.org/sites/default/files/documents/education-2030-incheon-framework-for-action-implementation-of-sdg4-2016-en_2.pdf
- [5] Lee MJW, McLoughlin C. Beyond distance and time constraints: Applying social networking tools and Web 2.0 approaches to distance education. In: Veletsianos G, editor. *Emerging Technologies in Distance education Research*. Edmonton, AB: Athabasca University Press; 2010. Available from: https://www.researchgate.net/publication/285077300_Beyond_distance_and_time_constraints_Applying_social_networking_tools_and_Web_2_0_approaches_in_distance_education
- [6] Advance HE. Flexible Learning in Higher Education. 2020. Available from: <https://www.advance-he.ac.uk/guidance/teaching-and-learning/flexible-learning>
- [7] Bennington B, Tallantyre F, Le Cornu A. *Flexible Learning: A Practical Introduction for Students*. York: The Higher Education Academy; 2013. Available from: https://s3.eu-west-2.amazonaws.com/assets.creode.advancehe-document-manager/documents/hea/private/fl_student_guide_0_1568036752.pdf
- [8] Gordon N. *Flexible Pedagogies: Technology-enhanced Learning*. York: The Higher Education Academy; 2014. Available from: https://s3.eu-west-2.amazonaws.com/assets.creode.advancehe-document-manager/documents/hea/private/resources/tel_report_0_1568036617.pdf
- [9] Huang RH, Liu DJ, Tlili A, Yang JF, Wang HH et al. *Handbook on Facilitating Flexible Learning during Educational Disruption: The Chinese Experience in Maintaining Undisrupted Learning in COVID-19 Outbreak*. 2020. Available from: <https://iite.unesco.org/wp-content/uploads/2020/03/Handbook-on-Facilitating-Flexible-Learning-in-COVID-19-Outbreak-SLIBNU-V1.2-20200315.pdf>
- [10] Alenezi E, Alfadley AA, Alenezi DF, Alenezi YH. The sudden shift to distance learning: Challenges facing teachers. *Journal of Education and Learning*. 2022;11(3):14. DOI: 10.5539/jel.v11n3p14
- [11] Barron M, Cobo C, Munoz N, Ciarrusta IS. The changing role of teachers and technologies amidst the COVID 19 pandemic: Key findings from a cross-country study. 2021. Available

from: <https://blogs.worldbank.org/education/changing-role-teachers-and-technologies-amidst-covid-19-pandemic-key-findings-cross>

[12] Rapanta C, Botturi L, Goodyear P, et al. Balancing technology, pedagogy and the new normal: Post-pandemic challenges for higher education. *Postdigital Science and Education*. 2021;**3**:715-742. DOI: 10.1007/s42438-021-00249-1

[13] Pokhrel S, Chhetri RA. Literature review on impact of COVID-19 pandemic on teaching and learning. *Higher Education for the Future*. 2021;**8**(1):133-141. DOI: 10.1177/2347631120983481

[14] DeCoito I, Estaiteyeh M. Transitioning, to online teaching during the COVID-19 pandemic: An exploration of STEM teachers' views, successes, and challenges. *Journal of Science Education and Technology*. 2021;**31**(3):340-356. DOI: 10.1007/s10956-022-09958-z

[15] Barrot JS, Llenares II, Del Rosario LS. Students' online learning challenges during the pandemic and how they cope with them: The case of the Philippines. *Education and Information Technologies*. 2021;**26**(6):7321-7338. DOI: 10.1007/s10639-021-10589-x

[16] Reaid S. Technological and pedagogical challenges for teachers during COVID-19. In: Langran E, editor. *Proceedings of Society for Information Technology & Teacher Education International Conference*. San Diego, CA, United States: Association for the Advancement of Computing in Education (AACE); 2022. pp. 2259-2265. Available from: <https://www.learntechlib.org/primary/p/221019/>

[17] Reimers F, Schleicher A, Saavedra J, Tuominen S. Supporting the continuation of teaching and learning

during the COVID-19 Pandemic Annotated resources for online learning. 2020. Available from: <https://www.oecd.org/education/Supporting-the-continuation-of-teaching-and-learning-during-the-COVID-19-pandemic.pdf>

[18] University of Birmingham. *Promoting Equality of Opportunity through Flexible Learning*. York: The Higher Education Academy; 2016. Available from: https://s3.eu-west-2.amazonaws.com/assets.creode.advancehe-document-manager/documents/hea/private/hea_-_birmingham_1568037348.pdf

[19] Kariippanon KE, Cliff DP, Lancaster SJ, Okely AD, Parrish AM. Flexible learning spaces facilitate interaction, collaboration, and behavioural engagement in secondary school. *PLOS ONE*. 2019;**10**(14):e0223607. DOI: 10.1371/journal.pone.0223607

[20] The University of British Columbia. *Flexible Learning: Benefits for Students*. 2023. Available from: <https://flexible.learning.ubc.ca/for-students/benefits-for-students/#:~:text=Benefits%20include%3A,learning%20delivers%20more%20scheduling%20options>

[21] Benzaghta MA, Elwalda A, Mousa MM, Erkan I, Rahman M. SWOT analysis applications: An integrative literature review. *Journal of Global Business Insights*. 2021;**6**(1):55-73. DOI: 10.5038/2640-6489.6.1.1148

[22] Dyson RG. Strategic development and SWOT analysis at the University of Warwick. *European Journal of Operational Research*. 2004;**152**(3):631-640. DOI: 10.1016/S0377-2217(03)00062-6

[23] Stotler J. Strayer education incorporated: An equity valuation.

- Journal of the International Academy for Case Studies. 2008;**14**(4):83-89. Available from: <https://lib.manaraa.com/books/STRAYER%20EDUCATION%20INCORPORATED%20AN%20EQUITY%20VALUATION.pdf>
- [24] Sharma D, Singh V. ICT in universities of the Western Himalayan region of India II: A comparative SWOT analysis. *International Journal of Computer Science Issues*. 2010;**7**(1):62-71. Available from: https://www.researchgate.net/publication/220489984_ICT_in_Universities_of_the_Western_Himalayan_Region_of_India_II_A_Comparative_SWOT_Analysis
- [25] Rios PJ. A SWOT analysis of globalization in Adventist higher education. *International Forum*. 2013;**16**(1):62-78. Available from: <https://journals.aiias.edu/info/article/view/141>
- [26] Kenan T, Pislaru C, Elzawi A. Trends and policy issues for the e-learning implementation in Libyan universities. *International Journal of Trade, Economics and Finance*. 2014;**5**(1):105-109. Available from: <http://www.ijtef.org/papers/349-N10012.pdf>
- [27] Sarhan LI, Atroshi AM, Ahmed NS. A strategic planning of developing student information management system using SWOT technique. *Journal of University of Human Development*. 2016;**2**(3):515-519. DOI: 10.21928/juhd.v2n3y2016.pp515-519
- [28] Pan KD, Su CL. Research on professional development of rural teachers in Zhanjiang city based on SWOT-PEST analysis. *Open Journal of Social Sciences*. 2023;**11**:418-427. DOI: 10.4236/jss.2023.113030
- [29] Andrade MS, Alden-Rivers B. Developing a framework for sustainable growth of flexible learning opportunities. *Higher Education Pedagogies*. 2019;**4**(1):1-16. DOI: 10.1080/23752696.2018.1564879
- [30] Richey RC. Developmental research: The definition and scope. 1994. Available from: <https://files.eric.ed.gov/fulltext/ED373753.pdf>
- [31] Gürel E. SWOT analysis: A theoretical review. *The Journal of International Social Research*. 2007;**10**(51):994-1006. DOI: 10.17719/jisr.2017.1832
- [32] Azorín C, Fullan M. Leading new, deeper forms of collaborative cultures: Questions and pathways. *Journal of Educational Change*. 2022;**23**(1):131-143. DOI: 10.1007/s10833-021-09448-w
- [33] García-Morales VJ, Garrido-Moreno A, Martín-Rojas R. The transformation of higher education after the COVID Disruption: Emerging challenges in an online learning scenario. *Frontiers in Psychology*. 2021;**12**:1-6. DOI: 10.3389/fpsyg.2021.616059
- [34] Aditya DS. Embarking digital learning due to COVID-19: Are teachers ready? *Journal of Technology and Science Education*. 2021;**11**(1):104. DOI: 10.3926/jotse.1109
- [35] Epps A, Brown M, Nijjar B, Hyland L. Paradigms lost and gained: Stakeholder experiences of crisis distance learning during the COVID-19 pandemic. *Journal of Digital Learning in Teacher Education*. 2021;**37**(3):167-182. DOI: 10.1080/21532974.2021.1929587
- [36] Marroquín B, Vine V, Morgan R. Mental health during the COVID-19 pandemic: Effects of stay-at-home policies, social distancing behavior, and social resources. *Psychiatry Research*.

2020;**293**:113419. DOI: 10.1016/j.psychres.2020.113419

[37] Guri-Rosenblit S. Eight paradoxes in the implementation process of e-learning in higher education. *Distances et Savoirs*. 2006;**4**(2):155-179. DOI: 10.3166/ds.4.155-179

[38] Smith BJ, Lim MH. How the COVID-19 pandemic is focusing attention on loneliness and social isolation. *Public Health Research & Practice*. 2020;**30**(2):3022008. DOI: 10.17061/phrp3022008

[39] Collie R. COVID-19 and teacher's somatic burden, stress, and emotional exhaustion: Examining the role of principal leadership and workplace buoyancy. *AERA Open* 7. 2021;**2021**:1-15. DOI: 10.1177/2332858420986187

[40] Code J, Ralph R, Forde K. Pandemic designs for the future: Perspectives of technology education teachers during COVID-19. *Information and Learning Sciences*. 2020;**121**(5):419-431. DOI: 10.1108/ILS-04-2020-0112

[41] Klapproth F, Federkeil L, Heinschke F, Jungmann T. Teachers' experiences of stress and their coping strategies during COVID-19 induced distance teaching. *Journal of Pedagogical Research*. 2020;**4**(4):444-452. DOI: 10.33902/JPR.2020062805

[42] Sahu P. Closure of universities due to coronavirus disease 2019 (COVID-19): Impact on education and mental health of students and academic staff. *Cureus*. 2020;**12**(4):e7541. DOI: 10.7759/cureus.7541

[43] Badiozaman IFA, Leong HJ, Wong W. Embracing educational disruption: A case study in making the shift to a remote learning environment. *Journal of Applied Research in Higher Education*. 2020;**2020**:1-15. Available from: [https://](https://www.emerald.com/insight/content/doi/10.1108/JARHE-08-2020-0256/full/html)

www.emerald.com/insight/content/doi/10.1108/JARHE-08-2020-0256/full/html

[44] Rojas JF. Flexible learning as the new normal. *Business Mirror*. 2021. Available from: <https://businessmirror.com.ph/2021/05/24/flexible-learning-as-the-new-normal/>

[45] Miller A. Formative assessment in distance learning. George Lucas Educational Foundation. 2020. Available from: <https://www.edutopia.org/article/formative-assessment-distance-learning>

[46] Barron M, Cobo C, Munoz-Najar A, Sanchez I. The changing role of teachers and technologies amidst the COVID-19 pandemic: Key findings from a cross-country study. *Education for Global Development*. 2021. Available from: <https://blogs.worldbank.org/education/changing-role-teachers-and-technologies-amidst-covid-19-pandemic-key-findings-cross>

[47] Laghigna A. Distance Learning: Challenges and Opportunities. *School Education Gateway*. 2020. Available from: <https://www.schooleducationgateway.eu/en/pub/latest/news/distance-learning-challenges.htm>

[48] Beteille T. Supporting Teachers during the COVID-19 (Coronavirus) Pandemic. *Education for Global Development*. 2020. Available from: <https://blogs.worldbank.org/education/supporting-teachers-during-covid-19-coronavirus-pandemic>

[49] Panther L, Allee-Herndon KA, Perrotta K, Cannon S. I Can Tell You Stories: Teacher Education during Educational Disruption. *The Teacher Educator*. 2021. Available from: <https://www.tandfonline.com/doi/abs/10.1080/08878730.2021.1918302?journalCode=utte20>

- [50] Song D, Rice M, Oh EY. Participation in online courses and interaction with a virtual agent. *International Review of Research in Open and Distributed Learning*. 2019;20(1):43-62. Available from: <http://www.irrodl.org/index.php/irrodl/article/view/3998/4952>
- [51] Valentine D. *Distance Learning: Promises, Problems, and Possibilities*. University of Oklahoma; 2002. Available from: <https://www.westga.edu/~distance/ojdla/fall53/valentine53.html>
- [52] Johnson AM, Jacovina ME, Russell DG, Soto CM. Challenges and solutions when using technologies in the classroom. In: Crossley SA, McNamara DS, editors. *Adaptive Educational Technologies for Literacy Instruction*. New York: Routledge; 2016. Available from: <https://files.eric.ed.gov/fulltext/ED577147.pdf>
- [53] Leroux JL. *Assessment of Distance Learning in a Competency-based Approach*. 2018. Available from: <https://www.profweb.ca/en/publications/articles/assessment-of-distance-learning-in-a-competency-based-approach>
- [54] Guangul FM, Suhail AH, Khalit MI, Khidhir BA. Challenges of remote assessment in higher education in the context of COVID-19: A case study of Middle East College. *Educational Assessment, Evaluation and Accountability*. 2020;32:519-535. DOI: 10.1007/s11092-020-09340-w
- [55] Holden OL, Norris ME, Kuhlmeier VA. Academic integrity in online assessment: A research review. *Frontiers in Education*. 2021;6:1-13. DOI: 10.3389/educ.2021.639814
- [56] Hess M. 3 Ways to Support Teachers in Flexible Learning Environments. *eSCHOOL NEWS*. 2021. Available from: <https://www.eschoolnews.com/2021/06/23/3-ways-to-support-teachers-in-flexible-learning-environments/2/>
- [57] Roy M. *Helping Teachers Feel More Confident about Distance Learning*. 2020. Available from: <https://www.edutopia.org/article/helping-teachers-feel-more-confident-about-distance-learning>
- [58] Ryan A, Tilbury, D. *Flexible pedagogies: New pedagogical ideas*. Higher Education Academy. 2013. Available from: https://www.heacademy.ac.uk/sites/default/files/resources/npi_report.pdf
- [59] Popa S. Taking stock: Impacts of the COVID-19 pandemic on curriculum, education, and learning. *Prospects*. 2022;51(4):541-546. DOI: 10.1007/s11125-022-09616-7
- [60] Costley J. Using cognitive strategies overcomes cognitive load in online learning environments. *Interactive Technology and Smart Education*. 2020;17(2):215-228. DOI: 10.1108/itse-09-2019-0053
- [61] Dong Y, Xu C, Chai CS, Zhai X. Exploring the structural relationship among teachers' technostress, Technological Pedagogical Content Knowledge (TPACK), computer self-efficacy and school support. *The Asia-Pacific Education Researcher*. 2019;29(2):147-157. DOI: 10.1007/s40299-019-00461-5
- [62] Picciano AG. *Online Education: Foundations, Planning, and Pedagogy*. Routledge; 2018. DOI: 10.4324/9781315226750
- [63] Dictionary.com. *Character*. 2021. Available from: <https://www.dictionary.com/browse/character>

[64] Carr LJ. Situational sociology.
American Journal of Sociology.
1945;51(2):136-141. DOI: 10.1086/219745

[65] Governance Institute of Australia.
What is Governance?. 2021. Available
from: <https://www.governanceinstitute.com.au/resources/what-is-governance/>

[66] International Bureau of Education.
Concept of Governance. 2023.
Available from: <http://www.ibe.unesco.org/en/geqaf/technical-notes/concept-governance>

[67] Vitello S, Greatorex J, Shaw S. What
is Competence? A Shared Interpretation
of Competence to Support Teaching,
Learning and Assessment. Cambridge
University Press & Assessment;
2021. Available from: <https://www.cambridgeassessment.org.uk/Images/645254-what-is-competence-a-shared-interpretation-of-competence-to-support-teaching-learning-and-assessment.pdf>

[68] Kianto A, Hong J. Handbook of
Research on Knowledge-intensive
Organizations. 2009. Available
from: <https://www.igi-global.com/chapter/knowledge-based-approach-organizational-measurement/20857>

[69] AIIM. What is Collaboration?. 2021.
Available from: <https://www.aiim.org/what-is-collaboration>

[70] Pearson J, Nelson P. An Introduction
to Human Communication:
Understanding and Sharing. Boston, MA:
McGraw-Hill; 2020. p. 6, 504 p

[71] Dictionary.com. Connectedness.
2021. Available from: <https://www.dictionary.com/browse/connectedness>