

STUDENTS' EXPERIENCES TOWARDS IMPROVING ONLINE DISTANCE LEARNING MODALITY (ODLM) AMONG PHILIPPINE HIGHER EDUCATION INSTITUTIONS

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ABSTRACT

The pandemic crisis due to the spread of coronavirus disease 2019 (COVID-19) worldwide leads to the adoption of the most appropriate instructional models of Online Distance Learning (ODL) amid the identified digitalization problems, access barriers, and stakeholders' opposition to modern technologies. This descriptive method of research employed the phenomenology and grounded theory approaches to qualitative research using the survey, Key Informants Interviews (KII), and Focus Group Discussions (FGD) in exploring the 108 (38 Male, 69 Female, and one do not prefer to say) students' experiences with the different modes of ODL delivery among 30 Higher Education Institutions (HEIs) in the Philippines. Thematic content analysis of transcripts follows the phases of initialization, construction, rectification, and finalization, which revealed students' satisfaction with exposure to engaging multi-sensory activities utilizing blended synchronous and asynchronous online learning delivery. The ODL delivery among HEIs will be more productive in maximizing learning outcomes among students when they can easily communicate with teachers and consistently receive personalized asynchronous on-time feedback. The upgrading and re-upgrading of learning resources and infrastructure, human capital development, and data-driven institutional policies among the HEIs have to be in place to revitalize the implementation of flexible ODL as per guidelines set in the CHED Memorandum Order No. 4, s. 2020. The derived ODL model, which illustrates the continuous process of teaching-learning tasks, may be adopted by the instructional designers among HEIs as a means of improving the ODLM experiences of students in diverse places in the Philippines.

Keywords: *Students' Experiences, Online Distance Learning (ODL), Instructional Delivery, Learning Model, Higher Education*



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INTRODUCTION

The sudden shift from traditional face-to-face classroom instruction to online distance learning modalities (ODLM) among the different levels of education emerges some challenges and strengths of educational delivery (Hernandez, 2021; Mukhtar, Javed, Arooj & Sethi, 2020) amid the pandemic crisis due to the spread of coronavirus disease 2019 (COVID-19) worldwide. The pandemic crisis leads to the adoption of different teaching models with the use of synchronous and asynchronous instructional technologies amid the identified digitalization problems, access barriers, and stakeholders' opposition to modern technologies (Careaga-Butter, Quintana & Fuentes-Henríquez, 2020). Furthermore, it was recognized that ODLM promotes student-centered instructions in a flexible learning environment (Bdair, 2021) which demonstrates exposure to varied latest educational technologies and locally available resources for applications of learned skills in the real world.

The Philippine educational system, in particular, has made concerted efforts despite the nationwide lockdowns and school closures to maintain learning continuity and make the instructional delivery mode most convenient and responsive to students' needs for access to quality education. The Philippine Commission on Higher Education (CHED) has issued guidelines for the implementation of flexible learning as a model of instructional delivery during the COVID-19 pandemic crisis, adopting the most innovative options, approaches, or systems beneficial to higher education students (CHED, 2020). The flexibility of the mode of instruction was highly emphasized in the CHED memorandum order no. 4, series of 2020 to address learners' unique needs in terms of place, pace, process, and products of learning as well as the availability of devices, internet connectivity, and levels of digital literacy and technology exposure.

The new paradigm shifts instructional design and delivery away from the usual classroom teaching-learning situation, which puts the students' quality of education at risk of being left behind vis-à-vis the set learning standards. Students among higher education institutions (HEIs) have various strategies employed to make online distance learning (ODL) productive according to the instructional design introduced despite the inequities of available learning resources (UNICEF, 2020). It was noted that learners who do not have access to digital learning resources and who lack the resilience and engagement to learn on their own are at risk of falling behind. Anent to this, Handog (2020) reported that many Filipino people lost their livelihoods due to the pandemic, which limited their capacity to secure educational gadgets and strong internet connectivity for their children, recognizing the Philippines as the second

slowest internet connectivity, as Porcalla (2020) mentioned in his article, among the members of the Association of Southeast Asian Nations (ASEAN).

Online teaching, gaining prominence to have near permanence even after the COVID-19 pandemic (Mishra, Gupta & Shree, 2020; Mathew and Chung, 2021), together with technology integration in the teaching-learning process, is now inevitable to enable teachers to match the demands of 21st - century learning skills. Online learning might be in terms of synchronous, real-time lectures and time-based outcomes assessments, or asynchronous, delayed-time activities, like pre-recorded video lectures and time-independent assessments (Oztok, Zingaro, Brett & Hewitt, 2013). Moreover, Daggett (2014) stresses that teachers need a working knowledge of new approaches to instruction as well as strategies and tools, whether in the synchronous or asynchronous mode of instruction, that enable them to shift their role from disseminators of knowledge to facilitators of the learning process. To remain relevant, university faculty members will need to reinvent learning environments so that digitalization expands and complements adopting new modes of teaching delivery, for which they may not have been trained.

To meet the demands of a digital society in any period of time, teachers who are implementers of the designed learning model shall be trained and capacitated with any introduced technological trends and innovations in teaching. Investment in teachers' competence in a digital environment adoptive to the local resources will lead to greater teaching flexibility and individualization, addressing the learners' needs and specific life phases (Barnett, 2014). The learners and their needs, including the learning resources offered that allow exploration at any place, time, and situation, are the central concerns of flexible learning. It is therefore recognized that the importance of well-planned and well-organized online distance courses that support the learners' development (Chen, 2016; McGaghie, Adler & Salzman, 2020).

As adapting to the structural changes of the whole academic system is inevitable, the need for strengthening HEIs' flexible learning initiatives should be focused upon. Educational institutions should put emphasis on the underlying issue of the ODL implementation satisfaction of the learners in their academic achievement, as they are the central stakeholders of the whole teaching and learning process. The current investigation aims to look through the lens of students' experiences and satisfaction with the different Online Distance Learning Modality (ODLM) among HEIs in the Philippines. The learning experiences of the students outline instructional design that maximizes student learning outcomes, engagement, and motivation despite the connectivity, access, and teacher support barriers.

The framework of constructivist learning theory on students' independent learning of new knowledge and skills by building on their previous experiences with the reinforcement of Dewey's (1938) experiential instructional model was adopted as the guiding principle in the examination of the implementation of ODLM among HEIs. Vygotsky's (1978) zone of proximal development (ZPD) was also explored to strengthen the analysis of maximizing learning while utilizing available resources with the guidance and support of teachers and other resource persons in the community. These frameworks served as guides to assist students with their learning needs in different situations and scenarios in the new normal learning environment. The evolving students' experiences gain better insight into deriving an online distance learning (ODL) model that will maximize learning outcomes among HEIs.

Additionally, the motivational theories of Schunk, Meece, and Pintrich (2014) and Keller (2010) outlined a need for educational programs to encourage student engagement and motivation to learn despite the challenges and shortcomings they encountered. These will provide a framework for understanding students' experiences of their own motivation and engagement under the ODLM educational arrangement among HEIs. The outcome of this investigation may also provide input to the Commission on Higher Education (CHED) in improving the ODLM under the flexible learning scheme benefiting diverse types of learners.

This study will explore students' experiences with the different modes of instructional delivery during the implementation of Online Distance Learning (ODL) among Higher Education Institutions (HEIs). Specifically, the following are the specific objectives: (1) Determine students' satisfaction with ODL modality in terms of a) instructional resources and delivery, and b) feedback and assessment; (2) Expound student experiences in creating productive online learning, and (3) Derive the ODL model based on students' experiences.

METHODOLOGY

Research Design

This descriptive method of research employed the phenomenology approach. The student experiences and satisfaction with Online Distance Learning Modalities (ODLM) were initially determined using a survey conducted containing open-ended questions. The data collected through the survey were reviewed and further validated by employing a series of Key Informant Interviews (KII) and two phases of Focus Group Discussions (FGD) among the purposely selected student participants to expound on their experiences in ODLM. The study concluded with the use of the grounded theory approach from the inductive analysis of data collected on student

experiences, generating the Online Distance Learning (ODL) model. Fraenkel and Wallen (2007) explained that the theory is suggested while there is an ongoing analysis of primary data collected through one-on-one interviews, focus group interviews, and participant observation by the researchers. The more data is collected, the theory is revised, further developed, and clarified, and the process continues until the derivation of the best ODL model that fits the diverse needs of students.

Research Participants

The study adopted the convenience and snowball sampling of the non-probability technique that arrived at a total of 108 (38 Male, 69 Female, and one do not prefer to say) student participants, composed of 78 (72.22%) students from 14 public Higher Education Institutions (HEIs) and 30 (27.78%) students from 16 private HEIs in the Philippines. Students' participation in the administered questionnaire was on a voluntary basis. The student participants were admitted to various degree courses in arts, technology, social science, and natural science at different year levels, with 93 of them being full-time students and 15 working students. The study purposely selected the 13 student key informants (5 Male and 8 Female) from the volunteered 108 participants in the survey conducted. There were eight key informants residing in the Bicol Region, with three of them studying outside the region, one resident of Central Luzon, one resident of Northern Luzon, one in the National Capital Region, one in the Mindanao area, and another one in the Visayas area. They were also involved in the conduct of the two scheduled focus group discussions (FGD) with five participants involved in the first FGD and six participants in the second FGD.

Research Instruments

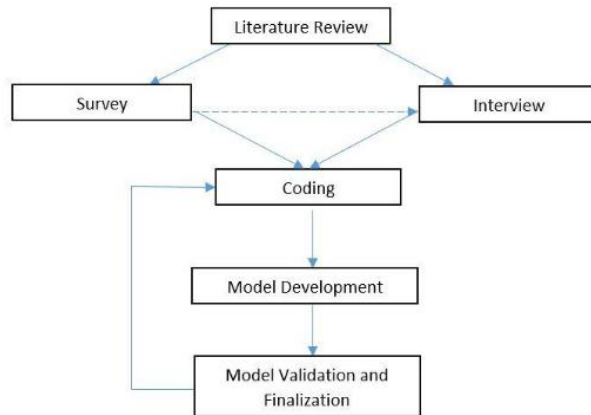
The questionnaire and interview guide served as the main instruments developed in the study. The questionnaire, which was subjected to expert validation, was made available both in print and non-print materials. Data privacy notices and consent were integrated into collecting the personal information of the participants in consonance with RA 10173 or the Data Privacy Act of 2012. The questionnaire contains students' demographic characteristics information, open-ended questions on the teachers' instructional design and delivery, and feedback and assessment practices during the ODLM as experienced by the student participants. They were also asked about their level of satisfaction, along with those identified teaching-learning modalities. The questionnaire also highlighted students' motivation on how they create a productive learning environment despite the challenges of ODLM as essential data in deriving an online distance learning model that would maximize learning outcomes.

The interview guide for the KII and FGD is composed of three main parts: introduction, interview questions, and closing statement. Generally, the interview guide for the KII and FGD were developed with almost the same content but with a different intention. The KII gathers clarificatory information gathered through the survey, while the FGD was the deepening component of the gathered information. The KII lasted for 30 minutes to 45 minutes for each participant, while the FGD lasted for 2 to 2.5 hours. The interview questions are guided by the objectives of the study, which are composed of the five key topics: instructional resources and delivery, feedback and assessment of learning, mode of internet connection and gadgets used, challenges encountered, and coping mechanisms.

Data Gathering Procedure

Figure 1 shows the flow of the research methodologies employed in the study, adapted from the proposed model by Shafique & Mahmood (2010). The literature review served as the framework to understand different theoretical and practical aspects of the study that are necessary for designing the research questions included in the questionnaire and interview guide.

Two-level of primary data collection were executed in this study: (1) Administration of the questionnaire, and (2) Interview. The questionnaire was administered from March 28, 2022 to April 24, 2022 (or four weeks' period) through online surveys using the Google Form as a primary tool. There were a series of follow-up interviews for the entire duration of the study to get authentic data on student ODLM experiences, which were accomplished and administered virtually via zoom from April 25 to May 1, 2022 (or a one-week period) for the KII and from May 12 to 13, 2022 for the two sessions of FGD. The interview was conducted with purposely selected participants who served as the key informants of the study. Open-ended questions were used as an in-depth approach to elicit in-depth responses during the interview process. There were a series of scheduled brainstorming sessions among the research team for data and response validation, which are essential for the generation of appropriate and relevant codes, themes, and a model.

Figure 1*Flow Chart of Research Methodology***Data Analysis**

The initial analysis of the data based on the retrieved questionnaire was coded to produce themes on instructional design and delivery, feedback and assessment, and coping strategies to improve the ODL model. Thematic content analysis from the respondent's responses in the questionnaire, KII, and FGD transcripts follow the theme development method of content analysis of Vaismoradi, Jones, Turunen & Snelgrove (2016) with the following phases: initialization, construction, rectification, and finalization. The *initialization phase* consists of reading and re-reading responses and/or transcripts to reach an overall understanding and meaning of the students' online distance learning experiences, coding and looking for abstraction in participants' accounts, and writing reflective notes to capture participants' true perspectives.

The *construction phase* of the theme development is composed of classifying, comparing, labeling, translating and transliterating, and defining and describing identified codes in relation to the research questions. To help the researchers in generating and refining codes, a literature review was considered. The *rectification phase* of theme development is a verification stage that consists of immersion and distancing, relating themes to establish the derived knowledge, and stabilizing data. The *finalization phase* is the storyline development that answers the research questions. The demographic characteristics of the student participants were considered in the discussion of their learning experiences and strategies for a better learning environment in the ODL model.

The researchers organized a series of brainstorming sessions during the theme development processes to arrive at the ODL model. The brainstorming of the data

gathered from the selected student-participants of the KII and FGDs was considered the basis of the initialization, construction, rectification, and finalization of the derived ODL model of the study.

RESULTS AND DISCUSSIONS

Students' Satisfaction with ODLM in terms of Instructional Resources and Delivery

The students reported a wide range of responses on instructional resources and delivery utilized during the online distance learning modality (ODLM) which revealed the high percentage of student participants who are *satisfied* (46.30%) together with the percentage of students who have a *neutral* (38.89%) satisfaction rating with the provided instructional resources and delivery among HEIs. Only 10 or 9.26% of the student participants are dissatisfied. The student participants particularize the instructional resources and delivery utilized in their distance learning, which holds positive perceptions of its value to facilitate teaching and learning activities in an online setting. With respect to instructional resources, the students can generally access the course materials provided by the teachers through various online platforms or virtual learning portals (VLP) such as Google Classroom, Moodle, Canvas, and Microsoft Teams depending on HEIs capability and choice. A student from a public HEIs reported that the *"Course packs/modules including the syllabus and manuals for laboratory/home experiments were sent through VLP platforms or mail"*. They also utilized recorded lectures and virtual labs such as LABSTER and distributed their materials via Google Classroom. Google Chat, Google Spaces, Hangouts, email, and Facebook Messenger are also used for announcements and communication. These responses indicate that teachers utilize a wide range of resources and media made available to students in online learning to guarantee teaching and learning activities. Besides, an Engineering Student from a private university in Manila specified that the utilization of instructional resources available online depends on the nature of the subject. He appreciated that his teachers usually screen share their presentations, videos, jam board, word processing software like Google Docs and spreadsheet software, and applications such as Autocad and Fusion 360 to satisfy their learning needs. This signifies that teachers are encouraged to create an online distance learning environment more conducive to interactions using the existing instructional resources and adapt to the latest online technologies to fulfill students' satisfaction.

However, the neutral rating of the students demonstrates some challenges encountered despite the availability of the materials online due to accessibility issues. These involve poor internet connection, especially for the students that belong to rural areas (50.93%), and electrical failures, which result in difficulty and failure to attend online lectures. One of the students from a rural area in the Bicol Region who rated ODLM with neutral satisfaction expressed her sentiment during an online class *"I was called for an online recitation and suddenly the internet connection was down."* An electrical failure experience was also shared by a student from a rural area in Masbate that resulted in an unstable network connection while having an ongoing online class. It was also an unfortunate experience when one of the students experienced an outage during a crucial examination as supported by the feedback of a student from an urban Luzon area *"There are times that the Moodle stopped in the middle of your timed examinations"*. The students' active and participatory learning was usually hindered by these technical difficulties during the conduct of online distance learning.

Table 1
Instructional Resources utilized along with the Online Distance Learning (ODL) Delivery

Synchronous	Asynchronous	Synchronous and Asynchronous
<ul style="list-style-type: none"> Google Meet MS Teams Meeting Zoom Conference Chat rooms via messenger /hangouts, polls, and shared documents 	<ul style="list-style-type: none"> Uploaded PowerPoint presentation Pre-recorded video lectures uploaded in YouTube or google drive Recorded video of the synchronous class discussion Audio-recorded lectures or podcasts Online articles Course guide/ packs Workbooks and worksheets Modules or e-modules Group chat via messenger Telegram E-mail Uploaded, scanned educational materials from print texts or books Open Educational Resources (OERs) Online Laboratory Manual Undergraduate and graduate Books Research paper /Journals 	<ul style="list-style-type: none"> All the synchronous and asynchronous delivery approaches Learning Management Systems (LMS) utilized in their institutions such as Moodle, Google Classroom, Canvas, and Microsoft Teams

The learning experiences of the students mentioned in the previous paragraph can be strengthened by the data that portrays 10 or 9.26% of the respondents who expressed their dissatisfaction with the instructional resources and delivery. The dissatisfaction of the students can also be associated with the overwhelming ODL tasks and activities. A student from a public university in Luzon stated that this online learning modality is heavily reliant on outputs as a measure of one's knowledge and understanding of the lesson. It is very detrimental to the well-being of both students and teachers, hence, the student suggested that instead of relying the performance on

heavy outputs such as problem sets, long objective tests, and examinations among others which are usually available online, more formative assessments and reflective activities like informal essays might be encouraged gauge better what works to the students. Another one stated that “... *modules should be simplified because it is really hard to read and understand their bulky content.*” This implies that when the students are bombarded with too much content, it may cause burnout. Too much instructional content without teachers’ presence and assistance can also cause students’ academic burnout, which results in dissatisfaction. The HEIs in the Philippines utilized either purely synchronous, asynchronous, or blended synchronous and asynchronous learning delivery as shown in Table 1. The instructional delivery among the HEIs is generally dependent on the learning infrastructure and resources available, the teachers’ competence and capability to use the technology resources, and the nature of the subject course.

Synchronous Learning Delivery. The students elaborated on their synchronous learning experiences, from scheduling to the actual execution of live classes. The conduct of synchronous classes was scheduled by their teachers in every subject. As narrated by the students from the FGD, there are various practices that teachers carry out in scheduling synchronous classes to meet the class for a live discussion. A student with a neutral satisfaction rating from the Mindanao area shared that when it comes to scheduling, it is between the institution and the department to collaborate in order to prepare the schedule for online classes. In contrast, a student from a public university in Manila expressed that they were involved in scheduling their live classes; “*We are involved in scheduling our online classes through the department head and we will suggest the dates for synchronous classes.*” Another scenario of scheduling synchronous classes was expressed by a student from a public university in Northern Luzon asserting that they have structured plans for each subject formulated by their teachers. The structured plan includes the timeline of the whole course, the topic for the specific week, as well as the delivery mode, whether synchronous or asynchronous. Based on their plan, if the schedule is said to be synchronous, a Google Meet link will be sent a day before the meeting via group chat in Messenger. Furthermore, another satisfied student on the conduct of synchronous from Bicol mentioned that they also have another scheme of scheduling synchronous online classes such as weekly or alternate weekly. However, a couple of students shared their sentiments that some of their professors have other tasks, so even if there is a schedule for synchronous class, the professor failed to meet them, so they need to self-study instead. A student from the Visayas area stated her feelings about the schedule that the online class lasted until 9:00 o'clock in the evening to match the availability of the teacher. Another case is stated by a student from the Luzon area. According to her, “*Due to the lack of a professor, there's a subject that lasts until 7:00*

pm in the evening, and a class at 7:30 am the following day. This is exhausting and there are times that even on weekends we have classes, and we don't have personal time for ourselves." This only means that time allocation and scheduling on the conduct of synchronous classes has a significant impact on the students' satisfaction and learning productivity.

An engineering student with a neutral satisfaction rating highlighted his eagerness to have synchronous classes because, according to him, it is vital to understand clearly the concepts of engineering subjects with the help of the teacher's discussion in real-time. Other respondents also said that live classes are really helpful in their learning experience. Online participation gave them a sense of belonging and helped them communicate with each other; as one student stated, *"Working with classmates is enjoyable and productive."* Online consultation held during synchronous classes is appreciated by the respondents since they can clarify and ask questions from their teacher. This is similar to other responses of students who appreciate the importance of live classes as it cultivates interaction with the instructor and other students, compensating for the lack of physical interaction in a regular classroom setup (Jacques, Ouahabi, & Lequeu, 2020; Rodríguez-Rodríguez, Sánchez-Paniagua, Sanz-Landaluze & Moreno-Guzmán, 2020). It only proves that synchronous classes are helpful for maintaining social presence in a virtual classroom. Thus, when designing online courses, the interaction mechanisms must be considered to offer an enriching and thriving learning environment (Salvador, Torre, Pena, and Davids, 2021).

Asynchronous Learning Delivery. The exchange of instructional resources and the conduct of assessment tasks for asynchronous learning is done through online learning platforms like the university/college Learning Management System or LMS such as Moodle, Google Classroom, Canvas, and Microsoft Teams. These are the general online platforms utilized by teachers to distribute and retrieve instructional resources to the students, accessible for downloading and uploading. Other course materials, associated resources, as well as updates and announcements were posted via Facebook Messenger, Telegram, Google Hangouts, and email. Asynchronous sessions enable learners to reinforce their learning by reviewing the presentations or videos to strengthen their learning after the live classes. Learners can also watch the pre-recorded video or the recorded file for the sake of the students who failed to attend the synchronous session. According to a dissatisfied student on the mode of ODL delivery from a public HEI, he prefers to have pre-recorded video/recorded video of sync classes due to his location and unstable internet connection; he cannot regularly join the live classes. This is the thing that the respondents appreciate the most about asynchronous. They can watch or review the recorded video lecture about the topic at their most convenient time. These findings indicate that in order to

strengthen the outcome of synchronous teaching, asynchronous learning activities shall be designed for practice and deepening of understanding of lessons in a real-life scenario.

Blended Synchronous and Asynchronous Learning Delivery. The six or 5.56% of student respondents of this study who are *highly satisfied* with ODLM experienced the blended synchronous and asynchronous learning delivery. Synchronous sessions were consumed for live teaching and asynchronous sessions for the accomplishment of their coursework in their own time. A highly satisfied student from a private university in Manila shared their scheme on the delivery of their online class: *"The synchronous class is scheduled once a week, and asynchronously for the other two sessions in the same week."* The scheme will let the students explore more of the newly introduced concepts on their own, guided by the learning tasks and activities while having regular meetings and consultations with the concerned teacher. This finding demonstrates that teacher-learner interaction during synchronous and learner-content interaction during asynchronous results in higher student satisfaction. Adopting a combination of synchronous and asynchronous approaches with the incorporation of different applications to engage students is imperative to increasing student satisfaction with online learning management systems (Elshami, Taha, Abuzaid, Saravanan, Al Kawas, & Abdalla, 2020).

Students' Satisfaction with ODLM in terms of Feedback and Assessment Delivery

Feedback and assessment can be seen with utmost importance in the context of distance learning. Fifty out of 108, or 46.30% of the student respondents are *satisfied* with the feedback and assessment tools provided by their teachers. The majority of the satisfied student respondents experienced receiving feedback from teachers in a personalized asynchronous manner through messenger applications, Google Classroom, MS Teams, emails, and VLP. Also, there are a number of satisfied respondents who experienced receiving feedback both asynchronously and synchronously through Google Meet virtual meetings. Furthermore, seven or 6.48% *highly satisfied* students experienced consistent feedback and assessment in a personalized asynchronous manner. Thirty-nine or 36.11% of the respondents have *neutral* satisfaction as they as well experienced receiving feedback through asynchronous tools. On the other hand, 10 or 9.26% of the respondents are dissatisfied and 2 or 1.85% are highly dissatisfied and received little to no feedback on all of the learning activities.

Synchronous Delivery of Feedback and Assessment. The synchronous format highlighted the recitation and written practice tasks as the standard formative assessment tools. Eight or 16% of 50 respondents who were *satisfied* with the feedback and assessment by their instructors, experienced a synchronous approach to receiving feedback. Feedback through live virtual classrooms provides simultaneous interactions where students are consequently getting necessary and immediate feedback as expressed by a BS Nursing student that “... *for laboratory sessions feedback was given via google meet or after return demonstration.*” A student in the Management Accounting course expressed her appreciation to her professor during the FGD session, “*One of our professors gave a PowerPoint presentation showing the solutions to the question that most of the students have an incorrect answer.*”

Asynchronous Delivery of Feedback and Assessment. In general, the majority of the respondents are *satisfied* with the asynchronous feedback and assessment tools provided by their teachers. The feedback that transpires using asynchronous tools such as Google Classroom cannot get feedback instantaneously. Rather, feedback occurs at a later time through email or private messages containing accurate information on the correct answers and solutions, still allowing the students to further enhance their learning. Students experienced consultation hours through email or HEI’s VLP with instructors for quick feedback and a better understanding of topics. A first-year Pharmacy student in the CALABARZON Region said that “*There is a feedback button where we can usually see our score. If it is group work; worksheets are usually given back with annotations that serve as feedback as well.*” Personalized motivational messages are also associated with student positive satisfaction and academic performance, as revealed by one respondent, “*A very simple compliment or encouraging words in the comment box boosts my energy and inspires me to do better.*” This is supported by the quantitative findings of Gallien & Oomen-Early (2008), which suggest that students perform better and are more satisfied with their online course when they receive personalized attention (in the form of feedback) from the instructor. Although feedback is observable, not all instructors among the participating HEIs are providing feedback. As mentioned by a BS Civil Engineering student, “*I rarely receive any feedback on my outputs/task compliance from my instructors.*” A Teacher Education student also supports the previous statement when she stated “*... most of our teachers do not really provide feedback. They just checked the activities then scored it.*” As highlighted by the responses, communication serves as a central part of the students’ overall learning. The lack of feedback mechanism from instructors to outputs and/or task compliance resulted in dissatisfaction among student respondents. A Nursing student disclosed her experience “*... sometimes I wonder if they really check my submitted outputs. I also noticed that our class has almost similar grades at the end of the semester.*” Consequently, students’ inability to

monitor their own academic progress occurs, which they view as a vital component in their overall learning process (Brown, 2007). Students who can easily communicate with their instructors are more satisfied with the learning compared to those having difficulties interacting with their instructors (Bray, Aoki, & Dlugosh, 2008). Feedback fosters the relationship between learners and educators through communication.

Blended synchronous and asynchronous delivery of feedback and assessment. A highly satisfied student with the feedback mechanism from a private college in Metro Manila mentioned in his survey response that they receive feedback on their outputs both in live online meetings, and offline through email when he said, “We receive feedback from our teachers during synchronous meetings as well as in private.” Provision of feedback is maximized when there is a synchronous mode of learning delivery in the absence of an asynchronous approach, and vice versa. Several research had indicated that technological tools for ODL aided in providing an opportunity to learn while learning from home (Setyawan, Aznam, Paidi, Citrawati, & Kusdianto, 2020). While students are more satisfied with asynchronous communication tools, they also appreciate the possibility of direct instructor feedback in synchronous settings (Fabriz, Mendzheritskay & Stehle, 2021).

Student Experiences in Creating Productive Online Learning

The challenges encountered by the students during the implementation of ODL can be grouped into learning resources and infrastructure, students’ and teachers’ technological competence, and teachers’ mode of delivery. The specific challenges presented in Table 2 have the corresponding coping strategies employed by the students to create a productive ODL.

Poor internet connectivity. Online learning requires a stable internet connection to be able to access synchronous classes as well as the instructional resources uploaded by the teachers. The identified poor internet connections as a challenge for their online learning can be associated with the geographical location of the 55 students who live in rural areas (50.93%) proving that weak digital infrastructure. This data could be supported by the experiences of the students who utilize not only mobile data but also broadband internet (31 or 28.70%) as coping strategies, and 27 or 25% are taking advantage of the use of mobile data for ODL utilization in a place with a strong connection. With the current state of the internet accessibility, there have been instances where students, particularly those who come from rural areas, have had trouble attending online classes, accessing the learning materials and tasks, and accomplishing the needed requirements. A student from the Bicol region mentioned that they went to the nearest school in order to have a good connection and access

the learning materials. Similarly, a student from the same region expressed her thoughts on ODL by saying, *“It was not easy for me. I have no permanent learning environment because of the Internet connection problem.”*

Table 2
Students’ Challenges and Coping Strategies

Challenges	Coping Strategies
<ul style="list-style-type: none">• Poor internet connectivity	<ul style="list-style-type: none">• Searching for areas with reliable and stable internet connection• Using multiple modes of internet connection• Downloading all the learning materials and/or submitting learning tasks when connected
<ul style="list-style-type: none">• Environmental distractions	<ul style="list-style-type: none">• Moving to areas with minimal distractions• Creating a study plan• Utilizing noise-canceling application tools
<ul style="list-style-type: none">• Unscheduled electric power interruption	<ul style="list-style-type: none">• Looking for areas with no unscheduled power interruption• Seeking copy of recorded video lectures for self-study• Using mobile data for back-up
<ul style="list-style-type: none">• Sustenance of internet access	<ul style="list-style-type: none">• Taking advantage of free Wi-Fi service• Availing load promos
<ul style="list-style-type: none">• Lack of technological competence	<ul style="list-style-type: none">• Seeking support from technologically competent individuals• Attending offline and online relevant trainings such as YouTube video tutorials
<ul style="list-style-type: none">• Limited opportunities for collaboration	<ul style="list-style-type: none">• Creating open communication with classmates, friends, relatives, and neighbors
<ul style="list-style-type: none">• Overwhelming learning tasks	<ul style="list-style-type: none">• Managing of time through a study plan
<ul style="list-style-type: none">• Absence of feedbacks	<ul style="list-style-type: none">• Sending direct messages to teachers

Table 2 (*continuation*)

- | | |
|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> • Limited conduct of synchronous sessions | <ul style="list-style-type: none"> • Searching for learning resources like books, materials from electronic sources such as YouTube videos, published research in journals, and other relevant materials |
|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
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The low internet connectivity also affects the conduct of learning assessments utilizing the time-exam as revealed by an engineering student mobile data user *"It was our major exam and the internet went out, so I need to go out and find a place with strong internet access."* The negative impact of poor internet connectivity is also evident in the conduct of recitation and discussion during synchronous sessions. A student from Camarines Sur who lives in a rural location claims that when he was called for an online recitation, he was unable to return to their online class. In addition, the learning acquisition of the students is also affected, as corroborated by a student in the same region who is a crop science major and said, *"The low internet connection during our online meeting makes the lectures unclear."*

Environmental distractions. Environmental distractions such as participation in household chores, poor learning space, lack of learning resources, and family interruptions at home, among others, weaken students' attention to learning sessions in ODL. One of the common students' responses disclosed, *"Here in our home, I have responsibilities too that sometimes disrupt my focus on studies. During online sessions, people around me are so noisy ..."* Students need a quiet space to focus themselves on any form of learning delivery (Gillick, 2020; Carling, 2020; Erickson, 2018). This space should be intelligently designed, free of distractions, and conducive to learning and focus. Attuned to the development of 21st-century skills among students, an anecdote by an accounting student from a public school in Luzon says, *"When I recorded a report using earphones that have no noise-canceling feature, the sounds of the dogs and roosters from the neighborhood can be heard in the final output."* The students have to spend more time recording until the desired outcome is attained. Some also used a video and audio enhancer for high-quality results. In response to the challenge they faced, students moved to areas with minimal distractions, designated a study space conducive to learning, and created a study plan to accomplish the learning tasks by observing timely submissions. A third-year nursing student shared his strategies for dealing with this situation, *"Having a designated space just for study, avoiding distractions as much as possible, and creating a weekly learning plan to divide time efficiently and systematically."* In addition, accomplishing the household chores before the class was the strategy employed by a graduating education student to counter this particular learning barrier. Undoubtedly, there is a need to understand the complex

relationships between learners, their ways of learning and studying, and the environments within which they study, both physical and virtual (Ng, 2021). In several studies, university students reported that their home had been a distractive environment and mentioned that they were more prone to being interrupted by roommates or family members (Kyne & Thompson, 2020; Son, Hegde, Smith, Wang & Sasangohar, 2020).

Unscheduled power interruption. Unscheduled power outages also posed problems for students attending online classes who are dependent on electricity access while using a wired connection (37.96%) with a Wireless Fidelity (Wi-Fi) modem. The education major student from a rural area shared his experience during his online presentation when there was a sudden power outage. He stated, *"I panicked when I had an online presentation because of the unnoticed power interruption."* It was also an unfortunate experience when one of the students experienced an outage during a crucial examination. In the absence of an electrical supply, students mentioned that they use mobile data as a backup to connect to the Internet. However, a student from the Masbate area narrated that she needed to go to a different place to intercept signals from cellular networks. The student mentioned, *"I have an emergency data load so that I can join a synchronous session despite these problems."* Students appreciated the asynchronous delivery in this particular scenario since they could download the instructional resources anytime. Looking for nearby areas with no unscheduled power interruption is one of the students' options in order to continue with the online classes, especially during scheduled examinations or output presentations.

Sustenance of internet access. In the study authored by Efriana (2021), the researcher identified another learning barrier that caused problems for teachers, students, as well as their parents in the implementation of ODL. He claimed that apart from the academic problems faced by students and teachers, some parents complained that ODL adds to their expenses on internet costs. This was agreed by the respondents of this study, citing that the learning modality in the new normal incurred extra costs, especially for 66 students (61.11%), who regarded mobile data as one of the modes of internet connection for ODL. Because of the high demand for internet connection, particularly in the educational sector, the telecommunications company offered cost-effective load promos to meet the students' needs for the sustenance of internet access. Those students who are not capable of having a broadband connection at home benefited from affordable internet load promos. A management accounting scholar from a highly urbanized city in Luzon suggested that students should be given a sufficient load allowance (at least 5G mobile data per month) to continuously participate in various learning activities. Furthermore, a student who lives in a rural area recommended during the interview that the

government should propose and implement projects with adequate funding concerning wide access to internet connectivity. The existing government initiatives in providing free internet access installed in selected public places have been a great help to students' learning continuity despite the challenges brought by the global health crisis. Students agreed that the free Wi-Fi project launched by the government should be strengthened and expanded so that more students would benefit from it.

Lack of technological competence. Information and communication technology (ICT) has been proven essential in fostering a high standard of instruction and a productive learning environment for both teachers and students. This study reveals that the lack of ICT skills of both teachers and students was observed as one of the barriers to ODL synchronous and asynchronous modes. A student from a public university mentioned that professors also struggled with using online platforms. This statement was supported by the claim of a student from a private institution in Mindanao stating that during their synchronous classes, he assisted his professor in using some features of the learning platform. The expected learning outcomes for a particular session were not completely fulfilled because the time allocated primarily for the learning session was partly used in providing assistance to their teachers. Likewise, student who resides in a rural area was not able to successfully accomplish the exam administered in Google Form because of the lack of knowledge in using this online tool. Inadequate technology competence delimits students' access to available educational resources offered by HEIs. As a way of coping with this challenge, both teachers and students seek support from someone who shows competence in using digital technology. Teachers are suggested to be trained and be equipped with technological competence to make a meaningful ODL experience. Educators need to recognize that ODL requires expertise and skills in the delivery of learning resources to satisfy student needs (Jacques, Ouahabi & Lequeu, 2020).

Limited opportunities for collaboration. Based on the students' responses, the online distance learning tasks were mostly assigned individually, and group tasks were minimal. Several students commented that teachers usually send online learning materials of the handouts such as modules, pdfs, and doc files. These files contain the online activities to be accomplished within the submission period given by the teacher. Minimal collaborative tasks such as group activities during synchronous classes, making of video vlogs, group presentations, video conferencing with breakout rooms, and online group study were designed. An education student from the Luzon area during an interview expressed her desire to have learning tasks that require group discussion because interaction with her classmates helps her to brainstorm ideas and learn and grow from each other. As a result, they created open communication with classmates, friends, relatives, and neighbors through group chats such as Facebook Messenger, Google Hangouts, and Telegram. It is therefore

vital that teachers facilitate group interaction during synchronous classes rather than passive discussion to promote interaction among the students. A student from public HEI mentioned that constant virtual interactions with classmates are one of the good points that the students want to continue with their teacher. This means that students will be more satisfied with the ODL modality when they are engaged with other classmates using online mediums where they can collaboratively plan, meet, practice, research, discuss, and prepare their group outputs in an online environment (Cheung and Vogel, 2013).

Overwhelming learning tasks. Students expressed their feelings about the overwhelming nature of learning tasks provided through the HEIs VLP. The students received an excessive number of assignments, the majority of which had the same due dates, as one of the respondents from a rural location noted. Another freshman nursing student from an urban area stated, *"The overwhelming tasks cause us anxiety and exhaustion."* A recent study affirmed this statement, revealing that multiple assignments given by their teachers added to their anxiety (Sundarasan, Chinna, Kamaludin, Nurunnabi, Baloch & Khoshaim, 2020). A student in the Visayas area mentioned that instructors give an extensive number of modules, and she suggested that modules should be summarized to cover only the most essential learning competencies (MELC) required in the subject. Students were able to organize tasks as a coping strategy, as reflected in their created study plan. This is evident from one student's remark of one of their common coping mechanisms to be productive: *"I make a to-do list wherein every task has a corresponding time."* They prioritize the tasks according to deadlines. Students should create a schedule of the tasks they must accomplish in order to improve their time management skills, including doing lesson activities ahead and extending the time for learning tasks (Joubert, 2020). Time management through a study plan enables them to use their time productively and efficiently in the ODL.

Absence of Feedback. The teachers' provision of feedback is regarded as one of the critical factors that transform assessment into learning. The lack of it creates an immense effect on a student's overall academic performance and learning experience. This is manifested in students' responses specified by a dissatisfied 2nd-year Electrical Engineering student, *"Most of the time, the professors applied self-pace learning and are not giving feedback."* He also added that despite the lack of feedback from their professors, he suggested that professors be reachable and open to conversations and be attentive in replying to their emails, direct messages, and SMS. In support of the previous statement, another highly dissatisfied engineering student shared, *"They just put our grades on the submission bins in the Canvas or Google Classroom."* Scores on major assessments are the only feedback they receive from their instructors without any comments at all. As a result, they are left unaware of their mistakes,

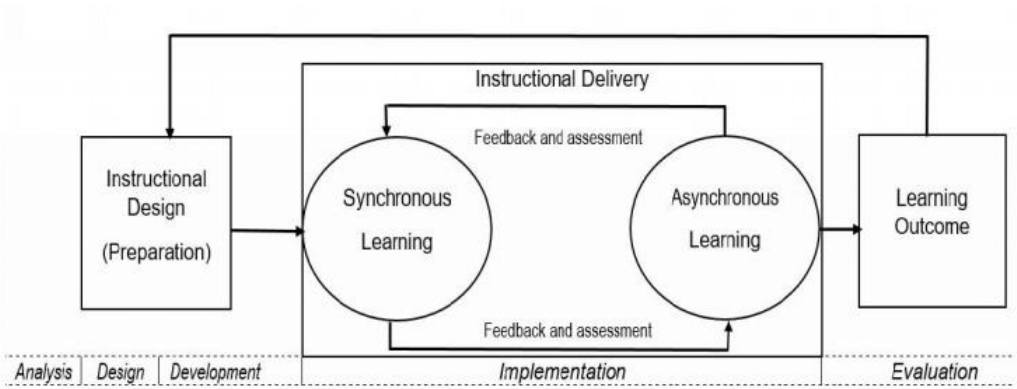
leaving them with no chance of correcting them and improving their learning. Teachers should be able to provide students with qualitative feedback, while students should be able to understand and use it effectively (Canning, 2013). This offers students a chance to assess their understanding of concepts learned, and re-learn the concepts based on the feedback given to produce enhanced learning outcomes.

Limited Conduct of Synchronous Sessions. Synchronous meetings, mainly the use of video conferencing applications, are instruments that encourage student engagement. This serves as an avenue for student collaboration and instructor-student interaction. Chen, Ko, Kinshuk & Lin (2005) showed that synchronous interaction and class participation may result in increased student involvement and, consequently, richer learning experiences. Limiting the conduct of synchronous sessions reduces students' learning progress as supported by the statement of a Nursing student in the Bicol region saying, *"Our teacher only met us twice and we only had one exam. I didn't learn a thing in the subject. I don't know how we passed the subject,"* confirming the students' challenge with the limited conduct of synchronous sessions. With the goal of minimizing the learning gap, students resort to self-paced learning. As a Chemical engineering student explained, *"Most of the time we are already given all the materials we need for the entire course, we just have to study and remain intact with the course schedule when recorded lectures are adequate."* Students value the efficiency of providing recorded lectures to both students and teachers. Accessed internet learning resources like YouTube videos, published journal articles, books, and others give considerable aid to students who seldom experience synchronous discussions for supplementary learning.

Derived online distance learning model based on students' experiences

The derived Online Distance Learning (ODL) model is based on students' experiences as shown in Figure 2, which demonstrates a continuous teaching-learning process of improvement that will guide every HEI educator to achieve the desired outcomes of ODL. The ODL model below is anchored on the widely recognized Instructional System Design (ISD) using the ADDIE (Analysis, Design, Development, Implementation, Evaluation) model framework that supports the Preparation, Implementation, and Evaluation (PIE) stages of the derived model.

Figure 2
Derived Online Distance Learning (ODL) Model to Maximize Student Learning Outcome



The PIE stages reflected in the derived ODL model shall provide guidance to educators in producing well-organized instructions using the appropriate platform for implementation so as to train students to become more independent learners while maximizing expected learning outcomes. This PIE stage of ODL design adopts the principles of instructions that promote learning by engaging learners in solving real-world problems, activating learners’ previous experiences as a foundation for new knowledge, demonstrating new knowledge to learners, applying the new knowledge by the learners, and integrating the newly acquired knowledge into the learners’ world, as enumerated by Khalil & Elkhider (2016).

Preparation (Instructional Design) Stage. The preparation or instructional design of PIE stage is the most critical component of the derived ODL model, which relies its success on how the educators foresee the teaching-learning process in the virtual environment. The teacher has a major role in this stage to reach mastery of learning goals (McGaghie, Adler & Salzman, 2020), which requires enough time for planning and organizing appropriate instructional materials based on the needs of the prospective students. This stage corresponds to the Analysis, Design, and Development Phases of the ADDIE model, where the bulk of work is assigned to the teacher. A well-designed ODL for synchronous or asynchronous lessons will not confuse students; they will know where to start, what to do, and how to utilize the provided materials (Chen, 2016).

The next phases of the PIE stages will depend on how the instructional activities are prepared, designed, or developed based on the available resources of the students, the teacher itself, and the community, which makes it the most critical part of the ODL model. This stage is composed of the analysis of the learners’ profiles, including their previous experiences and knowledge of the subject matter, which will eventually

define the constraints that need to be addressed by the teacher in their instructional design. The strategies and planned learning activities to be developed in this stage shall lead to the identification of the learning resources available to the locality of the learners whether they are for the synchronous or asynchronous lessons. The preparation stage of the derived ODL model is aligned with and adapted to the instructional design introduced by Dick and Carey (1996) who emphasized the interrelationship among the elements of context, content, learning, and instruction to produce the desired outcomes. The performance objectives shall be the basis for the development of the assessment tools and the best instructional strategies for both synchronous and asynchronous lessons, capturing the learners' context to create new knowledge from the produced materials. The produced instructional materials on any online platform familiar to the teaching-learning participants shall be designed by taking into consideration students' previous knowledge and experiences as a building block to becoming active members in the learning process with minimal teacher supervision while maximizing independent learning opportunities anchored on learning by doing principles.

Implementation (Instructional Delivery) stage. The execution of the planned and designed teaching-learning activities will happen in the implementation (instructional delivery) stage. The previous experiences of the students provided inputs for maximizing learning outcomes through the execution of the designed complementary synchronous and asynchronous learning. Together with the designed instructional activities and materials, the semester shall begin with synchronous lessons for leveling expectations, setting course requirements, and subject course orientations. Feedback and assessment shall be an integral component of each designed lesson and learning activity, whether in synchronous or asynchronous learning, so as to keep track of students' success. To strengthen the outcome of synchronous teaching, asynchronous learning activities shall be designed for practice and deepening of understanding of lessons in a real-life scenario. The designed asynchronous learning activities shall train students to become more independent learners where they are taught how to explore certain concepts and their applications in the real world. Students are expected to utilize available resources in the actual environment with the help of online resources and the latest technologies in consonance with outcome-based education (OBE). This ODL design can be supported by the investigation of Al-Areibi, Dickson & Kotsopoulos (2022), who found that the provision of multi-sensory and engaging learning activities in both synchronous and asynchronous modes of instruction promotes student motivation and positive learning outcomes.

Provision of health breaks is encouraged in the implementation phase. Teachers can design a lesson that is more simple, more practical, and easier to implement, either during synchronous or asynchronous learning. The 3-hour duration per subject course per week can be divided into a 2-hour period for synchronous and a 1-hour period for asynchronous learning (2:1), or, 1.5 is to 1.5, or 1 is to 2 ratios of synchronous and asynchronous learning depending on the pre-identified needs of the students and/or nature of the subject. The teacher shall possess high sensitivity to the needs of their students during and after the conduct of either synchronous or asynchronous lessons. While adhering to the production of independent learners exposed to ODL of personalized, innovative, and improved educational experiences and outcomes (Livingston, 2012), teachers shall always be there to assist and guide learners to attain and master those identified skills which are too difficult observing Vygotsky's theory of Zone of Proximal Development or ZPD (Kurt, 2020). Those identified as too difficult skills or topics are potential indicators of weakening pre-requisite skills of students to higher levels of study when not corrected or when they did not receive any help or assistance from the teachers. The HEI educators shall always see to it that the identified concerns and difficulties of the students during and after the execution of the ODL are addressed.

Evaluation (Learning Outcome) stage. The instructional designers of the ODL can assess their success in the evaluation or learning outcome stage of the derived model. This stage of the ODL model will tell whether the planned and designed activities have a positive effect or gain on the learning of the students on the particular topic. This stage of the ODL model consists of activities such as recording of student progress, surveys, and interpretation of test results as the basis for recommendations and/or revisions and enhancements of the ODL instructional design. The evaluation stage overlaps with other stages and/or phases of the ODL model which may occur throughout the entire duration of the designed instructional process, which consists of formative assessment and summative assessment. The feedback component as an integral part of the evaluation stage should be made more personalized and consistent (Rae & Cochrane, 2008), perhaps delivered via the electronic medium in online distance learning to promote student engagement in reflection and self-managed learning. The learning outcome is generally based on the result of the summative assessment, which assesses the overall effectiveness of the designed instructional processes. Though formative assessment and feedback mechanisms have a significant role in achieving the desired outcomes, summative evaluation is often used as the basis of decisions about the instruction.

CONCLUSIONS

It is noted in this investigation that the implementation of the flexible ODL delivery among HEIs in the Philippines generally depends on the available learning infrastructure and resources, students' and teachers' competence, and the nature of the offered subject course. Higher education students exposed to more engaging multi-sensory activities utilizing blended synchronous and asynchronous delivery are highly satisfied with the ODL. The learning resources and infrastructure barriers coupled with the overwhelming learning tasks with limited teachers' support and guidance and limited collaborations among learners while adjusting to the new educational set-up hinder the implementation of the chosen flexible ODL among the HEIs. The implementation of flexible learning as defined in the CHED Memorandum Order No. 4, s. 2020 has not fully saturated the real and diverse concerns as well as unique needs of the students among the HEIs in the Philippines. Considering the students' experiences and the identified challenges among the HEIs stakeholders, the derived ODL model can be operationalized by the Preparation, Implementation, and Evaluation (PIE) stages anchored on the widely accepted Instructional System Design (ISD) such as the ADDIE model framework and Dick and Carey model. The ODL model illustrates the continuous process of improving teaching-learning tasks and expected outputs that will guide every HEI educator to achieve the desired outcomes of flexible ODL.

RECOMMENDATIONS

Based on the conclusions of this study, the following are recommended to improve the delivery of instructions among the Philippine HEIs that will adopt the online distance learning (ODL) modalities.

The nature and capability of Philippine HEIs adopting ODL varies from one region to another and/or from one district to another district base on their locations, access to modern technologies, and connectivity. It is therefore imperative to offer flexibilities among HEIs, whether conventional or non-conventional, along with the delivery of instructions and assessment patterns in the implementation of the ODL base on the available technological resources, teachers' and students' capabilities, and course requirements.

Every HEI in the Philippines has to review and revisit the guidelines set in the CHED Memorandum Order No. 4, s. 2020 to fully operationalize the implementation of flexible learning, capturing the students' unique needs in diverse places with emphasis on the specific but not limited to the following provisions; 1) The general guidelines number 3 *"HEIs shall formulate decisions using data-driven and*

participatory approaches on determining and implementing the most viable form of flexible learning and teaching that will be utilized based on the capability, existing condition, national government agencies guidelines, and local government units advisories”; 2)The general guideline number 6 “...HEIs shall review all their curricular offerings and make the necessary adjustments or modifications in the curricular structures or program of study considering the prerequisite and corequisites, determine alternative options in the design, delivery, pedagogy, and assessment mechanisms that can be delivered to the students through various modalities”

The upgrading and re-upgrading of learning resources and infrastructure, human capital development, and data-driven institutional policies among the HEIs have to be in place and retrofit with the current and existing facilities to revitalize the implementation of the flexible ODL. As part of the human capital development among HEIs stakeholders, the CHED can offer scholarships, short-term courses, and/or training to the administrators and professors, as learning providers, to equip them with the latest technologies along with their services, expertise, and major field of specialization intended for the implementation of the ODL whether synchronous and asynchronous delivery of learning guided by the principles of Outcomes-Based Education (OBE) and applicable policies, standards, and guidelines (PSGs) of the different curricular program offerings.

Anchored on the derived ODL model, the HEIs may provide opportunities for the teachers or professors for a longer period of time in the preparation stage of designing their contextualized instruction to make it more engaging and attuned with the available local resources and ICT capabilities of both the teachers and students. Well-planned instructions will provide better student experiences and thus maximize learning outcomes. The faculty members with the same field of specialization from within or from different HEIs may work hand-in-hand in the preparation and production of multi-sensory learning resources intended for the diverse needs of students in blended synchronous and asynchronous ODL modalities. The HEIs shall ensure the provision of appropriate and available learning resources prepared by the faculty member in charge prior to the start of the semester for a particular course offering. The derived ODL model with PIE (Preparation, Implementation, and Evaluation) stages may be adopted by the instructional designers regardless of the type of HEIs as a means of improving the experiences of students in diverse places in the Philippines.

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