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Enhancing Sustainable Development Through Flexible Learning Modalities in Higher Education Institutions: A Future-Ready Perspective

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Abstract

Flexible learning is a learner-centered approach that empowers students to choose when, where, and how they learn. It has gained prominence due to disruptions caused by the COVID-19 pandemic, heat waves, wildfires, and other natural disasters. In private higher education institutions, flexible learning modalities offer several advantages. These approaches adapt to diverse student needs, accommodating varying schedules, work commitments, and personal circumstances. Students can access course materials online, engage in asynchronous discussions, and participate in virtual classrooms. This flexibility fosters a more inclusive learning environment, allowing students to balance academic pursuits with other responsibilities. Moreover, it prepares them for the dynamic workforce, where adaptability and lifelong learning are essential. As private schools strive to provide quality education, embracing flexible modalities ensures students receive personalized, accessible, and future-ready learning experiences.

Flexible learning modalities empower students to learn at their own pace, collaborate virtually, and access resources conveniently. Whether through blended learning, online courses, or hybrid models, these approaches enhance educational outcomes and promote lifelong learning

Introduction

Flexible learning is a learner-centered approach that empowers students to choose when, where, and how they learn. It has gained prominence due to disruptions caused by the COVID-19 pandemic. In private higher education institutions, flexible learning modalities offer several advantages. These approaches adapt to diverse student needs, accommodating varying schedules, work commitments, and personal circumstances. Students can access course materials online, engage in asynchronous discussions, and participate in virtual classrooms. This flexibility fosters a more inclusive learning environment, allowing students to balance academic pursuits with other responsibilities. Moreover, it prepares them for the dynamic workforce, where adaptability and lifelong learning are essential. As private schools strive to provide quality education, embracing flexible modalities ensures that students receive personalized, accessible, and future-ready learning experiences.

Flexible learning modalities empower students to learn at their own pace, collaborate virtually, and access resources conveniently. Whether through blended learning, online courses, or hybrid models, these approaches enhance educational outcomes and promote lifelong learning Let’s delve into the key points:

Definition and Purpose: Flexible learning allows students to tailor their learning experience based on individual preferences. It shifts away from rigid schedules and fixed locations. The primary purpose is to accommodate diverse learning needs, ensuring that education remains accessible and effective.

Sustainable Development Context: Sustainable development aims to meet present needs without compromising the ability of future generations to meet their own needs (UN, 1987). The United Nations' 2030 Agenda includes 17 Sustainable Development Goals (SDGs). SDG 4 emphasizes inclusive, equitable education and lifelong learning opportunities among these.

Challenges and Opportunities: COVID-19 forced institutions worldwide to shift from in-class to online teaching. Faculty and students faced emotional and technical challenges. Access disparities (internet availability, technology) affect digital learning, creating a divide across income levels.

Adapting Beyond Traditional Methods: Flexible learning pathways offer diverse routes for learners to achieve qualifications. These pathways recognize that not all students follow the same trajectory. HEIs must prepare for online conversion during pandemics to minimize spread. Social distancing aligns with online learning practices.

Flexible learning is essential for educational resilience and aligns with sustainable development goals. The pandemic accelerated its adoption, emphasizing the need for adaptable teaching methods. The study aimed to assess how school administrators and educators in higher education evaluate the implementation of CHED Guidelines (CMO-No.-4s.2020 series 2020) under Synchronous Learning (SL), Asynchronous Learning (AOL), and Remote Print Learning (RPL). It sought to identify adherence to guidelines and areas for improvement. Additionally, the study explored the utilization of allocated budgets for CHED programs as indicated in CMO No. 9 Series of 2020. Here are the statements of the problem:

1. To what extent are higher education institutions implementing flexible learning modalities according to the guidelines set by CHED to achieve sustainable development? These include:
a. Synchronous Learning;
b. Asynchronous Learning; and
c. Modularized Learning?
2. What challenges have administrators encountered in implementing flexible learning modalities to achieve sustainable development? These challenges encompass:
a. Digital Literacy;
b. Technical Issues;
c. Allocation of resources/budget; and
d. Learning Materials/Module Development?
3. How do school administrators tackle the challenges associated with delivering various modalities to achieve sustainable development?
4. What level of technological preparedness has the school attained in implementing CHED guidelines for sustainable development? This includes:
a. Availability of Equipment and Technology;
b. Learning Management System; and
c. Learning Modalities?
5. What insights have school administrators gained from implementing the CHED Guidelines on Flexible Learning Modalities?
6. What intervention programs can be proposed to enhance the implementation of flexible learning modes in pursuit of sustainable development?

II. METHODOLOGY

Research Design

This section presents the paradigm of this study where the researcher will use the Input-Process-Output model in the presentation of the different phases and processes of this study. "In the realm of higher education, where flexible learning modalities have become increasingly essential, the significance of research extends beyond identifying challenges. This study on the implementation issues faced by CHED in flexible learning underscores the pivotal role of offering an action plan or intervention program. Such a plan serves as a transformative bridge between research findings and tangible solutions. By providing a structured roadmap with actionable strategies and measurable outcomes, it not only empowers CHED and other stakeholders with practical tools for decision-making and policy reform but also promotes transparency, accountability, and continuous improvement. This research thus contributes not only to the understanding of the problems but also to the proactive pursuit of effective solutions, fostering progress and resilience in higher education systems."

The input includes the materials used in the study such as Republic Act (RA) No.7722, otherwise known as the "Higher Education Act of 1994", Republic Act No. 11469, otherwise known as the "Bayanihan to Heal as One Act", Commission en Banc (CEB) Resolution No. 412-2020, CMO-No.-4s.-2020 series of 2020, CMO No. 9 Series of 2020, theories, literature, and studies. The process or the intervening variables consisted of the extent of implementation of CMO-No.-4s.2020 series of 2020 guidelines in terms of the three flexible modes of learning in the higher educational institution namely, Synchronous Learning (SL) Asynchronous Learning (AOL), and Remote Print Learning (RPL).

The results or outputs is the intervention program or action plan handbook that will help the administrators gain awareness in the choice of their suitable modality and what competencies are to be homed to make them academically competent and increase their academic performance. Providing an action plan or an intervention program in a research study on the problems in implementing flexible learning modalities by the Commission of Higher Education (CHED) is significant for it offers concrete and practical solutions to the problems identified in the research. It goes beyond merely identifying issues and takes the research a step further by proposing actionable steps to address those issues.

Locale and Respondents of the Study

The locale of the study takes place in the province of Bulacan, Malolos. The study covered the three (3) school institutions, specifically from the private sector. It also allows the researcher to conduct the study at ease during the COVID-19 pandemic. The private colleges and universities involved are La Consolacion University of the Philippines Malolos Branch, Baliuag University, and Centro Escolar University Malolos Branch.

The respondents of this study were 30 school administrators who were directly involved or enrolled in the chosen schools. Each was selected using the non-probability convenience sampling method. Convenience sampling is a type of non-probability sampling method that chooses participants because they are "convenient" sources of data for the researcher. The respondents of this sampling technique have been determined based

Instrument of the Study

The researcher utilized a self-made survey questionnaire as the instrument to gather and collect information from the respondents. The questionnaire was constructed with the guide of the CHED Guidelines in the Implementation of Flexible Learning under CMO-No.-4s.-2020 series of 2020 and CMO No. 9 Series of 2020. A total of 3 Flexible Learning Modalities which include Synchronous Learning (SL)

Asynchronous Learning (AOL) and Remote Print Learning (RPL) will be addressed in the instrument. The statements and questions will involve challenges encountered in delivering quality education in these different modalities or flexible modes of learning during the pandemic in terms of Digital Literacy; Technical Issues; Allocation of resources/budget; and Learning materials/Module Development.

Data Processing and Statistical Treatment

In this study, the researcher employed different statistical treatments appropriate to analyze the gathered data from the respondents. These statistical treatments were essential and vital in analyzing the data gathered from the self-made survey questionnaire that will be distributed to the respondents.

For SOP#1, the researcher employed the weighted mean analysis to determine the extent of flexible learning modalities implemented in terms of (a) synchronous learning, (b) asynchronous learning, and (c) remote printed learning. This portion was answered using a 5-point Likert Scale from (5) Very Great Extent; (4) Great Extent; (3) Moderate Extent; (2) Less Extent; and (1) No Extent.

Scale	Range	Verbal Interpretation
5	4.50-5.00	Very Great Extent
4	3.50-4.49	Great Extent
3	2.50-3.49	Moderate Extent
2	1.50-2.49	Less Extent
1	1.00-1.49	Very Less Extent

For SOP#2 and SOP#3, the researcher employed the weighted mean analysis to determine the challenges encountered in the delivery of quality education in these different modalities, in terms of: (a) digital literacy, (b) technical issues, (c) allocation of resources/budget; and (d) learning materials/module development. This portion was answered using a 5-point Likert Scale from (5) Strongly Agree; (4) Agree; (3) Moderately Agree; (2) Disagree; and (1) Strongly Disagree.

Scale	Range	Verbal Interpretation
5	4.50-5.00	Strongly Agree
4	3.50-4.49	Agree
3	2.50-3.49	Moderately Agree
2	1.50-2.49	Disagree
1	1.00-1.49	Strongly Disagree

Table 2 shows the 5-point Likert scale used to measure the respondent's level of agreement or disagreement with the statements in the questionnaire. The scale ranges from 1 to 5, where 1 means strongly disagree and 5 means strongly agree. The verbal interpretation of each scale point is also provided in the table. This is commonly used in surveys and questionnaires to measure people's attitudes, opinions, or agreement levels.

A rating of 5, falling within the range of 4.50 to 5.00, corresponds to "Strongly Agree." This means that if respondents select this rating, they strongly support or agree with the statement or question presented to them. A rating of 4, ranging from 3.50 to 4.49, is interpreted as "Agree." This indicates that the respondents agree with the statement or question, although their agreement may not be as strong as a "Strongly Agree" response. A rating of 3, within the range of 2.50 to 3.49, signifies a "Moderately Agree" response. This suggests that the respondents neither agree nor disagree with the statement, indicating a lack of a clear stance. A rating of 2, spanning from 1.50 to 2.49, represents "Disagree." Respondents who choose this rating disagree with the statement or question presented to them. A rating of 1, falling between 1.00 and 1.49, is interpreted as "Strongly Disagree." This means that respondents strongly disagree with the

statement or question and hold a contrary view. In summary, this table provides a clear and standardized way to interpret the numerical responses on a 5-point Likert scale, making it easier to analyze and understand survey data regarding opinions, attitudes, or levels of agreement.

III. RESULTS AND DISCUSSION

This section of the paper provides the presentation, analysis, and interpretation of the data that was gathered and computed from the responses of the participants of the study. A self-made questionnaire was utilized to provide the respondents with the necessary questions related to the variables presented in the study. Such an instrument was validated and checked for its reliability to undergo the data-gathering process. Both quantitative data and qualitative data were gathered and analyzed in this chapter of the study.

Part I. The Extent of the Flexible Learning Modalities in Higher Education Being Implemented based on the Guidelines Set by the CHED in Achieving Sustainable Development

Flexible Learning Modalities: Synchronous Learning

According to Scholl (2023), synchronous learning entails studying with teachers in a group setting. It is a style of teaching and learning that takes place concurrently but not always in the same location. It is a type of distance learning where individuals study using digital tools like televisions, video courses, etc. from various locations.

Table 3 provides a discussion on the frequency distribution and descriptive measures on the extent of the flexible learning modalities in higher education being implemented based on the guidelines set by the CHED in achieving sustainable development in terms of synchronous learning. The table depicts that flexible learning modalities are implemented to a very great extent in higher education based on the guidelines set by the CHED in achieving sustainable development. In particular, it was assessed that the flexible learning modality that has been implemented to a very great extent in the above table was synchronous learning. As the table depicts, it can be indicated that in higher education, synchronous learning was greatly implemented and was employed in accordance with the guidelines prepared by CHED which is directed at achieving sustainable development.

Additionally, it presents a comprehensive overview of the Frequency Distribution and Descriptive Measures pertaining to the Extent of Flexible Learning Modalities, specifically focusing on the dimension of Synchronous Learning. This table encapsulates valuable insights into how different categories or levels of Flexible Learning Modalities, within the context of synchronous learning, are distributed among respondents or data points. Furthermore, it provides essential statistical measures, including the mean, median, and standard deviation, which offer a nuanced understanding of the central tendencies and variability within the dataset. By delving into these data-driven details, we gain a deeper comprehension of the extent to which synchronous learning methods are employed within flexible learning modalities, shedding light on the dynamics of modern educational approaches in an increasingly digital and adaptable learning landscape.

The data on Table 1 indicates that flexible learning modalities, particularly synchronous learning, are highly utilized and valued in the educational setting. The overall weighted mean of 4.53 suggests that these methods are implemented to a "Very Great Extent," with capacity-building seminars and training receiving the highest rating (4.63). This highlights the significant emphasis placed on real-time engagement and the provision of comprehensive training for educators, students, and administrative staff. Knowing this, it can be assessed that through synchronous learning experienced and implemented among

the institutions of the chosen respondents, capacity-building seminars and training were commonly employed and participated by the respondents of the study.

In addition to this, in synchronous learning, students, educators, and administrators must know the use of online platforms that can be utilized in learning. However, as the data suggests in the above table, the lowest mean of 4.43 was computed portraying that it training on the use of the different media platforms such as how to navigate G-suites, Google Classroom, Google Meet, and Zoom, Office 365, and other applications relevant to the needs of students, educators, and administrative staff was not greatly prioritized hence, gaining a verbal interpretation of "Great Extent".

Flexible Learning Modalities: Asynchronous Learning

Asynchronous learning plays a significant role in flexible learning where students can access educational materials and participate in discussions at their own pace and convenience, without the need for real-time interaction. It encompasses activities such as recorded video courses, email correspondence between instructors and students, online discussion forums, and systems that manage course materials and correspondence. This flexibility enables a wider range of students, including those with employment and busy schedules or limited access to traditional educational institutions to participate in sustainable development initiatives. By removing the constraints of time and location, asynchronous learning makes education more accessible to individuals of diverse backgrounds and geographical locations.

On Table 2, it was evaluated that asynchronous learning was implemented in higher education in accordance with the guidelines formulated by CHED for achieving sustainable development. To further explain, it was responded by the participants that they were able to observe that asynchronous learning was being implemented to a great extent in higher education. In the table above, it was observed by the respondents that through asynchronous learning, training on developing innovative assessments in flexible learning through digital and non-digital tools was greatly provided. This specifies that as observed by the chosen respondents of the study, higher education focuses on new ways to provide assessments among students through the use of digital and non-digital platforms for the convenience of the students since this gained a computed mean of 4.57 and a verbal interpretation of "Very Great Extent".

In connection with this, among the above statements that assess the extent of asynchronous learning implemented in higher education, it was determined that asynchronous learning focuses less on allowing the students to access complete lectures, readings, homework, and other learning materials and learn at their own schedule within a time frame. This indicates that the extent of asynchronous learning being implemented in higher education is more inclined on producing innovative ways to provide the students to have access with digital and non-digital assessments but somehow does not always provide the students to have access with recorded lectures or online uploaded learning materials thus, making it harder for them to study at their own pace since this gained the lowest computed mean of 4.13 and a verbal interpretation of "Great Extent".

Provided with the result based on the gathered data from the respondents, it can be claimed that higher education that follows the guidelines of CHED in terms of asynchronous classes has less focus on providing the respondents with online uploaded learning materials. Knowing this, this negates the article written by Celestino (2020), wherein, students who take asynchronous classes can work at their own pace. Students are required to connect to their class at least once or twice throughout a set period, which is frequently one week. The advantage of asynchronous classes is that you can begin learning whenever you like (or at night).

Flexible Learning Modalities: Remote Printed Learning

Remote learning describes the way of learning where students are acquiring knowledge in the comfort of their homes. In an article written by Ray (2021), While working from home, students and teachers can stay connected and involved in the subject matter through remote learning. By switching to remote learning, students may stay on track and avoid having to do a lot of catch-up work when they return to traditional classroom settings. This will enable them to be prepared for any scheduled tests.

Table 3 presents the frequency distribution and descriptive measures on the extent of the flexible learning modalities in higher education being implemented based on the guidelines set by the CHED in achieving sustainable development in terms of remote printed learning. It offers a comprehensive depiction of the Frequency Distribution and Descriptive Measures concerning the Extent of Flexible Learning Modalities, with a specific focus on the facet of Remote Printed Learning. This table meticulously outlines how various categories or levels of Flexible Learning Modalities, as related to remote printed learning, are distributed among the surveyed data points or respondents. Additionally, it furnishes crucial statistical indicators, such as the mean, median, and standard deviation, which provide valuable insights into the central tendencies and variability inherent within the data set. This data-driven analysis allows for a nuanced understanding of the prevalence and utilization of remote printed learning approaches within the broader framework of flexible learning modalities, thus contributing to our grasp of contemporary educational practices in an increasingly digital and adaptable learning environment.

The data reveals that remote printed learning modalities are widely utilized and appreciated. The overall weighted mean of 4.38 indicates that these methods are implemented to a "Great Extent," with the highest-rated item being the training on the development of modules and learning materials (4.57). This suggests a strong emphasis on quality assurance and comprehensive support for educators and students in remote learning environments.

One of the flexible learning modalities adopted by schools in the Philippines is remote printed learning, which involves the delivery of printed learning materials to students who have limited or no access to the internet or electronic devices. This study aims to examine the extent of the implementation of remote printed learning by schools and to provide descriptive measures of its effectiveness and efficiency. The study used a survey questionnaire with a 5-point Likert scale to collect data from 30 administrators of three different colleges and universities. The data were analyzed using frequency distribution and descriptive measures, such as mean and standard deviation.

Given this, under remote printed learning, the respondents of the study stated that training on the development of modules/course content/learning materials, assessment tools, and improving and updating syllabi based on flexible learning was greatly implemented in higher education since this gained the highest mean of 4.57 and a verbal interpretation of “Very Great Extent”. This result indicated that upon the implementation of remote printed learning in higher education, the respondents assessed that the development of modules, assessment of tools, and approving and updating of syllabi were taught and were the focus of the stated flexible learning modality.

On another occasion, the remote printed learning modality is less inclined to provide materials for the printing modules such as printers, paper and ink, and other school supplies since this gained a computed mean of 4.20 and a verbal interpretation of “Great Extent”. This just means that higher education institution that implements remote printed learning do not have enough resources that can be used to develop learning materials and school supplies that would help them in teaching.

Remote-printed or modularized learning was implemented in higher education. The same with synchronous and asynchronous learning, as evaluated by the respondents, remote printed learning follows the guidelines generated by CHED in achieving sustainable development. Considering this, it just means that students of higher education undergo remote learning that follows the curriculum and rules presented under CHED. In general, higher education implements the use of flexible learning modality particularly, remote printed learning which allows the students to learn at their own pace, in the comfort of their homes while keeping up with the activities provided by the educators.

This table presents the summary table on the extent of the flexible learning modalities implemented in higher education based on the guidelines set by CHED in achieving sustainable development. As seen from Table 8, the overall mean from the variables was presented such variables under flexible learning modalities were synchronous learning, asynchronous learning, and remote printed learning. All of the variables obtained a grand mean of 4.44 which obtained a verbal interpretation of "Great Extent".

As such, it can be determined that the most implemented and widely utilized flexible learning modality in higher education based on the responses of the participants of the study was synchronous learning. This obtained the highest overall mean of 4.53 and was ranked first. This also gained a verbal interpretation of "Very Great Extent", which then indicates that higher education institutions mostly utilize synchronous learning to disseminate knowledge among their students. This, synchronous learning occurs when classes are held on predetermined dates and times. Because lectures, debates, and presentations occur at defined times, students and instructors are both online at the same time in synchronous classrooms.

Aside from this, it was also noticed that the lowest overall mean among the variables was remote printed learning since gaining an overall mean of 4.38 and a verbal interpretation of "Great Extent". This result depicts that remoted printed learning was not widely utilized among higher education institutions thus, to sustain development, higher education institutions should focus on improving synchronous classes thus, providing them with a sustainable development in learning and education.

Part II. Challenges Encountered by the Administrators in Implementing Flexible Learning Modalities in Achieving Sustainable Development

Challenges Encountered by the Administrators in Implementing Flexible Learning Modalities in Digital Literacy. Digital literacy is understanding that the information collected or gathered in the use of websites, or the internet can be used for a greater purpose and this is in providing necessary knowledge. Digital literacy is crucial in the modern world, as technology plays an increasingly central role in daily life, education, employment, and society. It empowers individuals to participate fully in the digital age, access information, communicate effectively, and make informed choices while navigating the digital landscape. Moreover, digital literacy is essential for promoting digital equity and ensuring that everyone has equal access to the opportunities and benefits offered by digital technologies. Digital literacy refers to the ability to effectively navigate, use, and critically evaluate information and communication technologies (ICT) in various digital formats. It encompasses a range of skills and competencies that empower individuals to interact with the digital world confidently and competently.

The data on Table 5 highlights that administrators face significant challenges related to digital literacy when implementing flexible learning modalities. On average, users agreed that they struggle with searching, preserving privacy, recognizing unethical content, and distinguishing false media from facts (overall mean of 3.70). However, there is a neutral stance on issues like education about credible platforms and sources, as well as the shift to asynchronous learning due to digital literacy gaps. These findings suggest a need for targeted training and support in these areas to improve digital literacy among users.

Digital literacy refers to the ability to use digital technologies effectively and responsibly for learning and communication. This study aims to identify the challenges encountered by administrators in terms of digital literacy and to provide descriptive measures of their frequency and severity. The study used a survey questionnaire with a 5-point Likert scale to collect data from administrators of different schools.

The data were analyzed using frequency distribution and descriptive measures, such as mean and standard deviation. The results of the analysis are presented in this chapter. Table 9 displays the frequency distribution and descriptive measures of the challenges encountered by the administrators in implementing flexible learning modalities in achieving sustainable development in terms of digital literacy.

In addition, the data also highlights the challenges faced by the respondents in terms of digital literacy wherein, as seen in the table, it was assessed that respondents of the study have agreed that the following indicators above were the challenges that they experienced in terms of digital literacy. This indicates that the following indicators expressed in Table 9 were experienced by the administrators in implementing flexible learning modalities particularly, the challenges that they faced in terms of digital literacy.

This, among the items displayed in the above table which challenges faced by school administrators in terms of digital literacy, it was determined that the administrators agreed that users can recognize unethical or disrespectful content in social media platforms or news outlets since this gained the highest computed mean of 4.10 and a verbal interpretation of "Agree". In line with this, the result means users of technology were well informed about the unethical or disrespectful content available on the media platforms to news outlets

Furthermore, among the items produced in determining the challenges faced by administrators in terms of digital literacy, the respondents are neutral that occasionally, some of the users are not educated on the use of credible platforms and sources as means of news and information since this obtained the lowest computed mean of 3.33 and a verbal interpretation "Neutral". This result depicts that somehow among the problems experienced by the respondents in digital literacy was they were not aware of the legitimate and right sources of information on the web.

Noting the result obtained from table 7, it can be evaluated that school administrators address problems in digital literacy by filtering out information that is unnecessary for use to those whose information are relevant, especially in disseminating important facts and news. This coincides with the article written by CSM (2021), wherein some critical digital-literacy skills learners may acquire at home and at school including effective searching, preserving their and others' confidential information online, and comprehending digital footprints. Furthermore, when students understand how to judge the quality, trustworthiness, and validity of media and give correct credit to the source, they will be able to search efficiently.

Challenges Encountered by the Administrators in Implementing Flexible Learning Modalities in Terms of Technical Issues. Technical issues refer to the problems that may arise in the use of technological resources such as computers, laptops, or even software often used in teaching and learning. Based on PUG (2020), the length of time it takes to solve the issue will depend on how complicated it is. An online learner needs a steady internet connection. A quick internet connection is required if you plan to do a lot of your studying at home. Select a top-notch home service and know who to contact for connection-related technical help. Having a list of nearby locations with dependable Wi-Fi, like a public library or coffee shop, is also a smart idea.

Technical issues refer to problems or glitches that occur within a technological system, device, software application, or digital process. These issues can disrupt the normal functioning of the technology and may

impede its ability to perform as expected. Technical issues can manifest in various forms and can affect different aspects of technology, including hardware, software, networks, and digital services.

Table 6 highlights the frequency distribution and descriptive measures on how the school administrators address the challenges encountered in the delivery of the different modalities in achieving sustainable development in terms of technical issues. It also shows that school administrators agreed that challenges are encountered in their educational institutions. This just means that the implementation of the different flexible learning modalities has brought about various challenges that school administrators face.

In accordance with this, the availability of accredited platforms suited for specific degrees from universities was the most common solution employed by the school administrators in resolving technical issues since this gained the highest computed mean of 4.50 and a verbal interpretation of "Strongly Agree". This result would suggest that school administrators focus on providing necessary software that was designed based on the course or topic being taught within the higher education institution. Through this, students will be able to use the right software necessary for the right topic of a subject that is currently being taught in the school.

Other than this, it was also found in the table given above that the school administrator utilizes ample learning options due to internet demands less often than the solution stated before since this gained the lowest computed mean of 4.03 and a verbal interpretation of "Agree". This result means learning options were quite a challenge among school administrators since there are only a few that are suitable for the learning of the students.

With regard to the result above, it can be assumed that in terms of technical issues, school administrators encourage their students and teachers the use of online learning platforms that are suited to different kinds of subjects or topics. This will provide the students with the necessary equipment to study the subject even at home despite the lack of physical materials which are only available in schools. According to McKinley (2022), the growth of student skills is one of the main benefits of online training platforms. On-boarding, role-based, compliance, and soft skill training for students can all be provided in one location. As a result of the skills they gain, individuals perform better in their current positions and are qualified to take on greater responsibility in the future.

Challenges Encountered by the Administrators in Implementing Flexible Learning Modalities in Resources/Budget. Among the challenges encountered in the delivery of the different modalities in achieving sustainable development is the allocation of resources/budget. Allocation of resources/budget is frequently performed on educational institutions especially for allocating monetary funds for learning resources that are important in the education of the children. As stated by Academic Samples (2023), budgeting and resource allocation are crucial processes for implementing a strategy. Resource allocation is the process of transferring available resources, particularly financial ones, from the central level to the periphery. Budgeting, on the other hand, is more thorough and exact.

Table no. 7 shows the frequency distribution and descriptive measures on how the school administrators address the challenges encountered in the delivery of the different modalities in achieving sustainable development in terms of allocation of resources/budget. The table depicts the challenges encountered in the delivery of the different modalities by the administrators in terms of allocation of resources or budget which provided us with the result that school administrators agree that they face challenges in accordance with the allocation of resources or budget.

In connection with this, among the items presented above, it was determined that school administrators frequently, have harmony from internal or external stakeholders with regards to budget allocation per

department since this obtained the highest computed mean of 4.23 and a verbal interpretation of "Agree". This result indicates in the allocation of resources or budget, school administrators often have a proper and good relationship with the internal and external stakeholders thus, leaving it as not a challenge. Maintaining a good relationship with the stakeholders would cause less conflict and would greatly benefit higher education institutions.

Moreover, it was assessed that also among the challenges were the effective allocation of resources and budget that lead to questionable audits since this gained the lowest computed mean of 3.77 and a verbal interpretation of "Agree". This implies that the school administrators often focus in improving relationships and has less focus on understanding the way on how to effectively allocate resources.

Considering the results in the above table, it was evaluated that school administrators value the relationship being established among their internal and external stakeholders. This means that maintaining a good relationship among their internal and external stakeholders would greatly benefit the needed and important resources of their educational institution and would further provide them with the necessary amount of budget that would aid in improvement. As indicated on the article written by Getting Smart (2022), people make up stakeholders in education, and as we all know, people are the system's beating heart. Stakeholders possess the tools, knowledge, and opportunities as well as the compassion, wisdom, and love required to support the educational system's objectives and provide the conditions for our children to prosper both now and in the future.

Challenges Encountered by the Administrators in Implementing Flexible Learning Modalities in Materials/Module Development. Among educational institutions, learning materials or module development are among the important aspects that should be focused on to assure that students are able to attain quality in education despite the application of different modalities. Different modalities applied in learning also comes with learning materials or modules that coincides with the platforms used in learning may it be synchronous, asynchronous, or remote printed learning. According to De Vera (2020), a number of universities have significantly contributed their current resources, it was stated that they are doing this to give their staff members access to academic resources around-the-clock and to enable them to quickly get the knowledge they need across a wide range of topics and devices (De Vera, 2020).

Implementing flexible learning in materials and module development can present several challenges such as adapting existing content to suit flexible learning formats. Traditional materials may need to be redesigned to be more interactive, accessible and engaging for students. It also requires a robust technological infrastructure to support the delivery of digital materials and modules. This includes having the necessary hardware, software, and internet connectivity to ensure seamless access to learning resources.

Table 10 describes the frequency distribution and descriptive measures of how the school administrators address the challenges encountered in the delivery of the different modalities in learning materials/module development. One of the key components of flexible learning modalities is the learning materials or modules that are designed to facilitate the students' self-directed learning. However, developing these materials or modules can pose various challenges for the administrators, such as lack of time, expertise, resources, or quality assurance. As seen from the table above, it was gauged that the school administrators agree that they have faced challenges in learning materials/module development. This result depicts that the following indicators showed the challenges that the school administrators encountered upon implementing the flexible learning modality.

This study aims to investigate the challenges encountered by the administrators in terms of learning materials/module development and to provide descriptive measures of their frequency and severity. The data were analyzed using frequency distribution and descriptive measures, such as mean and standard deviation. The results of the analysis are presented in this chapter.

In light of this, among the statements presented in the above table, complying with the standards of quality assurance for developed course materials was viewed as the least challenging. This gained the highest computed mean of 4.40 and a verbal interpretation of n "Agree". As such, this result means that the school administrators consider the quality of the learning materials that their educational institution develop to assure that the students will be able to obtain great quality of knowledge despite the different learning modalities used that are far more different in the traditional way of learning.

Furthermore, it was also determined in the table that the school administrators do not frequently expedite financial support to prioritize the production and distribution of printed materials as compared to ensuring that the learning materials were able to have quality assurance. This was able to gain the lowest computed mean of 3.93 and a verbal interpretation of "Agree". This result indicates that the school administrators were focused more on quality rather than the quantity of producing and distributing printed materials.

Based on the result from the table, we can grasp that school administrators often ensure that the learning materials that they develop have undergone quality assurance. This would guarantee that the materials received by the students are of good quality and will be able to provide them with the necessary information and knowledge there is relating to the subject that they are currently learning.

Table 9 presents the summary table of challenges encountered by the administrators in the delivery of the different modalities in achieving sustainable development The items indicated were the areas in which challenges are faced in the delivery of the different learning modalities. As such, it was assessed that the school administrators agreed the following variables indicated were a challenge.

Relating to the data presented in the table, it was evaluated that school administrators agreed that technical issues were a challenge since this gained the highest computed overall mean of 4.28 and a verbal interpretation of "Agree". Aside from this, challenges in digital literacy are least often addressed by the school administrators since this obtained the lowest computed overall mean of 3.70 and a verbal interpretation of "Often". It also shows that technical issues, learning materials/module development and allocation of resources/budget and digital literacy are among the first three challenges encountered by the administrators.

Part III. Level of Preparedness in Technology Attained by the School in the Implementation of the CHED Guidelines in Achieving Sustainable Development

As the years pass by, the incorporation of technology in education has been highly utilized and had provided great importance in the dissemination of knowledge. This aids in providing learning and teaching convenience and faster brought up necessary information needed in education. Flexible learning modalities applied today in learning revolves around the use of technology since this diverts from the traditional way of learning. According to the School of Education (2020), digital learning tools used effectively in the classroom can boost student engagement, assist teachers in creating better lesson plans, and promote individualized instruction. Additionally, it aids pupils in developing crucial 21st-century abilities. Virtual classrooms, videos, augmented reality (AR), robots, and other technological tools can not only make classes more engaging but also more inclusive learning environments that encourage collaboration and inquisitiveness as well as give teachers the ability to gather information on student performance.

Level of Preparedness in Technology: Availability of Equipment and Technology. The availability of equipment and technology in learning is of great importance especially if different flexible learning modalities are used in educational institutions. Available equipment and technology among educational institutions and at home will provide the students with convenience and ease in accessing learning materials that are available online. According to Planipolis (2018), the societal mission is to achieve inclusive growth and equity, and the objectives for the higher education sector's sustainable development are to develop highly skilled human resources and to generate, adapt, and disseminate information and technology for strengthening the country's international competition.

Table 12 provides a comprehensive overview of the frequency distribution and descriptive measures related to the level of preparedness in technology, specifically focusing on the availability of equipment and technology. This table presents valuable insights into how different categories or levels of preparedness in technology are distributed among respondents or data points. Additionally, it offers essential statistical measures, including the mean, median, and standard deviation, which provide a nuanced understanding of the central tendencies and variability within the data set. By delving into these data-driven details, we gain a deeper comprehension of the extent to which organizations or individuals are equipped with the necessary technology and equipment to support their objectives and operations, thus shedding light on their technological readiness and capabilities.

Based on the data displayed in the above table, it was assessed that equipment and technology in higher education institutions are prepared among the students and school staff. This means that higher education institutions have the necessary tools and technology needed in teaching, especially upon employing flexible learning modalities in teaching and in learning.

Relating to the table above, it was evaluated by the respondents that the school always constantly provides information and communication facilities which may be used as the venue for online teaching and have ample modern technological equipment that is used in effective teaching and learning process since this gained the highest computed mean of 4.57 and a verbal interpretation of “Very Highly Prepared”. This means that the institution where the respondents are teaching was able to access the necessary equipment used in communicating information and has technological equipment that may be utilized for the teaching of the educators and for the learning of the students.

Aside from this, it was also assessed in the gathered data that programs that provide financial assistance for teachers in order to acquire the needed technological equipment (such as laptop, tablet, smartphones, etc.) and internet access, to be used in facilitating online learning were least focused on among higher education institution since this gained the lowest computed mean of 4.07 and a verbal interpretation of “Highly Prepared”. This result implies that financial assistance among teachers were not frequently available thus, making it hard for teachers to gain access to the necessary tools needed for teaching.

More importantly, the result above depicts that the higher education institution that were using flexible learning modalities such as synchronous, asynchronous, and remote printed learning are always prepared in terms of the availability of equipment and technology. Thus, this means that the teachers and learners were able to have access to tools in learning that makes use of technology. This would greatly improve the learning and teaching imposed among higher education institutions. As per CHED (2020), however, since higher education aims to foster professional abilities and give people the power to improve their lives and systems, which will in turn help the overall cause of socioeconomic sectors, it conflicts with the SDGs' goals. The SDG 4 (Quality Education) education targets set a goal for 2030 to "provide inclusive and equitable quality education and encourage lifelong learning opportunities for everyone." The SDGs

for health and well-being, the environment, gender equality, decent work, and economic growth are intimately tied to the goals of higher education.

Level of Preparedness in Technology: Learning Management System. Since the start of the pandemic and the introduction of online learning in the country, the learning management system has been highly utilized among educational institutions. This is among the educational platforms that provide the students with the necessary learning materials as well as access in assessments that should be done despite being situated in online learning. Based on Western Governors University (2022), a learning management system is a computer-based tool that offers employees training and coursework from outside sources for their personal and professional growth. With the aid of a variety of technologies to support learning and address training, management, retention, and sales objectives, these systems assist businesses in providing adaptable, digital courses for a wide range of audiences.

The data suggest that the school is generally well-prepared in terms of technology availability and equipment. The overall weighted mean of 4.40 indicates a high level of preparedness. Notably, the school excels in providing information and communication facilities for online teaching, and having ample modern technological equipment, both with a weighted mean of 4.57, categorized as "Highly Prepared." Additionally, there is significant preparedness in providing accessible e-learning materials and cooperating with various stakeholders to ensure access to technological equipment. However, there is slightly lower preparedness in providing financial assistance for teachers to acquire needed technological equipment, with a weighted mean of 4.07, still indicating a "Prepared" level. These findings emphasize the school's strong commitment to supporting technological needs for effective teaching and learning.

As such, it was evaluated that the school’s learning management system was always easy to comprehend and user-friendly in terms of its activities and instructions since this gained the highest computed mean of 4.60 and a verbal interpretation of “Highly Prepared”. This result implies that the institution is always prepared in the use of the learning management system as such the learning management system that they are currently using is easy to use and does not provide any troubles in uploading or downloading activities and instructions. It focuses on improving the accessibility of all students regardless of their background, abilities or learning styles. Moreover, a user-friendly interface enables students of all technical abilities to easily navigate through the platform reducing potential frustration and improving over-all engagement.

Consequently, the school’s learning management system is often operated through a strong and dependable internet connection provided by the learning institution since this gained the lowest computed mean of 4.17 and a verbal interpretation of “Prepared”. This indicates that not at all times that the school is able to provide a stable internet connection to access the learning management system. Thus, this may result in slower access to learning materials that are needed by the students.

The data indicates that the school's learning management system (LMS) is generally well-prepared to support online teaching and learning. The overall weighted mean of 4.39 shows a strong level of preparedness. Items related to user-friendliness and intellectual property protection of the LMS received the highest ratings (4.60 and 4.57, respectively), indicating a high level of satisfaction with these aspects. The school's efforts in providing sufficient technical staff and ensuring a strong internet connection are also viewed positively, with both items rated as "Prepared" (4.33 and 4.17, respectively). These findings suggest that while the LMS is effective and user-friendly, continuous improvements in technical support and internet infrastructure can further enhance the overall preparedness.

The result from the data gathered in the above table depicts that the higher education institution is well prepared in the use of learning management systems and were able to develop learning management

systems that are user-friendly. In line with this, Mobo (2020), stated that the Range of Learning Management Systems is advocating for online learning in the midst of COVID-19 and the closure of institutions of higher learning.

The adoption of a learning management system might aid in the paperless distribution of educational materials. In the online course, for example, instructional slides, slide shows, assignments, instructional practices, and academic outcomes might be uploaded. Learning Management Systems is one of the approaches utilized as a substitute under the present circumstances of pandemic breakout and incapacity to be present in universities due to the National Government's Enhanced Community Quarantine or lockdown. A Learning Management System is an online software application that assists, manages, delivers, and tracks educational sources, training programs, or learning or development programs. Some examples of LMS are Moodle, Canvas, Blackboard, and Google Classroom. You can find more information about LMS on these websites:

Level of Preparedness in Technology: Learning Modalities. HEIs are supposed to use technology as effectively as possible to improve teaching and learning, which may entail doing things like deciding how much technology to use for program delivery based on student connectivity. establishing multi-media or learning resource centers to aid academic staff in creating IT-enabled and IT-mediated teaching materials Utilization of openly accessible OERs and/or electronic libraries as sources for subject-specific content in a variety of flexible learning pedagogies. Using a non-proprietary learning management system or a proprietary one (LMS). The level of preparedness in technology in learning modalities varies widely across different educational institutions, regions, and individuals. Technological preparedness can have a significant impact on the effectiveness of various learning modalities including traditional classroom-based learning, online learning. The level of preparedness in technology for learning modalities varies widely across different educational institutions, regions, and individuals. Technological preparedness can have a significant impact on the effectiveness of various learning modalities, including traditional classroom-based learning, online learning, blended learning, and more.

Table 15 presents the frequency distribution and descriptive measures on the level of preparedness in technology attained by the school in the implementation of the CHED guidelines in achieving sustainable development in terms of learning modalities. Technology plays a vital role in facilitating flexible learning modalities, such as online, blended, or hybrid learning. However, not all teachers and students are equally prepared to use technology effectively and efficiently for learning purposes. The table above shows that higher education institutions were often prepared for the use of learning modalities in education. This means that the following statements above were prepared applied and performed by higher education institutions particularly in using different learning modalities.

This table aims to assess the level of preparedness in the technology of the teachers and students in terms of learning modalities and to provide descriptive measures of their distribution and variation. The data were analyzed using frequency distribution and descriptive measures, such as mean and standard deviation. The results of the analysis are presented in this chapter. When implementing flexible learning strategies in online mode, HEIs may take into account learning modalities in technology including desktop computers, laptop computers, smartphones, mobile applications, learning packets, and learning management systems (CHED, 2021).

In connection to this, it was always seen that the learning modalities offered by the institution are properly discussed and cascaded to give clear instructions regarding their use and implementation since this gained the highest computed mean of 4.60 and a verbal interpretation of “Highly Prepared”. This result means

that higher education institutions make use of learning modalities that provide the learners of their clear objective and its use to make the students understand the sole purpose of applying the learning modality. In addition to this, the school often offers different learning modalities that accommodate diverse students based on their own abilities and capacities and the learning modalities offered by the school provide the students choices that will foster responsibility for their own learning that meet their personal needs which obtained the lowest computed mean of 4.17 and a verbal interpretation of "Prepared". The results iterate that the school was less prepared for the student's diversity in learning. This means that students were offered the same learning modality despite having differences in their learning pace.

The result from the table above means that the learning modalities used in higher education institutions were explained clearly of their purpose however, diversity in learning of the students were not prioritized and were offered with the same learning modality that all other students were subjected to. According to the study of Cabual (2021), learning is an ongoing process, and a process is an event that results in a definite result. Understanding will not be achieved if obstacles force the learning process to be slowed or stopped. An effective learning plan will address these issues, resulting in learning that is tailored to the needs of the learner. The misalignment will worsen as a result of inefficient approaches, techniques, and tactics with the learners. Recognizing the learner's learning style and preferred learning modalities can lead to successful teaching and student learning. Each kid has a unique learning style and preferences. Some people uncover their main learning styles, while others use a variety of learning styles in various situations.

In connection to this, the school is prepared in the availability of equipment and technology since this gained the highest computed overall of 4.40 among the other variables presented. In addition, the school was also prepared in the learning modalities used for teaching and for learning since this obtained the lowest computed overall mean of 4.37 indicating that the school is ready to implement the CHED guidelines in achieving sustainable development. It can be tailored to the specific context and needs of the school and updated regularly to track progress. For each of the criteria listed under, the school's readiness by assigning a level of preparedness by using specific metrics or scores. Additionally, one can provide comments or action items to address any gaps in preparedness.

The summary table indicates that the school is well-prepared in terms of technology to implement the CHED guidelines for achieving sustainable development. The highest level of preparedness is seen in the availability of equipment and technology (mean = 4.40), followed closely by the learning management system (mean = 4.39), and then learning modalities (mean = 4.37). The overall mean of 4.39 suggests that the school is generally well-prepared across all aspects. The relatively low standard deviations indicate consistent preparedness levels across different areas, with the availability of equipment and technology having the least variation (.417), suggesting uniformity in this aspect. These results highlight the school's strong commitment to technological preparedness and effective implementation of the guidelines.

Part IV. Realizations of the School Administrators when Implementing the CHED Guidelines on Flexible Learning Modalities

Drastic Change

Technology has slowly been introduced in education for the past years and its incorporation in education took a big turn during the strike of the pandemic. Different learning modalities were used and employed among higher education institutions which mainly use technology as a tool to still disseminate learning despite being at home. Based on an article written by Gavan (2021), in order for Filipino students to continue learning regardless of the limitations in their communities, the Department of Education

embraced one or a mix of the various learning modalities. This is also a significant factor for the teachers' and students' health and safety. Among the flexible learning modalities was synchronous, asynchronous, and remote printed learning.

In connection to this, safety protocols have slowly been lifted up and students now can enter an educational institution however, flexible learning modalities are still adapted since it has been deemed for some to be more convenient while some deemed it to have provided drastic changes. According to Li & and Lalani (2020), education has undergone a significant transformation. E-learning, in which instruction is delivered online and through digital platforms, has emerged particularly.

Technology has seemed to be more incorporated into learning and had given a big adjustment among educators as such the respondents:

Thematic analysis is a methos of analyzing qualitative data that involves reading through a set of data and looking for patterns in the meaning of the data to find themes. A theme is a coherent and meaningful pattern that emerges from the data and relates to the research question.

Based on the responses from the informants, a possible thematic analysis is:

Synchronous Learning

This theme reflects the informants' experiences and challenges of conducting online learning in real-time. The responses indicate that the informants had to adapt to change, learn new skills, and deal with issues such as student attention, internet connection, LMS limitations, and assessment reliability. The responses also suggest that synchronous learning opened a new venue for technological advancement in learning.

Technical Issues

This theme captures the informants' problems and solutions regarding the technical aspects of online learning. The responses indicate that the informants faced difficulties with internet connection and equipment, both software and hardware. The responses also indicate that the school provided some assistance to the informants and the students to overcome these difficulties.

Allocation of Resources/Budget

This theme describes the informants' views and needs regarding the financial aspects of online learning. The responses indicate that the informants found it challenging, costly, and demanding to fund online learning. The responses also indicate that the school had limited resources but tried to maximize them. The responses also suggest that the informants wanted more budget allocation for the student's needs and for the completion of projects.

Learning Materials/Modular Development

This theme reflects the informants' tasks and efforts in creating and preparing online learning materials. The response indicates that the informant had to prepare at least two materials in different formats for online learning.

In relation to the data gathered from the respondents, it was recommended by the participants that projects such as faster internet connection to aid in learning, training in the use of the different modalities, as well as establishing a proper and easy-to-use learning management system that is necessary for flexible learning modalities would help in sustainable development. These were the problems that the respondents thought should be addressed properly. With regards to this, such recommendations would then help the education system and further improve the quality of education despite the transition from traditional learning to online learning. Consequently, since online learning has greatly been promoted even today and is continually implemented among higher education institutions, the best practices that were used by the

teachers were being flexible in the use of synchronous learning and utilizing technology efficiently in learning to help the students.

In this study, the researcher conducted a thematic analysis of qualitative data from 10 informants who shared their experiences and challenges of online learning during the pandemic. The analysis revealed four main themes: synchronous learning, technical issues, allocation of resources/budget, and learning materials/modular development. These themes reflect the informants' adaptation to change, their problems and solutions, their views and needs, and their tasks and efforts in online learning. The findings suggest that online learning is a complex and dynamic phenomenon that requires constant improvement and support from various stakeholders. The study also has some limitations, such as the small sample size, the subjective interpretation of the data, and the lack of generalizability. Therefore, future research could explore other aspects of online learning, such as student motivation, teacher feedback, and learning outcomes.

The shift in paradigm has disrupted the traditional modes of teaching and learning in higher education institutions. To cope with the challenges and opportunities brought by the pandemic, higher education institutions adopted flexible learning modalities that cater to the diverse needs and preferences of students and faculty. However, flexible learning modalities also pose some issues and difficulties, such as the lack of learning materials, technical problems, digital literacy gaps, and budget constraints.

Proposing an action plan or intervention program to address issues in the implementation of flexible learning is crucial for ensuring the effectiveness and sustainability of this educational approach. Below are paragraphs outlining the rationale for such a proposal:

The implementation of flexible learning has become more critical than ever, especially in light of recent global challenges such as the COVID-19 pandemic. While flexible learning offers numerous advantages, including increased access and adaptability, it is not without its challenges. These challenges, if left unaddressed, can hinder the attainment of educational objectives and limit the potential impact of this innovative approach. Therefore, the rationale for proposing an action plan or intervention program is rooted in the need to proactively address these issues, ensuring that flexible learning remains a viable and effective means of education delivery. By identifying and mitigating obstacles, we can create a learning environment that maximizes the benefits of flexibility while minimizing its drawbacks.

Paragraph 2:

One of the key drivers behind proposing an action plan or intervention program is the pursuit of educational equity. Flexible learning has the potential to bridge the digital divide, reach underserved populations, and provide opportunities for lifelong learning. However, without targeted interventions, certain groups, such as those with limited access to technology or facing socio-economic challenges, may be disproportionately affected by the barriers within the flexible learning landscape. To uphold the principles of inclusivity and equal access to education, it is imperative to develop strategies that remove these barriers and ensure that no one is left behind.

Paragraph 3:

Furthermore, the dynamic nature of technology and educational needs demands ongoing adaptation and improvement. As flexible learning evolves alongside advancements in digital technology, the identification and resolution of issues within its implementation are paramount. Proposing an action plan or intervention program serves as a proactive response to the changing educational landscape, enabling educational institutions to remain responsive to the needs of learners and to leverage emerging opportunities for innovation. Through continuous improvement, flexible learning can better align with the

goals of sustainable development, preparing individuals to meet the complex challenges of the 21st century.

Paragraph 4:

In addition, the COVID-19 pandemic has accelerated the adoption of flexible learning, making it an integral part of the educational ecosystem. As a result, administrators and educators are presented with a unique opportunity to refine and optimize the implementation of flexible learning modalities. By addressing issues promptly and strategically, we can harness the potential of this educational paradigm to foster critical thinking, digital literacy, and problem-solving skills—all essential components of preparing learners to contribute to sustainable development goals. Therefore, the rationale for proposing an action plan or intervention program lies in seizing this pivotal moment to shape the future of education in a way that aligns with the evolving needs of learners and society.

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In addition, the COVID-19 pandemic has accelerated the adoption of flexible learning, making it an integral part of the educational ecosystem. As a result, administrators and educators are presented with a unique opportunity to refine and optimize the implementation of flexible learning modalities. By addressing issues promptly and strategically, we can harness the potential of this educational paradigm to foster critical thinking, digital literacy, and problem-solving skills—all essential components of preparing learners to contribute to sustainable development goals. Therefore, the rationale for proposing an action plan or intervention program lies in seizing this pivotal moment to shape the future of education in a way that aligns with the evolving needs of learners and society.

Therefore, this proposed intervention program aims to address these issues and improve the quality and effectiveness of flexible learning modalities at Bulacan State University. The program consists of four key result areas: learning materials/module development, technical issues, digital literacy, and allocation of budget/resources. Each key result area has specific objectives, persons involved, time frame, budget, and expected outcomes. The program is expected to enhance the accessibility, affordability, and quality of flexible learning modalities, as well as foster the development of 21st-century skills among students and faculty.

The intervention program consisted of eight key result areas: learning materials/module development, technical issues, digital literacy, allocation of budget/resources, Learning Management System, Training in the Use of Different Learning Modalities, User-Friendly Platforms and Systems, and lastly, User-

Friendly Platforms and Systems. Each key result area had specific objectives, persons involved, time frame, budget, and expected outcomes.

The first key result area was learning materials/module development. The objective was to furnish students with printed modules (1:1) that contained all the details and steps to be covered in the session with discussion, worksheets, and questions. The persons involved were school administrators, deans, department heads, program heads, faculty members, and non-teaching personnel. The time frame was from May to August 2023. The budget was P1, 500/module/subject. The expected outcome was that 75% of enrolled students under Remote Printed Learning would have received a module per subject complete with discussions, worksheets, and questions.

The second key result area was technical issues. The objective was to provide adequate training on how to resolve technical issues with students. Higher learning institutions should provide free, fast, and reliable internet service on campus. The persons involved were administrators, deans, department heads, program heads, faculty members, and non-teaching personnel. The time frame was all year round. The budget was P500,000.00. The expected outcome was that 75% of the faculty members and students would be provided with training on troubleshooting and resolving technical problems.

The third key result area was digital literacy. The objective was to become effective in terms of searching, preserving privacy, confidentiality, and comprehensive digital footprints. To train enough competent technical personnel available during class hours. Help students manage digital distractions. The persons involved were school administrators, deans, department heads, program heads, faculty members, and non-teaching personnel. The time frame was all year round.

Allocation of Budget/Resources is focused on managing the financial resources within an educational institution effectively. The primary objective of this initiative is to ensure that funds are allocated in a timely manner and that any necessary budget cuts are made while considering their impact on various expenses within the institution.

Here's an interpretation of the roles mentioned in this initiative: School Administrators: School administrators are responsible for overseeing the overall operation of the educational institution. In the context of this initiative, they play a crucial role in making high-level decisions related to budget allocation and financial management. They have a broad view of the institution's financial needs and priorities. Deans: Deans typically oversee specific schools or colleges within the institution, such as the College of Arts and Sciences or the School of Business. They are responsible for managing the academic programs and faculty within their respective units. In the context of this initiative, deans may be involved in advocating for budget allocations that support the academic goals of their schools. Department Heads: Department heads lead individual academic departments or units within the institution, such as the Department of Biology or the Department of History. They are responsible for managing the day-to-day operations of their departments, including faculty, curriculum, and budgets. In this initiative, department heads may play a more specific role in advocating for budget allocations that directly impact their departments. Collectively, these roles work together to ensure that the institution's financial resources are allocated efficiently and in a way that supports the "Allocation of Budget/Resources," is focused on managing the financial resources within an educational institution effectively. The primary objective of this initiative is to ensure that funds are allocated in a timely manner and that any necessary budget cuts are made while considering their impact on various expenses within the institution.

The initiative described involves enhancing the Learning Management System (LMS) by developing a software application to improve various aspects of education, including administration, documentation,

tracking, reporting, automation, and course delivery. Here's an explanation of the roles involved in this initiative and the allocated budget:

School Administrators: School administrators play a crucial role in overseeing the overall implementation of the enhanced LMS. They are responsible for making high-level decisions related to the initiative, including approving the budget and ensuring that the project aligns with the institution's strategic goals.

Deans: Deans, as mentioned earlier, oversee specific schools or colleges within the institution. In this context, they may be involved in advocating for the adoption and funding of the enhanced LMS within their respective academic units. They provide input on how the LMS can support the academic programs offered by their schools

Department Heads: Department heads are responsible for managing academic departments, including faculty and curriculum. They may collaborate with the development team to ensure that the enhanced LMS meets the specific needs of their departments and supports effective teaching and learning.

Program Heads: Program heads are responsible for specific educational programs or courses within the institution. They play a role in providing insights into how the LMS can be tailored to meet the requirements of their programs and contribute to the successful delivery of courses.

Faculty members are end-users of the LMS. They will be directly involved in using the enhanced system for course administration, content delivery, and assessment. Their feedback and involvement in the development process are valuable to ensure that the LMS meets the needs of educators and learners.

The non-teaching personnel may include IT staff, instructional designers, and support staff who assist in the technical implementation, maintenance, and user support for the LMS. They are essential for the successful deployment and ongoing operation of the system.

The allocated budget of P 1,200,000.00 is intended to fund the development and enhancement of the LMS, with a specific focus on achieving certain functionalities such as rubrics, teacher and instructor-facilitated learning, and the use of a syllabus. This budget allocation reflects the importance of investing in technology to improve the educational experience and streamline administrative processes.

The initiative is designed to benefit the entire institution by providing a more efficient and effective way to manage educational courses and training programs, ultimately enhancing the quality of education and learning outcomes. It's essential for all stakeholders to collaborate and provide input throughout the development process to ensure the LMS aligns with the institution's educational objectives.

The primary objective of Training in the Use of Different Learning Modalities is to expose students to different learning modalities and styles. By doing so, students can better identify and align their preferences with the learning methods that work best for them. This initiative ultimately promotes more effective and personalized learning experiences for students.

To implement this initiative, educational institutions can consider the following steps:

Assessment of Learning Modalities: Begin by assessing and identifying various learning modalities and styles, such as visual, auditory, kinesthetic, or reading/writing preferences. This assessment can be done through surveys, quizzes, or self-reflection exercises.

Educational Workshops: Organize educational workshops or training sessions where students can learn about the different learning modalities. These workshops can include presentations, interactive activities, and discussions that highlight the characteristics of each modality.

Practical Application: Encourage students to apply what they have learned about different learning modalities in their coursework. This may involve trying out different study techniques or engaging with course materials in ways that align with their preferred modalities.

Support Resources: Provide resources and support for students to explore and experiment with different learning styles. This could include access to various types of study materials, study groups, or online tools and resources.

Regular Evaluation: Continuously assess and evaluate the effectiveness of the initiative by collecting feedback from students. Adjust the program as needed to meet the evolving needs and preferences of the student body. The initiative to develop user-friendly platforms and systems for students and to educate on the use of credible platforms and sources for news and information is an important one. It involves multiple stakeholders within the educational institution. Here's a breakdown of the initiative:

The primary objective of this initiative is twofold:

User-Friendly Platforms: To create innovative and user-friendly digital platforms and systems that enhance the overall student experience, making it easier and more comfortable for students to access and use these systems.

Media Literacy and Credible Sources: To educate students about the importance of using credible sources of news and information, fostering critical thinking and media literacy skills.

To implement this initiative, the following steps can be considered:

Platform Development: Allocate resources for the development of user-friendly digital platforms and systems that serve various aspects of student life, such as learning management systems, student portals, or communication tools. These platforms should be designed with a focus on usability and accessibility.

Training and Workshops: Organize workshops and training sessions for students, faculty members, and non-teaching personnel to introduce and demonstrate the user-friendly platforms. Include hands-on training to ensure that users are comfortable navigating and utilizing these systems.

Media Literacy Education: Integrate media literacy education into the curriculum or offer optional courses or workshops. Teach students how to critically assess information sources, distinguish credible news from misinformation, and use reliable sources for research and learning.

Continuous Support: Provide ongoing support for students and faculty as they use the platforms and engage with credible sources. This support can include help desks, online tutorials, and resources for fact-checking and critical thinking.

Monitoring and Assessment: Continuously monitor the effectiveness of the platforms and the impact of media literacy education. Collect feedback from users and make improvements as needed.

IV. CONCLUSION AND RECOMMENDATION

Conclusions

Based on the findings of the study, the following conclusions were drawn:

The researcher concluded that synchronous learning was the most commonly used flexible learning modality among higher education institutions. In accordance with this, since synchronous learning comes with the use of technology in teaching and in learning, in some cases, technical issues were faced and thus, were mostly addressed by the school administrators. Aside from this, available equipment and technology were necessary to make synchronous learning in higher education institutions possible hence, it being the major priority of the educational institutions that participated in this study.

In addition to this, it was observed from the responses of the participants that the shifting from the traditional way of learning to online learning has been a challenge and produced drastic changes. Hence, it was recommended by the participants to improve the internet connection to make it stable and not be a hindrance to learning thus, leading to the achievement of sustainable development. Communication and

collaboration are integral to a comprehensive educational experience such as a student-friendly communication through various channels, including chat features, email-integration, and video conferencing. This enables students to seek clarification, express concerns and engage in meaningful discussions with their peers and instructors. By creating a virtual classroom that breaks the barriers of time and space. Overall, it was viewed and revealed in the study that, flexible learning modalities are implemented among educational institutions with the goals of providing the best quality in education despite the challenges faced by the school administrators.

Recommendations

The following recommendations were generated based on the findings of the study:

1. Begin with a clear vision of what you want to achieve through flexible learning. Set specific, measurable, achievable, relevant, and time-bound (SMART) goals. Ensure that your goals align with your institution's mission and values.
2. Conduct a thorough needs assessment to understand the requirements and preferences of your learners. Identify their technology access, learning styles, and any specific challenges they may face.
3. Invest in the necessary infrastructure, including reliable internet access, hardware, and software. Ensure that your learning management system (LMS) or online platforms are user-friendly and accessible.
4. Provide training and professional development opportunities for educators. They should be proficient in using digital tools, online pedagogy, and be aware of best practices for online teaching and student engagement.
5. Create or adapt educational content that is suitable for flexible learning. Ensure that it is engaging, accessible, and can be delivered in various formats, such as text, video, and interactive modules. Offer robust support services for learners, including technical support, academic advising, counseling, and disability services. Ensure that students have access to resources that help them succeed.
6. Develop fair and effective methods for assessing student progress and providing timely feedback. Explore alternative assessment methods that align with the flexibility of the learning approach. Develop fair and effective methods for assessing student progress and providing timely feedback. Explore alternative assessment methods that align with the flexibility of the learning approach.
7. Foster a sense of community and engagement among learners. Use communication tools, discussion forums, and collaborative projects to encourage interaction and peer learning. Collect and analyze data on learner performance, engagement, and satisfaction. Use this data to make informed decisions and continuously improve the flexible learning experience. Implement a quality assurance process to monitor and evaluate the effectiveness of your flexible learning programs. Regularly review and update course materials and teaching methods.
8. Continuously evaluate the success of your flexible learning initiatives and be prepared to adapt to changing needs and technologies. Flexibility and adaptability are key to long-term success. Ensure compliance with relevant legal and ethical standards, including copyright, data privacy, and intellectual property rights. Develop a sustainable financial model that supports ongoing flexible learning initiatives. Consider costs associated with technology, faculty training, and support services.
9. Ensure that all materials and platforms are accessible to learners with disabilities. Follow accessibility guidelines and accommodate individual needs. Establish feedback mechanisms for both students and faculty. Encourage learners to provide feedback on their experiences and use this input to make improvements; Training among teachers or school staff can be performed to avoid any technical issues

upon using online learning platforms. Moreover, digital literacy should be given importance since some of the information in the web are not always reliable and true. Proper training with regard to the use of technology and the proper choice of reliable information on the Internet should also be given importance; Examine the challenges and opportunities of implementing flexible and open learning approaches in the context of the Philippines, such as the readiness of institutions, teachers, and students, the availability of resources and infrastructure, and the alignment of curriculum and assessment, and the impact on learning outcomes; Compare and contrast the policies and practices of different countries and regions that have adopted flexible learning modalities in higher education, such as the recognition of prior learning, the accreditation of non-formal and informal learning, the modularization of courses, and the use of digital technologies.

By following these recommendations, administrators can create a robust and effective flexible learning environment that meets the diverse needs of learners while aligning with institutional goals and values. In summary, flexible learning's adaptability, accessibility, and capacity to reach a diverse audience make it a valuable tool in advancing sustainable development.

Flexible learning can play a significant role in achieving sustainable development by addressing various aspects of this complex global goal. Here's how flexible learning can aid in sustainable development. By equipping individuals with the knowledge, skills, and global perspectives necessary to address sustainability challenges, flexible learning contributes to building a more sustainable and equitable future.

10. Future researchers in the same field may look into the results of this study, and the procedure and research methodology followed by the researcher in the conduct of the study. A similar study may be conducted to highlight areas which are not included in the present research.

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