

Research Article

## Effectiveness of Using Different Modalities to the Learners' Performance in Physical Education 8

Aiza B. Solomon\* and Nilda S. Alforja\*\*

\*Master of Arts in Education Major in Physical Education, Laguna State Polytechnic University, Los Banos Campus and JHS Teacher at General Gregorio Del Pilar Integrated School, Bulacan District, SDO Bulacan, Philippines.

\*\*Associate Professor IV, Laguna State Polytechnic University—Los Banos Campus  
Corresponding Author Email: [saibaay90@gmail.com](mailto:saibaay90@gmail.com)

Received: June 29, 2021

Accepted: July 14, 2021

Published: July 25, 2021

**Abstract:** The study determined the effectiveness using different to the learners performance in Physical Education 8. This study examined the use of classroom evaluation methods such as pretest and posttest, as well as various learning modalities such as synchronous, asynchronous, and modular. After determining the significant difference between the pretest and posttest using synchronous, asynchronous, and modular learning, a new school improvement plan was developed in the hopes of improving the instructional skills of P.E. teachers. Descriptive-correlational method was used in this study to determine the correlational relationship of the independent and dependent variable. Adaptive evaluation questions from the Self Learning Modules of DepEd were used to assess the scores of Grade 8 students. The ANOVA test was used to evaluate the statistical differences between the means of synchronous, asynchronous, and modular print learning in providing the instructions in P.E. The frequency and percent distributions were used in measuring the variables that make up an efficient online and modular learning. The Turkey post-hoc analysis was used to find out whether there was a substantial difference in pre and post-test scores between classes. The learners who used synchronous modality in physical education had the highest mean scores, followed by the asynchronous group, which had the lowest mean scores among the three groups of learners studied. Based on the findings provided, synchronous learning is a more efficient form of teaching P.E. instructions than asynchronous and modular learning. In the meantime, the Significant Difference between Pre-test and Post-test among Groups of Learners Test is significant. It means that each learning modalities has an impact on how teachers provide instructions to students. For successful teaching, teachers must choose the best learning modality that meets the needs of both the students and the school. It will act as a guide for MAPEH teachers as well as the school on how to change their practices and create detailed instructions based on the results of the school improvement plan.

**Keywords:** Learning Modalities, Effectiveness, Synchronous, Asynchronous, Modular.

### Introduction

The pandemic had an extensive impact on the education system, affecting thousands of students and educators. The consequences of this pandemic include the closure of schools and other learning spaces. The crisis is wreaking havoc on pre-existing education, limiting opportunities for many more of the most vulnerable youth, children, and adults to continue learning. Learning is decreasing because it threatens how education can be acquired in this time of the pandemic. The shutdown of educational institutions hampers the delivery of access to food and services for the people of the communities, likewise to the capacity of parents to work, increase the risk and violence against children and women within the family. To make matter worse the demand on education is much

challenging. Adjustments and non stop webinar session are feed by the Department of Education to educators just to ensure that education will still continue despite the pandemic. Education has no exceptions in this crisis especially in the field of Physical education many of us P.E instructors find it hard to deliver the instruction and lessons to our learners particularly in the product base performance of our students. Why it said so? Because of restrictions and closure of the schools, parks and even the cancellation of school sports activity.

In line with this the Deped Order No.18 s.2020, Policy Guidelines for the Provision of Learning Resources in the Implementation of the Basic Education Learning Continuum Plan, was issued by the Department of Education (BE-LCP). The Regional and Schools Division office is responsible for the urgent and required creation, production, and distribution of learning resources in compliance with Article XIV, Section 1 and 2 of the 1987 Constitution, namely: Section 1. The state shall promote and protect all citizens' right to quality education at all levels, and shall take all necessary steps to make such education available to all. Section 2. The state shall (1) establish, maintain, and support a comprehensive, adequate, and integrated system of education relevant to the needs of the people and society; and (2) establish and maintain a system of free public elementary and secondary education.

According to DepEd Secretary Leonor Briones, the Department of Education will provide Self-Learning Modules (SLMs) as different learning modalities for diverse learners in the Philippines, including the Gen. Gregorio Del Pilar Integrated School. Face-to-face classes were still restricted due to transmission of the virus, as public health concerns, the integration of SLMs with alternative learning delivery modalities is essential. DepEd ensures that all learners were accessible to quality education. SLMs and other alternative learning modes were executed to address the issues. The students' situations and problems in educational resources were addressed by the educational institution as guaranteed that the education is accessible to all even in times of epidemic. To address the problem of P.E. teachers in providing instructions and evaluation to students using the different modalities the Department of Education mandate a DepEd order on how to assess students' performance through Synchronous, Asynchronous and Modular Print of Self-Learning Modules this DepEd Order no.031, s. 2020 Interim Guidelines for Assessment and grading in light of the basic education learning continuity plan (Enclosure no. 1) to provide guidance on the assessment of student learning and on the grading scheme to be adopted this school year. Which may help my fellow P.E. educators as well as students to fully understand that blended learning delivery modality was the answer to the problem on how we can assess students' performance in teaching P.E. Based on the above given information, the study aimed to determine the factors that may affect the delivery of different learning modality. And since the pandemic have affected all social dynamics, this serves as a start in featuring new paradigms if ever such related or similar state might transpire in the future.

### **Background of the Study**

The objectives of the Department of Education in having the alternative *delivery* mode (ADM) aimed to offer learners with equitable access to high-quality basic education in a home-based setting supervised by competent parents, guardians, or tutors who had received necessary training. In compliance with its statutory mandate, the DepEd has promulgated issuance on flexible learning materials, stipulated in DepEd Order No. (DO) 21 s. 2019, Policy Guidelines on the K-12 Basic Education Program. It sets forth flexible learning options (FLOs), which covers different forms of learning delivery and its accompanying learning materials that are sensitive to learners' needs. Since then, each Schools Division are advised to adopt different learning delivery modalities that are applicable to the locality and capability of the school. What Learning modality does the Gen. Gregorio Del Pilar Integrated School adopted? The school chose the Blended learning delivery modality which include the Synchronous, asynchronous and Modular print. The Division of Bulacan come up with strategic plan to ensure that all activity in Distance learning will be conducted according to DepEd Memorandum No.160 s.2020 of Bulacan (1) The teaching and learning process under the “new normal “of education calls for a great adjustment in the performance of assigned

duties of teachers on one hand and task learners on the other. Corollary to this, the Schools Division of Bulacan through the curriculum implementation Division informs the field of some activities that must be done during the first week of distance learning delivery beginning August 24, 2020. (2) In as much as face to face is not allowed, all concerned together with elementary and secondary teachers are encouraged to think and devise ways on how the following activities could be provided to learners and parents/guardians. Cited in letter d and e on the above memorandum states the (d) Orientation on Blended learning modality and Online modality and (e) Systems of LMs. Distribution and retrieval.

Depending on the COVID-19 limitations and the unique context of the learners in the school or region, schools may employ one or a mix of the following learning delivery modes. Parents preferred distance learning modalities such as Online Distance Learning (ODL) and Modular Distance Learning (MDL). Blended Learning was chosen by three (3) sections of Grade 8 at Gen. Gregorio Del Pilar Integrated School, which included Online Distance Learning (ODL) and Modular Distance Learning (MDL). Online classes are held every Thursday and Friday, and modular print materials are distributed to parents every Monday, with module retrieval taking place the following week.

### **Theoretical Framework**

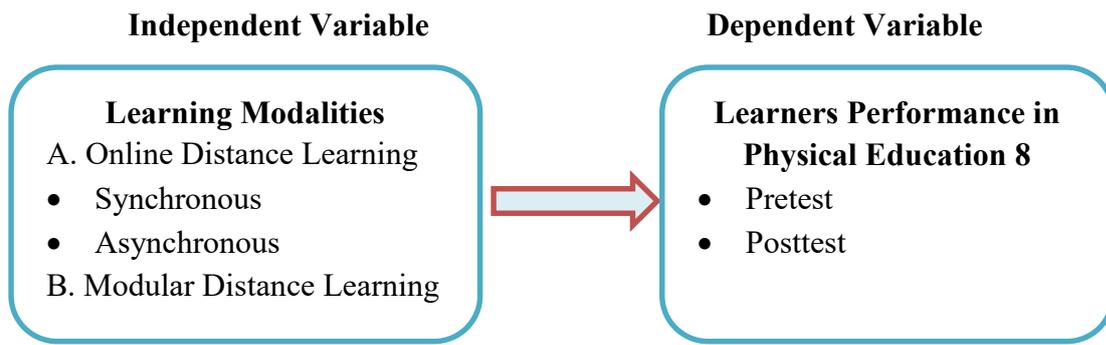
The study was anchored on the theory of David A. Kolb, the experiential learning theory (ELT) was based on the theoretical assumption that a person learns from direct experience or “learning by doing”. In particular, it's intriguing since it focuses on the learner's point of view and personal growth. The introduction of strategy on an online and modular class that is the latest approach in teaching in the “new normal education” is considered an innovative classroom for new learning style and new learners' experiences and related to Kolb theory of experiential learning. Learning is defined as a process of acquiring knowledge via the transformation of experience. The learning cycle, according to Kolb, has four stages: concrete experience, reflective observation, abstract conceptualization, and active experimentation. It is a never-ending loop in which the individual learns with each new encounter. According to his thesis, learning is a comprehensive process in which ideas for improvement are created and applied. He described two different ways of grasping experience based on Kolb's experiential model (1). Conceptualization in the abstract (2). Concrete experience, as well as two methods for transforming experience (1) Active experimentation and (2) reflective observation. These four modalities of learning constitute a cycle in which a tangible experience gives knowledge that acts as a basis for reflection, and as a result of these reflections, information and abstract concepts are absorbed (Cherry 2020). Since this research focuses on the different learning modalities which is online and modular class. It explains, when a student may choose to begin learning via modular class or online a testing of ideas is a process, once they gather information from the platform, they choose a new idea and information is being processed, this is the time they were able to decide and reflect which learning mode will work best for them.

Learning style is one of the factors affecting student's capability in choosing the best learning modalities. According to Kolb theory of Learning Style Inventory (LSI), the evaluation enables students to choose their preferred learning style and provides information on how instructors may utilize this knowledge to better serve their students. The potential strategies for accommodating different learning styles enables the teachers to use the learning style strategy. At the beginning of the class will learn more about their student's abilities and help them better understand how they learned. Learning style inventories might assist students in developing study habits that would keep them motivated and involved in the new learning process. They may also find it necessary to discover their preferences and then use them to improve their study routine.

### **Conceptual Framework**

Conceptual framework utilizes the independent and dependent model used in Physical Education. In the context of the study, the identified independent variables are as follows: The learning modalities. A). Online Learning which includes synchronous and asynchronous. B). Modular distance learning:

Modular print. The dependent variables include the Learners Performance in Physical Education 8: Pretest and Posttest.



**Figure 1. Research Paradigm**

### **Statement of the Problem**

This study aimed to describe the effectiveness of using different modalities to the learners' performance in Physical Education 8. Specifically, it sought to answer the following questions:

- 1) What are the learners' mean scores in terms of their pretest and posttest and using learning modalities?
- 2) Is there a significant difference between the pretest and posttest using the synchronous online learning?
- 3) Is there a significant difference between the pretest and posttest using asynchronous learning modalities?
- 4) Is there a significant difference between the pretest and posttest using modular learning modalities?
- 5) Is there a significant difference between the posttest among the learners using the three different modalities?
- 6) What is the proposed School Improvement Plan based on the results of the study?

### **Hypotheses**

#### **The following hypotheses were tested in this study**

- 1) There is no significant difference between the pre assessment and post assessment using the online learning and modular learning modalities.
- 2) There is no significant difference between the pretest and posttest using the synchronous online learning.
- 3) There is no significant difference between the pretest and posttest using asynchronous learning modalities.
- 4) There is no significant difference between the pretest and posttest using modular learning modalities.
- 5) There is no significant difference between the posttest among the learners using the three different modalities.

### **Significance of the study**

The output of the study would be beneficial to the following individual or group of people. It could help them make best use of the different learning modalities in giving instruction and assessing the output especially in the subject of Physical Education. This study could be an important resource in development of an effective learning modal(s). The result of the study may help the **School Administrators** find several means to improve the teaching skills of the P.E. teachers whether it is online or modular learning. It also initiates innovations on how to develop the skills of teachers that can help the learners to have a high skill performance. This will provide information on how to serve and deal with teachers by knowing their needs and abilities.

The study could help **Physical Education teachers** to be familiarize and equip in giving precise instruction and right assessment to students in using different modalities.

This study will be beneficial to the **students** since they already identified and familiar on what learning modalities they are using.

The result of the present study would be beneficial to the **future educators** in adding to their volume of knowledge in the field of Physical education. Such result could serve as a future reference for the next generation as they may need information regarding instructional skills of the teachers.

The study will be beneficial to the **community** for it can provide a solution to the common questions in the community about the different learning modalities and how their students will be assessed.

The study may serve as reference to the **future researchers** who would conduct similar study. It can also give more comprehensive and more ideas regarding the instructional skills of the teachers and its relation to the performance of the learners. The result can be used in further researches to improve the instructional skills of Physical Education teachers.

### **Scope and Limitation**

The study was focused on effectiveness of using different modalities to the learners' performance in Physical Education 8. The respondents involved of Grade 8 which consists of ninety five (95) students of Gen.Gregorio Del Pilar Integrated School, Bulakan District, SDO Bulacan. The main source of data was adapted from DEPED LRMS Self-Learning Modules, Physical Education Third Quarter Module I-Get Moving at Home for Fitness.

Random sampling was employed to select learners and answer the given questions.

This study is limited only to the responses of the respondents on the pretest and posttest of Third Quarter-Module 1 Get Moving a home for fitness on the different learning modalities with fifteen (15) item choices.

### **Definition of Terms**

In order to have a better understanding of the study, the researcher specified the following terms: conceptually and operationally to give the reader added information on the words that were used in this study.

**Assessment:** It refers to the assessment or estimation of someone or something's nature, quality, or ability. In this study, it also pertains to the achievements of students based on modular equipment, graded performances and test.

**Asynchronous:** It is a wide phrase encompassing kinds of education, instruction, and learning that do not alter in the same location or time. This study pertains to any Information technology application that facilitates teaching and learning.

**Blended learning:** A type of education in which students learn through electronic and online media in addition to traditional face-to-face instruction. In this study, it refers to the usage of technology software together with instructional materials.

**Effectiveness:** Is the ability to produce a desired output or the ability to produce a desired results. In this study, this pertains to the efficacy of the learning modalities.

**Instruction:** A statement describing how to do something, an order or command, the act or process of teaching: the act of instructing someone. In this study, it used to instruct students on what they

should do with the lessons.

**Learning modality:** It relates to how learners like to receive knowledge-visually, vocally, or kinesthetically. This study includes the online learning usage of the learners.

**Modular Distance Learning:** It refers to (MDL) Individualized teaching in which learners employ self-learning modules (SLMs) in paper, digital, or electronic format, depending on their needs. This study refers to written materials and worksheets sent by the teachers to the students.

**Modular Print:** It refers to the printed materials that serve as Self-learning modules. Student's equipment containing a lesson written in a way that is easy for the students to understand and be allowed to do even without the teacher by their side. This study refers to the printed lessons such as worksheets and summative tests.

**Online Distance Learning:** It refers to the teacher as a class facilitator. Attendance of students in active engagement via various online platforms, even if they were in different locations during teaching. This study pertains to online application and websites use in teaching to achieve learning in Google meet, Google classroom, Zoom meeting, Microsoft teams 365 etc.

**Self-Learning modules (SLM):** It refers to a full unit or bundle of study materials for individual use, which is particularly beneficial for adult learners, graduate students, and undergraduate students. This study belongs to the print materials produced by the department of education.

**School Improvement Plan (SIP):** It refers to a plan that establishes the changes in school needs to enhance student accomplishment and shows how and when these changes will be available. In this study, it refers to the school's growth plan, which incorporates the school's objectives, vision, and mission.

**Synchronous:** It refers to online or distance education that happens in real time. In this study, it pertains to real time online classes wherein students attend lessons to the teacher.

### **Review of Related Literature**

This chapter discusses the selected related literature and studies were relevant to the study of effectiveness of using different modalities to the learners' performance in Physical Education 8. Due to the pandemic, the education system has constantly changed from traditional face-to-face learning to distance learning. Physical education is one of the subjects affected by this new teaching method. Various learning modalities were introduced through the Department of Education's intuition in order to maximize the educational process.

As mandated in the Constitution, section 1 of article XIV of 1987, BE-LCP is constant that the state will protect and promote the welfare of the citizens ensuring quality education that is accessible also for all levels. DepEd is vested with the authority, accountability, and responsibility for ensuring access to, promoting equity in, and improving the quality of education under Section 6, Chapter 1 of Republic Act No. 9155, or the Governance of Basic Education Act of 2001.

As a result, depending on local health conditions, resource availability, and the unique context of the learners in the school or region, schools may utilize one or a combination of the following learning delivery modes (ACCRA LAW, 2020).

According to Walter (2020), the technique of taking classes from a college or educational institution situated anywhere in the globe over the internet is known as distance learning. Distance is immaterial, and the quality of education should be the same as that in a classroom setting, as long as the educational institution is certified by an authorized organization. It refers to any learning that

occurs when students are not physically present in the classroom. Distance education used to refer to correspondence courses in which students connected with their schools or professors through the mail. Distance education has lately gone online, incorporating a wide range of systems and methods that may be accessed via practically any connected device.

Distance learning is a learning delivery method in which learning between a teacher and students in other places met using an online platform. While modular distance learning (MDL), online distance learning (ODL), and Television and Radio-Based Instruction are the three types of this modality (Teacher P.H., 2020). As the Internet blurs the barrier between near and distant, distance learning is poised to upset the present educational paradigm. There are more alternatives than ever before for learning anything you need to know, with everything from AI-powered teaching algorithms to basic message boards. View sonic Library (2020).

The readings are related to the present study because they focus on Distance learning by the different modalities (Blended, Online, and Modular Learning) as presented in this study.

Face-to-face training is combined with online distance learning, modular distance learning, and TV or radio-based education in blended learning. Blended learning will allow schools to remove face-to-face learning, preserve social distance, and restrict the number of children who are outside at any given moment (Lego, 2020).

Blended learning refers to any formal education program in which a student learns in part through online learning, with some student choice over time (Horn *et al.*, 2014). Meanwhile, to Holden and Westfall (2010), Blended learning is described as the practice of mixing the best learning and teaching techniques, technology, and media to offer meaningful, adaptable learning experiences that result in learning outcomes. This study's most relevant learning and teaching techniques include online learning and modular learning. According to Pop (2020), the ideas of using online technologies for learning are referred to as online knowledge. The important aspect here is the usage of the internet. A distance between the student and the teacher is implied by an online track. Virtual platforms make it possible to deliver lectures, assignments, and examinations.

Willkomm (2020) explained that online learning is a pre-determined course structure that is built on a learning management system (LMS) prior to the terms start. Classes, as the name implies, are designed to be taught online, with all course content, assignments, and so on housed online. In addition, most lectures include power points, and audio-visual lessons and assignments are scaffold. One of the most significant improvements in online learning has been a greater emphasis on in-person, face-to-face interactions to give support and scaffolding for students learning online (Media Wailey, nd).

According to Geneva College (2020), online learning or online education is truly flexible and completely online. This is a type of internet-based education in which students can work on their studies at their own pace. Video lectures or self-paced courses may be used in courses to guide students through their learning experiences. According to Diana (2020), online learning options should be made available in order to leverage the best teaching and provide high-quality course options to all learners. As online learning becomes more usual in our educational system, we must provide more participatory and personalized online and blended learning experiences that manifest best practices for engaging all students.”

There are numerous options for online teaching. The synchronous and asynchronous types are well supported by this system established pedagogies. According to Heick (2020), when students study the same subject at the same time, whether online or offline, this is referred to as synchronous learning. He also explained that synchronous learning occurs when multiple students learn the same thing at the same time, such as during a lecture (online or in-person).

According to Woodall (2020), Group learning is a type of synchronous learning that takes place in a time-space-unified way in which students learn the same or similar subject at more or less the same time and typically in the same area. In this domain, traditional classrooms, virtual classrooms, live product practice laboratories, interactive chat rooms, and mentorship are all employed.

Individualized teaching is offered using Students can use self-learning modules (SLMs) in print or digital format/electronic copy with modular distance learning, whichever is most convenient for them. Learner's Materials, textbooks, activity sheets, study guides, and other study materials are also available through Modular Distance Learning. Teachers are usually asked to provide appropriate learning materials. Students, on the other hand, can have access to these materials by downloading electronic versions to their computer, tablet PC, or smartphone (Whatalife.ph. 2020).

Teachers are accountable for providing accountability for the students' success in this modality. Similarly, students may seek assistance from professors via email, Facebook message, SMS, and so on. Assessment is important in each learning modality, it is a gauge on how to assess students' performance whether classroom, formative or summative.

According to United Nations Children's Fund (UNICEF) monitoring is essential for determining and improving the reach and effectiveness of distance learning modalities. It is important to identify which demographic groups and locations of the country are not served by learning modalities. This information may be utilized to develop plans and strategies for expanding reach Feedback from important stakeholders such as learners, parents/caregivers, and teachers can help to improve the quality and effectiveness of distant learning modalities. Surveys may inquire about their attitudes, preferences, and level of participation in various forms of learning. The Department of Education issued DepEd Order No.31 s, 2020 INTERIM GUIDELINES FOR ASSESSMENT AND GRADING IN LIGHT OF THE BASIC EDUCATION LEARNING CONTINUITY PLAN (Enclosure no.1) to guide the assessment of student learning and the grading scheme that implemented this school year. The Department of Education is dedicated to maintaining educational continuity throughout this crisis while also caring for the health, safety, and well-being of all students, instructors, and workers. Schools must now create evaluation and grading systems that will most effectively encourage students' growth and adapt to changing conditions (Philippine Information Agency).

According to the preliminary results of Learner Enrollment and Survey Forms (LESFs) distributed during the enrollment period, 7.2 million enrollees prefer modular distance learning, TV and radio-based instruction, and other modalities for the 2020-2021 school year, while only 2 million prefer online. According to the most recent Department of Education data, 3, 885, 427 Students that chose modular modules, either printed or digital, will use them as an alternate learning choice. Meanwhile, a total of 2, 074, 010 learners are enrolled in online learning, with the remaining 1,940, 054 enrolled in a combination of face-to-face and other modalities. A total of 744, 648 kids preferred television-based education, while 358, 270 preferred radio-based instruction. The 401,903 individuals polled preferred "other" alternative learning modes (Manila Bulletin, 2020).

There have been assumptions made about the possibility of problems and difficulties in learning modalities, such as a lack of engagement and a sense of connection with pupils, in addition to the closeness in delivery (Cua, 2020). The new developmental education modalities are vastly different from what a traditional developmental classroom would offer in terms of printed materials as well as internet access and connectivity (Sheldon and Durdella, 2010).

Positive learning outcomes include improved knowledge as assessed by test scores, more student engagement with class material, a better perspective of learning and the online format, a stronger sense of community among students, and less withdrawal or failure. (MERLOT Journal of Online Learning and Teaching, Vol. 11, No. 2).

During the post-COVID-19 era, a fully online instructional technique may be practical. For example, in China, the virus's first epicentre, Over 180 million youngsters have been told to stay at home. However, education had to continue in a new manner when schools were closed for closure. It was made available on the internet through online courses and electronic textbooks (Patrinos and Shmis, 2020).

A variety of underlying issues limit the efficacy of blended learning. One significant difficulty is mastery how users can utilize technology successfully and guaranteeing participants' dedication given the peculiarities of the particular learner and the interactions with technology (Hofmann, 2014). The users encounter difficulties with technology, they may abandon their learning and, as a result, technological applications may fail.

Furthermore, Blended learning is referred regarded as the "new normal" in the world of educational technology (Norberg *et al.*, 2011). Despite some uncertainty in its definition, blended learning is described as a form of education that mixes traditional classroom methods with online digital methods (Graham, 2013). Control over time, setting, or speed is achieved by the teacher's physical presence as well as the learner's physical presence (Huang *et al.*, 2009). These integrated learning qualities provide great opportunities for education in the coming era.

According to an Oxford Group (2013) According to the survey, some learners (16%) expressed unfavorable views regarding blended learning, and 26% were afraid that blended learning students would not complete their courses. Learners are active participants in any learning process, and their experiences and characteristics influence their future ability to learn efficiently. The design tools employed in blended learning may have an impact on the learning efficacy. Kintu and Zhu (2016) investigated the feasibility of blended learning at a Ugandan university, with a focus on whether student attributes such as self-regulation, Significant variables in learner outcomes were attitudes toward blended learning, computer competency, and student backgrounds (such as family support, social support, and task management).

Virtual schooling, also known as Online Distance Education (ODE), became widely available in the 1990s. Its growth has accelerated since then and continues to accelerate (de la Varre *et al.*, 2011). Rice (2012) discusses the rise of K-12 online distance education in the United States. She points out that virtual schooling is growing at a rate of 30% per year in the United States. Enrollment in online courses reached 4 million in 2011, up from 50,000 in 2000. Out of the fifty states, forty-five have their own virtual schools. In the same element, virtual schooling is becoming more popular in Canada.

According to Barbour (2013), there were nearly 25,000 K-12 students enrolled in online distance courses in Canada in 1999-2000, with the number increasing to 284,963 in 2012/13. This rapid growth in virtual schooling is due to a variety of factors, including increased internet access, lower hardware prices, a growing variety of learners with varying educational needs, and the appeal of cost-effective distance education (Johnson, 2011).

Gahutu (2010) examined modular learning in the context of a physiology course at Rwanda's National University. Students indicated that when education was less theoretical and they could go through content in practical seminars and demonstrations, they learnt the most. However, in order for the problem-based approach to be effective, students will need greater access to outside information, which may be provided through the library or the Internet. Overall, learners preferred the modular, self-directed learning method over the more typical classroom model previously employed.

Sadiq (2014) based on statistical analysis results and study findings.

When compared to traditional teaching techniques, in the teaching-learning process, modular instruction is more effective. Because kids study at their own speed using this modular method. It is

a free self-learning approach in which instant reinforcement and feedback are given to practice exercises, which motivates pupils and piques their interest. A modular approach increases the likelihood of student engagement in the classroom in terms of completing the assigned activities on the spot. As a result, the pupils feel free to learn in their own way.

According to Dangle *et al.*, (2020), it was clear that teachers faced a number of problems while implementing Modular Distance Learning. The majority of students are unable to study on their own. Seventy percent of them find it difficult to follow the instructions in the modules. As a result, modules were routinely submitted late, and the vast majority of response sheets were blank. The teachers believe that students' responses in their modules have little logic, and mastery of the course is most likely impossible to achieve. Some of them spend most of their time helping their younger siblings to accomplish their modules. Hence, parents are unable to assist their child or children due to a lack of orientation. Some parents are unable to complete their education. Some teachers have poor cell phone signal and connectivity. And, instructors have a lot of paperwork to verify and record. According to Olivier (2020), while comprehensive online and mixed learning appear to be the ultimate aim of education in this new era, they necessitate significant modifications. In certain developed nations, blended learning is a well-established educational method. It has given these nations the ability to deal with the present COVID-19 epidemic. Blended learning and teaching techniques have already been used. Schools in other nations, on the other hand, must carefully prepare a virtual learning solution.

According to Obana (2020), it is important to evaluate their abilities in light of the power supply dependability, internet connectivity, and instructor preparedness. When it comes to grading, several universities have shifted from quantitative to qualitative evaluation systems, such as a pass/fail system (Farrington, 2020).

While the decision was made with good intentions, some individuals are worried about the repercussions. The context of student motivation, as well as the advantages and disadvantages of various evaluation measures, are all disputed (Barnes and Buring, 2012). Within the argument for quantitative over qualitative, Dilanchyan (2020) argued that such a change would detach students' motivation to strive for high rating. Given the learners' difficult situation, the assessment construct known as kindness error is a situation in which the teacher is overly kind and all students receive high passing scores (Nitko and Brookhart, 2014).

REGION MEMORANDUM PPRD No. 26, s. 2020 of the SOCKSARGEN Region refers to Region Memorandum CLMD No. 55, s. 2020 regarding the "Region-wide Conduct of Pilot Tests for the Different Learning Delivery Modalities" in identified SOCKSARGEN schools to be facilitated by the nine Schools Division Offices (SDOs), which will take place on July 27-31, 2020. Determine if there is a significant difference in teacher, parent/guardian, and student assessments of instructors' competency in employing blended learning approaches via Online Distance Learning (ODL) and Modular Distance Learning (MDL) modalities and determine if there is a substantial difference in the assessments of instructors, parents/guardians, and students about the degree of competency of parents in monitoring the Modular Distance Learning modality.

According to Carroll and Burke (2010), Online instruction is more effective than face-to-face training. This conclusion was based on the fact that the final examination scores from the two parts were almost equal, with no statistically significant difference between them. Ünal (2015) stated that the relationship between achievement and learning modality is important in the process of teaching and learning. There should be less conflict and problem if teachers understand their own teaching styles as well as the learning modalities of their students. Ogbonna *et al.*, (2019) employed two instruments, a pretest and posttest, which were delivered to two non-equivalent and non-randomized groups of students. The research was carried out at two Nigerian secondary schools. This study found that teaching word processing utilizing synchronous and asynchronous e-learning modes

improved students' cognitive academic achievement in word processing. In terms of cognitive accomplishment, students taught using synchronous e-learning outscored those taught using asynchronous e-learning, according to the findings of the study.

Emmanouilidou *et al.*, (2012) conducted a research with a pretest and a posttest to evaluate if knowledge improvement occurred forty nine (49). Physical educators with elementary teaching experience were randomly allocated to one of three groups: synchronous, asynchronous, or control. Prior to participating in the program, physical educators' understanding of student evaluation was controlled since only approximately 40% of questionnaire items were accurately answered. The post test revealed that both experimental groups correctly answered an average of 62 percent of questionnaire items, resulting in a percentage of knowledge improvement of 52 percent and 59 percent for the synchronous and asynchronous instructional groups, respectively. Learning technologies, both synchronous and asynchronous, can increase the quality of student-teacher interactions, stimulate greater student involvement, and improve learning outcomes (Simonson *et al.*, 2012).

### **Synthesis**

In that research covers the efficacy of various learning modalities, and considering that we are amid a pandemic, this form of teaching and learning is appropriate for the current scenario. The internet bridges the gap between close and remote learning conditions. This experimental period's statistics with all learning modes selected provide insight into teaching and learning techniques in future application.

To assist this research, statistical data from a variety of sources was highlighted in order for it to be used as a model to assure the success of this experimental learning.

To quantify this research, statistical data from various sources was emphasized so that it could be utilized as a model to ensure the success of this experimental learning. Patterns from different researches, assessments such as pre-test and post-test that evaluate three learning modalities were utilized.

The settings of learning and applied to assess the performance of the participants of this research will focus on the success of different areas. In the existing state of affairs, the synchronous learning modalities were the most effective means of communicating knowledge to its dependents.

### **Research Methodology**

This chapter discusses the methodological instrumentation and statistics of research used by the researcher. Likewise, discussed here are the research design, respondents of the study, the research instrument in the gathering of data, the procedure observed in the investigation, and finally the statistical treatment.

### **Research Design**

The researcher used the descriptive correlational method in order to obtain the relationship among variables without seeking to establish a casual connection. According to Write (2020), In scientific research, a descriptive correlational method refers to a sort of study in which information is gathered without making any modifications to the studied topic. This indicates that the researcher cannot directly interact with the environment under investigation in such a way that the experiment results in any changes. These kinds of investigations are commonly referred to as observational studies.

### **Respondents of the Study**

The respondents of the research were Grade 8 students from General Gregorio Del Pilar Integrated School, with a total of ninety-five (95) students chosen at random.

**Table 1. Shows the Distribution of respondents.**

<b>Grade Level/Section</b>	<b>No. of Students</b>	<b>Type of learning Modalities</b>
Grade 8- St. Philip	38	Modular
Grade 8- St. Peter	32	Synchronous
Grade 8- St. James	25	Asynchronous

The researcher employed the different assessment tools to be used in assessing students' learnings.

### **Research Instrument**

The evaluation instruments used to give the pretest and posttest to Grade 8 pupils at General Gregorio Del Pilar Integrated were adopted from Alternative Delivery Mode Quarter 3–Module 1: Get Moving at Home for Fitness First Edition 2021. The contents of this module are owned by their respective copyright holders. It was issued by the Department of Education Region III. Each SLM is composed of many components. What I Need to Know, What I Know, What's New, and What It Is. Pretests are offered to assess your past understanding of each SLM's lectures. This will indicate whether you should continue with the module or seek assistance from your facilitator or teacher for a better comprehension of the lesson. To self-check your learning, you must complete the posttest at the conclusion of each lesson. Each evaluation instrument has 15 items.

### **Research Procedures**

The researcher asked permission from the office of the Principal of General Gregorio Del Pilar Integrated School to conduct a study on selected students of Grade 8 which consists of ninety five (95) learners. After retrieving the letter from the Principal the researcher proceed to the research. The assessment tools pretest and posttest were provided to students in the Synchronous and Asynchronous learning modalities using Google Form so that all learners with the link could quickly access and answer the test right away. After they submit their response, the test score will be computed automatically. In the Modular group, the printed pretest and posttest evaluation tool was provided on the day of module retrieval and returned the following day, which was distribution day. To collect the test score, you will examine it item by item so that you may obtain the final results. After gathering the needed data, the researcher tabulated and analyzed the results and applied the statistical treatment used in the study.

### **Statistical Treatment Data**

The researcher administered personally the survey among the Grade 8 learners which consists of ninety five (95) learners of Gen. Gregorio Del Pilar Integrated School. The frequency and percent distributions were used in measuring the factors constitute to an effective online and modular learning. To determine the statistical differences among the means of synchronous, asynchronous and modular print learning in delivering the instructions in Physical Education, the ANOVA test was used. The t-test was also used to identify the pretest and posttest dependent sample.

### **Presentation, Analysis and Interpretation of Data**

This chapter includes the presentation, analysis, and interpretation of the data gathered.

**Table 2. Pre-test mean scores of groups asynchronous, synchronous and modular**

<b>Group</b>	<b>Mean</b>	<b>SD</b>	<b>Skewness</b>
Asynchronous	8.08	2.38	-.063
Synchronous	10.09	2.47	.487
Modular	9.24	3.06	-.257

Table 2 shows the pretest mean score of the learners using the three learning modalities. It was shown that the learners using synchronous modality in physical education got the highest mean scores ( $\bar{x}$ =10.09;  $sd$ =2.47;  $skewness$ =.487), followed by modular group ( $\bar{x}$ =9.24;  $sd$ =3.06;

skewness=-.257), then the lowest means scores among the three groups of learners under this study is the asynchronous group ( $\bar{x}$ =8.08; sd=2.38; skewness= -.063).

The results revealed that the synchronous group of Grade 8 learners received the highest mean score in their pretest among the three groups of learners. There were no significant differences between groups in terms of test scores, assignments, participation grades, or final grades, however the online group's averages were somewhat higher.

Ninety-six percent of online students thought the course was as good as or better than their traditional face-to-face course. There were no significant variations in learning preferences, styles, or grades between the two groups. According to the findings of the study, similar learning activities can be as successful in both online and face-to-face contexts (Imaggi.com, 2011).

**Table 3. Posttest mean scores of groups asynchronous, synchronous and modular**

Group	Mean	SD	Skewness
Asynchronous	9.56	2.16	-.452
Synchronous	12.12	2.70	-.501
Modular	10.74	2.65	-.539

Table 3 illustrate the results of mean scores of group Asynchronous, Synchronous and modular. It was shown that the learners using synchronous modality in physical education got the highest mean scores ( $\bar{x}$ =12.12.; sd=2.70; skewness=-.501), followed by modular group ( $\bar{x}$ =10.74; sd=2.65; skewness=-.539), then the lowest means scores among the three groups of learners under this study is the asynchronous group ( $\bar{x}$ =9.56; sd=2.12; skewness= -.452). The results revealed that the synchronous group of Grade 8 learners received the highest mean score in their posttest among the three groups of learners. There were no significant differences between groups in terms of test scores, assignments, participation grades, or final grades, however the online group's averages were somewhat higher.

A vast number of studies have revealed that when compared to traditional face-to-face forms, the usage of online or hybrid forms has a statistically significant influence on the outcomes of student learning. Favorable learning outcomes include improved learning as assessed by test scores, more student engagement with class material, a more positive image of learning and the online format, a stronger feeling of community among students, and a reduction in withdrawal or failure (MERLOT Journal of Online Learning and Teaching, Vol. 11, No. 2. June 2015).

**Table 4. Test of significant difference in pre-test mean scores among groups**

	Sum of Squares	Df	Mean Score	F-value	p-value
Between Groups	56.978	2	28.489	3.903	.408
Within Groups	671.611	92	7.300		
<b>Total</b>	728.589	94			
**p-value $\leq$ 0.01; (highly significant) *p-value $\leq$ 0.05 (significant)					

The Table 4 presents the results of ANOVA test to identify the significant difference on the Pretest mean scores among the groups. The data illustrates that there is significant difference in the pretest mean scores among the groups with the p-value of .024. The Tukey post-hoc analysis (see appendix page #57) determined that the significant difference lies between group asynchronous and group synchronous. According to Olson and McCracken (2015) reported no difference in student satisfaction between synchronous and asynchronous students, while Kunin *et al.*, (2014) found that students rated the asynchronous format higher than synchronous formats.

**Table 5. Test of significant difference in posttest mean scores among groups**

	Sum of Squares	Df	Mean Score	F-value	p-value
Between Groups	94.251	2	47.125	7.208	.408
Within Groups	601.476	92	6.538		.001
<b>Total</b>	695.726	94			

\*\*p-value  $\leq 0.01$ ; (highly significant) \*p-value  $\leq 0.05$  (significant)

The Table 5 presents the results of ANOVA test to identify the significant difference on the Posttest mean scores among the groups. The data illustrates that there was significant difference in the posttest mean scores among the groups with the p-value of .001.

Data indicated that the research hypothesis indicates a substantial variation in students' answers regarding the efficacy of synchronous e-learning resources at the higher education level, enrolled in different programs. Students in diverse programs noticed that the efficacy of synchronous and asynchronous e-learning technologies differed (Misbah *et al.*, 2017).

**Table 6. Test of significant difference between pretest and posttest among group of learners**

Group	Assessment	Mean	Difference	df	t-value	p-value
Asynchronous	Post	9.56	1.48	24	2.715	*.012
	Pre	8.08				
Synchronous	Post	12.12	2.03	31	1.211	**.000
	Pre	10.09				
Modular	Post	10.74	1.50	37	4.130	**.000
	Pre	9.24				

\*\*p-value  $\leq 0.0$ (highly significant)1; \*p-value  $\leq 0.05$  (significant)

Table 6 illustrates the results of t-test in order to identify the significant difference between pretest and posttest among group of learners. The results reveal that there was a statistically significant difference between the pre-test and posttest among the group of learners. Mean scores of posttest in Asynchronous group posttest (M=9.56) was greater than the pretest (M= 8.08) Difference- 1.48 t (24) =2.715, \*p.012. Synchronous group posttest (M=12.12), was greater than the pretest (M=10.09) Difference = 2.03, t (31) =1.211, \*p.000. It is also evident that there is no significant difference in mean scores of modular group among the group of learners. Mean scores of posttest (M=10.74), was greater than the pretest (M= 9.24) Difference= 1.50, t (37) =4.130,\*p.000.

According to Carroll and Burke (2010), an online teaching modality outperforms face-to-face training. The fact that the final examination scores from the two parts were almost equal, with no statistically significant difference between them. Shivaraju *et al.*, (2017) explained that there was a substantial improvement in the recipient's understanding following the post-lecture evaluation as compared to the pretest. Only 56 (35.90%) of the 156 pupils earned scores between 5 and 8, while 100 (64.10%) received scores less than 5. In the post-test, 78.21 percent (122) of the recipients obtained scores between 5 and 8, while 21.79 percent (34) received scores more than 8, suggesting a high recipient group with good progress.

### Proposed School Improvement Plan

The Governance of Basic Education Act of 2001 (RA 9155) requires the state to provide schools and learning centers the ability to make decisions that are in the best interests of the children they serve. According to RA 9155, school leaders have the authority, accountability, and duty for developing school education programs and the SIP. Furthermore, school administrators are charged with the creation of school and community networks, as well as the promotion of active involvement of teachers' organizations, non-academic staff in public schools, and parents-teachers-community groups, notably in local school development initiatives (Teacher Ph.com.).

A School Improvement Plan (SIP) is a three-year road map outlining the school's specific solutions to identified Priority Improvement Areas (PIAs). It aims to improve three key components of basic education outcomes: access, quality, and governance. It is founded on facts, is goal-oriented, and is centered on the child or learner. The SIP serves as the foundation for the school's Annual Implementation Plan (AIP) as well as additional specific plans like as the tire Child Protection Plan, Disaster Risk Reduction Management (DRRM) Plan, and Learning Action Cell (LAC) Action Plan (2020). In accordance with this, the proposed SIP was developed; it will serve as a reference for the General Gregorio Del Pilar Integrated School in terms of how to improve the effectiveness of instruction through the use of various learning modalities, whether synchronous, asynchronous, or modular.

The proposed SIP is composed of Project title, objectives, outputs, activities, persons involved, schedule/venue, budget and source that will direct you to the appropriate action and provide you with a sense of direction that will lead you to the proper strategy that can be used to achieve those goals. The plan's target was determined after the objectives were established. It is followed by a discussion of possible strategies for achieving the objectives. The proposed school improvement plan also specifies the time frame, individuals involved, and funding sources. Finally, the expected outcome for each objective was determined. The actual School Improvement Plan can be seen in Appendix B.

### **Summary, Conclusions and Recommendations**

This chapter provides a summary of the research. Furthermore, this conveys the framed conclusion as well as the recommendations that follow.

### **Summary of Findings**

The study determined the effectiveness of using different learning modalities to the learners' performance in Physical Education 8.

It was pointed out that Asynchronous, Synchronous, and Modular Pretest and Posttest Mean Scores results revealed that learners utilizing the synchronous modality in physical education had the greatest mean, followed by the modular group, and the asynchronous group had the lowest mean scores among the three groups of learners in this study. The results also showed that the synchronous group of Grade 8 students had the highest mean score in their pretest among the three groups of students. There were no statistically significant differences between the pretest and posttest.

Furthermore, the test results to evaluate the significant difference in the Pre-test and Post-test mean scores across the groups reveal a significant difference. It suggests that the learners' results are affected by the teachers' instructions delivered through various modes.

The group of learners showed a substantial difference between the pretest and posttest. The posttest mean scores in the Asynchronous group were higher than the pretest. The posttest for the synchronous group was higher than the pretest. It is also clear that there is no significant difference in mean scores of the modular group among the learners whose posttest mean scores were higher than their pretest mean scores.

### **Conclusion**

The hypothesis that there is no significant relationship between Pretest and Posttest scores among the various modalities is rejected based on the findings. Therefore the used of synchronous leaning is an effective tool for providing instruction in post-test and pre-test among the learners of Grade 8.

### **Recommendations**

The following recommendations are based on the findings and conclusion:

- 1) School administrators can take the necessary steps to make it possible and find various ways to improve the teaching skills of physical education teachers, whether through online or modular

learning. It is also initiating innovations on the skills of teachers to help students achieve high levels of skill presentation.

- 2) The MAPEH educators could assist them in making the best use of the various learning modalities in giving instruction and assessing outputs and tests, particularly in Physical Education. This will also be a valuable resource in the development of effective learning method.
- 3) Students may continue to use the various learning modalities that have worked best for them in order to study and easily adopt and understand the instructions.
- 4) Researchers in the future who will conduct a similar study. It can also provide more comprehensive and more ideas about the various modalities about the performance of the students. To further attest the effectiveness of instruction using the different learning modalities for learner performance or any other factor that may be deemed helpful and constructive.

### **Acknowledgements**

I thank my family, friends, and colleagues for their encouragement, as well as my thesis adviser, Professor IV NILDA S. ALFORJA, for her assistance and guidance. Almighty God, for the blessing, wisdom and strength for accomplishing the tasks.

### **Conflicts of interest**

The authors declare no conflicts of interest.

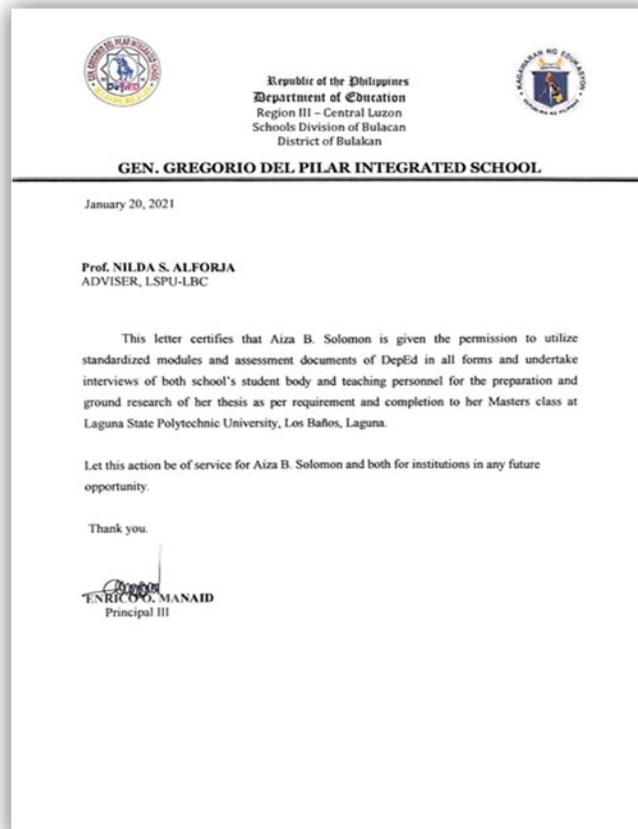
### **References**

1. ACCRALAW. 2020. The New Normal Education Media Wiley.com. Retrieved from blended: using disruptive innovation to improve schools.
2. Barbour, M.K. 2013. State of the nation: K-12 online learning in Canada.
3. Barnes, K.D. and Buring, S.M. 2012. The effect of various grading scales on student grade point averages. *American Journal of Pharmaceutical Education*, 76(3): 41.
4. Cahapay, M.B. 2020. Rethinking education in the new normal post-COVID-19 era: A curriculum studies perspective. *Aquademia*, 4(2): ep20018.
5. Cherry. 2020. Kolb's Theory of Learning Styles.
6. Dilanchyan, H. 2020, March 31. The pass/fail grading system could severely affect your GPA.
7. de la Varre, C., Keane, J. and Irvin, M.J. 2011. Dual perspectives on the contribution of onsite facilitators to teaching presence in a Blended learning environment. *Journal of Distance Education*, 25(3): 1-14.
8. Dangle et al. 2020. The Implementation of Modular Distance Learning in the Philippine Secondary Public Schools. 3<sup>rd</sup> International Conference on Advance Research in Teaching Education. Dublin, Republic of Ireland, November 2020.
9. Dep Ed Order no.18 s. 2021. Interim guidelines of giving an awards and Recognition in light of the Basic Education Learning Continuity Plan (BE-LCP) for S.Y. 2020-2021.
10. Dep Ed Order no. 31 s. 2020- Interim guidelines for assessment and grading in Light of the Basic Education Learning Continuity Plan.
11. Emmanouilidou, K., Derri, V., Antoniou, P. and Kyrgiridis, P. 2012. Comparison between synchronous and asynchronous instructional delivery method of training programme on in-service physical educators' knowledge. *Turkish Online Journal of Distance Education*, 13(4): 193-208.
12. Farrington, R. 2020. Colleges go to pass-fail due to coronavirus concerns: What does this mean for students. *Forbes Magazine*.

13. Gahutu, J.B. 2010. Physiology teaching and learning experience in a new modular curriculum at the National University of Rwanda. *Advances in Physiology Education*, 34(1): 11-14.
14. Geneva College. 2020. Online Education vs. Remote Learning.
15. Hancock, S. and Wong, T. 2012. Blended Learning. [http://etec.ctlt.ubc.ca/510wiki/Blended\\_Learning](http://etec.ctlt.ubc.ca/510wiki/Blended_Learning)
16. Heick. 2020. The Definition of Synchronous Learning. Teach Thought.
17. Hofmann, J. 2014. Solutions to the top 10 challenges of blended learning. Top 10 challenges of blended learning. Available on [cedma-Europe.org](http://cedma-Europe.org)
18. Horn, M.B. and Staker, H. 2014. *Blended: Using Disruptive Innovation to Improve Schools*. San Francisco: Jossey-Bass.
19. Johnson, T. 2011. Perceptions of distance education in Newfoundland and Labrador: 1999- 2009, 1-80.
20. Kintu, M.J. and Zhu, C. 2016. Student characteristics and learning Outcomes in a blended learning environment intervention in a Ugandan University. *Electronic Journal of e-Learning*, 14(3): 181–195.
21. Llego. 2020. DepEd Learning Modalities for School Year 2020-2021. <https://www.teacherph.com/deped-learning-delivery-modalities/>
22. Coulter, M. and Ní Chróinín, D. 2011. What is PE? Sport, education and society. *Sport, Education and Society*, 18(6): 825-841.
23. Malaya. 2020. Modular Learning Here’s What You need to know.
24. MANILA BULLETIN, 2020/07/03/deped-most-students-prefer-modular learning-Over-online.
25. Nguyen, T. 2015. The effectiveness of online learning: Beyond no significant difference and future horizons. *MERLOT Journal of Online Learning and Teaching*, 11(2): 309-319.
26. Unal, M. 2015. An investigation on revealing the learning modalities of undergraduate students. *Educational Research and Reviews*, 10(15): 2076-2083.
27. Mirriahi, N., Alonzo, D. and Fox, B. 2015. A blended learning framework for curriculum design and professional development. *Research in Learning Technology*, 23.
28. Malik, M. and Fatima, G. 2017. E-Learning: Students' Perspectives about Asynchronous and Synchronous Resources at Higher Education Level. *Bulletin of Education and Research*, 39(2): 183-195.
29. Nitko, A.J. and Brookhart, S.M. 2014. *Educational assessment of Students*. 8<sup>th</sup> Edition. Pearson Education: New York.
30. Norberg, A., Dziuban, C.D. and Moskal, P.D. 2011. A time-based blended learning model. *On the Horizon*, 19(3): 207-216.
31. Obana, J. 2020. Could educational technology be a ‘holy grail’ amid Covid-19 crisis. *The Manila Times*.
32. Ogbonna, C.G., Ibezim, N.E. and Obi, C.A. 2019. Synchronous versus asynchronous e-learning in teaching word processing: An experimental approach. *South African Journal of Education*, 39(2): 1-15.
33. Olivier, W. 2020. Education post-COVID-19: Customised blended learning is urgently needed. *The Conversation*.

33. Olson, J.S. and McCracken, F.E. 2015. Is it worth the effort? The impact of incorporating synchronous lectures into an online course. *Online Learning*, 19(2): 73-84.
34. Oxford Group. 2013. Blended learning-current use, challenges and best practices. Accessed on 17 Mar 2016.
35. Patrinos, H.A. and Shmis, T. 2020. Can technology help mitigate the impact of COVID-19 on education systems in Europe and Central Asia.
36. Pop, A. 2020. Study Portals. *Journal*
37. Rice, K. 2012. Making the move to K-12 online teaching. Pearson Education, Inc.
38. Sadiq, S. and Zamir, S. 2014. Effectiveness of modular approach in teaching at university level. *Journal of Education and Practice*, 5(17): 103-109.
39. Shivaraju, P.T., Manu, G., Vinaya, M. and Savkar, M.K. 2017. Evaluating the effectiveness of pre-and post-test model of learning in a medical school. *National Journal of Physiology, Pharmacy and Pharmacology*, 7(9): 947.
40. Walter. 2020. What is the difference between remote or distance learning and classroom learning?
41. Watts, L. 2016. Synchronous and asynchronous communication in distance learning: A review of the literature. *Quarterly Review of Distance Education*, 17(1): 23-32.
42. Willkomm, A.C. 2020. Online vs. Remote Learning: What's the difference. 10(15): 2076-2083, 10 August, 2015.

**APPENDICES**  
**Appendix A**  
**Request Letter for School Head**



**Appendix B**  
**School Improvement Plan**

School Improvement Project Title	Project Objectives	Output for the year	Activities	Person(s) Responsible	Schedule/venue	Budget per activity	Source
Project 4x4	To optimize the amount of time spent focusing on the provided subjects	Increases students' performance and results in various assessments	-Provide modified activities and evaluation.	MAPEH teachers	Monday-Thursday	none	none
Development of learning materials	Create high quality materials that are aligned with MELCs	Focus on the least mastered skill	-Prepare different learning resources. - localize lessons	MAPEH teachers	School Head, Master Teacher	2,000	MOOE
Utilization of MELCs in the subject MAPEH.	designed the most essential topic/lesson to be discussed with the students	Teachers and students who can work together to make the lesson more understandable.	-Deliver activities that are in accordance with the MELCs - Students might concentrate on specific goals, which may lead to an increase in their evaluation activities.	MAPEH teachers	Whole year round	none	None
Project AID	Reduce the strain on parents to come and go to school by allowing students to send their outputs and tests online.	Students will be trained on how to use the ELearning platform.	Access to Free Internet Data every Monday and Friday which allows students to access learning modules/lessons and assessments online.	School Head, LGU Teachers	Whole year Round	5,000/ grade level	MOOE

**APPENDIX C**  
**Pretest and Posttest**

Name: \_\_\_\_\_  
Learning Modality: \_\_\_\_\_

Grade and Section: \_\_\_\_\_  
Score: \_\_\_\_\_

**1. Which of the following statements is not the result regular physical exercise.**

- A. increased cardio-respiratory endurance
- B. increased joint flexibility
- C. increased strength
- D. reduced calcium in the bones

**2. Fitness is related to \_\_\_\_\_.**

- A. ability to perform daily task efficiently
- B. diminished school performance
- C. mood swings
- D. risk for diseases

**3. Among the following activities, which are closely associated to health-related fitness?**

- A. archery, table tennis, bowling
- B. judo, karate, kickboxing,
- C. soccer, basketball, hockey
- D. walking, running, stair climbing

**4. A person who is in good physical condition has \_\_\_\_\_.**

- A. enlarged heart
- B. risk for heart attack
- C. low resting pulse rate
- D. probability to diseases

**5. The health-related benefits of exercise are the result of all the following components except:**

- A. Cardiorespiratory
- B. Flexibility
- C. Muscular endurance
- D. Speed

**6. Benefitting the part of the body you train for refers to \_\_\_\_\_.**

- A. isometric training
- B. isotonic training.
- C. Overload principle
- D. Principle of specificity

**7. The aim of overload principle.**

- A. Increasing the stress on the body in order to develop it.
- B. to aid in contractions of smooth muscle
- C. to avoid anaerobic work
- D. to give importance to the isotonic conditioning method.

**8. The ability of the heart and circulatory system to supply oxygen to the muscles**

- A. body composition
- B. cardiovascular fitness
- C. strength
- D. power

**9. The ability of the joints to a full range of motion;**

- A. body composition
- B. coordination
- C. flexibility
- D. speed

**10. If a person run in a marathon, what type of fitness does he apply?**

- A. agility
- B. endurance
- C. flexibility
- D. power

**11. Which refers to the ability to change direction rapidly?**

- A. agility
- B. coordination
- C. power
- D. speed

**12. What is the type of skill you exert when you maintain your equilibrium?**

- A. balance
- B. coordination
- C. reaction time
- D. strength

**13. Which among the following skills measures your reaction time?**

- A. sit and reach
- B. standing long jump.
- C. stick- drop test
- D. zipper test

**14. Your ability to remain stable while moving.**

- A. agility
- B. balance
- C. coordination
- D. reaction time

**15. The use of explosive strength and leg power.**

- A. Standing long jump
- B. sit and reach

- C. stick-drop test
- D. stork balance stand test

**APPENDIX D**

<b>Descriptive Statistics</b>					
	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Skewness</b>	
	<b>Statistic</b>	<b>Statistic</b>	<b>Statistic</b>	<b>Statistic</b>	<b>Std. Error</b>
Synch pretest	33	10.0909	2.46683	.487	.409
Synch posttest	33	12.1212	2.70136	-.501	.409
Asynch pretest	25	8.0800	2.37908	-.063	.464
Asynch Posttest	25	9.5600	2.16179	-.452	.464
Modular pretest	38	9.2368	3.09694	-.257	.383
Modular posttest	38	10.7368	2.64763	-.539	.383
Valid N (list wise)	25				

<b>ANOVA</b>						
		<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
<b>Pretest</b>	Between Groups	56.978	2	28.489	3.903	.024
	Within Groups	671.611	92	7.300		
	Total	728.589	94			
<b>Posttest</b>	Between Groups	94.251	2	47.125	7.208	.001
	Within Groups	601.476	92	6.538		
	Total	695.726	94			

<b>Multiple Comparisons</b>							
<b>Tukey HSD</b>							
<b>Dependent Variable</b>	<b>(I) Group</b>	<b>(J) Group</b>	<b>Mean Difference (I-J)</b>	<b>Std. Error</b>	<b>Sig.</b>	<b>95% Confidence Interval</b>	
						<b>Lower Bound</b>	<b>Upper Bound</b>
<b>Pretest</b>	1.00	2.00	-2.01375*	.72120	.017	-3.7318	-.2957
		3.00	-1.07789	.69578	.273	-2.7354	.5796
	2.00	1.00	2.01375*	.72120	.017	.2957	3.7318
		3.00	.93586	.64826	.323	-.6084	2.4802
	3.00	1.00	1.07789	.69578	.273	-.5796	2.7354
		2.00	-.93586	.64826	.323	-2.4802	.6084
<b>Posttest</b>	1.00	2.00	-2.56500*	.68251	.001	-4.1909	-.9391
		3.00	-1.15053	.65845	.193	-2.7191	.4181
	2.00	1.00	2.56500*	.68251	.001	.9391	4.1909
		3.00	1.41447	.61348	.060	-.0470	2.8759
	3.00	1.00	1.15053	.65845	.193	-.4181	2.7191
		2.00	-1.41447	.61348	.060	-2.8759	.0470

Paired Samples Test									
		Paired differences				t	df	Sig. (2-tailed)	
		Mean	SD	Std. Error Mean	95% confidence interval of the difference				
					Lower				Upper
Pair	Async	1.48000	2.72519	.54504	.35510	2.60490	2.715	24	.012
posttest-1									
	Asynch pretest								
Pair	Synch	2.03030	1.53062	.26645	1.48757	2.57304	7.620	31	.000
posttest-2									
	Synch pretest								
Pair	Modular	1.50000	2.23909	.36323	.76403	2.23597	4.130	37	.000
posttest-3									
	Modular pretest								

**Citation:** Aiza B. Solomon and Nilda S. Alforja. 2021. Effectiveness of Using Different Modalities to the Learners' Performance in Physical Education 8. *International Journal of Recent Innovations in Academic Research*, 5(7): 100-121.

**Copyright:** ©2021 Aiza B. Solomon and Nilda S. Alforja. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.