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PHILIPPINE NORMAL UNIVERSITY

The National Center for Teacher Education

Towards an Improved Use of Interdisciplinary Approach in Performance-based Assessment in the New Normal

A Thesis presented to the
Graduate Research Office
College of Graduate Studies and Teacher Education Research
Philippine Normal University
Manila

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts in Education
with Specialization in Educational Management

MARJORIE P. NAQUITA

June 2021

APPROVAL SHEET

This thesis entitled **“TOWARDS AN IMPROVED USE OF INTERDISCIPLINARY APPROACH IN PERFORMANCE-BASED ASSESSMENT IN THE NEW NORMAL”** prepared and submitted by **MARJORIE P. NAQUITA** in partial fulfillment of the requirements for the degree of **Master of Arts in Education with Specialization in Educational Management**, is hereby recommended for approval and acceptance.



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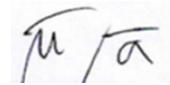
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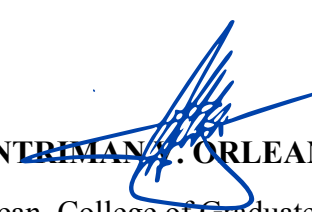
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PHILIPPINE NORMAL UNIVERSITY

The National Center for Teacher Education

For Mama and Papa



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I attained the completion of this study through the support and encouragement of those who walked with me as I pursue my MA and thesis writing journey. This achievement would not be made possible without them.

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M.P.N.



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ABSTRACT

Name: Marjorie P. Naquita

Title of Study: Towards an Improved Use of Interdisciplinary Approach in Performance-based Assessment in the New Normal

Degree: Master of Arts in Education

Specialization: Educational Management

Adviser: Dr. Marilyn U. Balagtas

This descriptive research study aimed to assess the management of the existing policies, guidelines, and procedures on the implementation of the interdisciplinary approach in performance-based assessment (IAPA) before and during the COVID-19 as basis in proposing improvements in its implementation in the “new normal”. Thirty senior high school science teachers and school leaders from five private and five public schools in Metro Manila participated in the study. The participants were asked to assess the management of existing policies, guidelines, and procedures on the implementation of the IAPA using a survey questionnaire and to identify the strengths and the weaknesses of the IAPA using an interview guide developed by the researcher. Survey questionnaire and semi-structured interviews were conducted to validate and gain a good scope of responses to propose inputs on the improvement of the IAPA’s implementation. Findings indicated that the management of existing policies, guidelines, and procedures on IAPA’s implementation is effective as perceived by the teachers and school leaders, and that IAPA benefits students and teachers in many ways. However, weaknesses associated to its implementation greatly concentrate on the role of school leaders and on the presence of



procedures, guidelines, and/or policies especially during the new normal education setting. Hence, suggestions in improving the implementation of the IAPA in the new normal covering both the face-to-face and the online learning modalities could be used together with the statements under the survey questionnaire to improve more its implementation and to make it more relevant under the new normal.

Key Concepts: *blended learning, interdisciplinary approach, new normal, performance-based assessments*



CHAPTER 1

THE PROBLEM AND LITERATURE REVIEW

This chapter discusses the background of the problem, literature review, aims of the study, conceptual framework, research problems, scope and limitations, and definition of terms.

BACKGROUND OF THE STUDY

Global competitiveness is a factor in the aim of the academic sector to constantly improve the quality of education to produce competent and skilled citizens. In line with this, changes in the curriculum have been implemented in Philippine education to better prepare the students for the world of work, which is also anchored on the Republic Act 10533 series of 2013. This Republic Act strengthens the curriculum and increases the number of years of basic education to meet the global standards. In line with this, the senior high school program that started during School Year 2016-2017 trains and prepares students for the rigorous college life and the world of work. The additional two years in basic education cover numerous subjects that students take and complete. Considering the constant improvement in its implementation and the number of subjects and tasks that students are to complete, this study particularly focuses on the senior high school to be able to contribute to its betterment and students' benefits.

The K to 12 basic education curriculum promotes the mastery of skills and provides better opportunities for the attainment of learning competencies through authentic assessments. Authentic assessments measure the extent to which students demonstrate the concepts and skills



through learning outcomes that are pertinent to the real world (Zilvinskis, 2015) since simple remembering is no longer appropriate to the kind of learners that we aim to produce today. Hence, performance-based assessment is being used as an authentic assessment since it allows the application of the learner's understanding in real-life situations.

According to Hallstrom and Schonborn (2019) Science, Technology, Engineering, and Mathematics (STEM) teaching needs to be authentic. However, planning and designing authentic learning situations and activities are considered as one of the main challenges in aiming for STEM mastery (Ciolan & Ciolan, 2014). In line with this, the use of performance-based assessments in different subjects, specifically in science, is being observed by different schools today since it is the most suitable assessment in measuring students' understanding. Performance-based assessments are one of the best assessments in the promotion of 21st-century skills (Rosaroso & Rosaroso, 2015). Its use in science and other subjects is also anchored on DepEd Order no. 8 series of 2015 (Policy Guidelines on Classroom Assessment for the K to 12 Basic Education Program of DepEd) which stated that performance tasks provide opportunities to demonstrate and integrate knowledge, understanding, and skills in real-life situations, and on DepEd Order No. 31 series of 2020 (Interim Guidelines for Assessment and Grading in Light of the Basic Education Learning Continuity Plan) which stated that (1) assessments should be holistic, authentic, and integral in capturing the attainment of the most essential learning competencies, and (2) summative assessments shall be in the form of written works and performance task as students' learning is evaluated in the distance learning set-up.

However, the study of Davalos and Malaluan (2018) found that as performance-based assessments are being used to assess students' learning in science, common problems are



encountered such as (1) too much time required in performance tasks' assessment, (2) too much time required in developing localized performance tasks, and (3) difficulty and insufficient time to execute the activity. In connection to these, even in other countries, almost the same problems were observed, such as in the study conducted by Clary, Wandersee, and Tucker (2014), where they introduced performance task in grade three (3) middle school science teachers in Connecticut State Department of Education and found out that teachers and students enjoyed the hands-on tasks but identified time as the limiting factor in its utilization. In addition, Altun and Kelecioğlu (2018) determined that performance tasks are time-consuming, exhausting, and stressful as perceived by the students and the teachers. Moreover, the study of Rosaroso and Rosaroso (2015) revealed that the use of performance-based assessments provides opportunities for the growth and progress of both teachers and students. However, its use is time-consuming, costly, demanding, and prone to backlogs for both participants.

Hence, there is a need to address the problems encountered in the use of performance-based assessment as an authentic assessment in science and in other subjects to maximize its use and effectiveness. This study particularly focuses on science subject, since it is a body of knowledge that requires the application of concepts in real-life situations to make learning more relevant to the students. In addition, according to the study of Hallstrom and Schonborn (2019) authenticity must be viewed as the foundation of STEM mastery, and that authentic learning must be observed in science and technology subjects. Moreover, Casidsid (2017) stated that the use of authentic assessment increases students' achievement in science and engages them in authentic interdisciplinary works that prepare them for employability through producing professional quality works. However, it was found out that a great challenge for teachers and school leaders in STEM



subjects is the process of designing learning activities that integrate two or more subjects in a meaningful and relevant way (Margot & Kettler, 2019). In addition, Hallstrom and Schonborn (2019) found that in integrating STEM subjects, teachers' creativity and school leaders' role are vital in incorporating concepts and ideas of different subjects to each other.

According to Republic Act 10533 of 2013, the curriculum shall be learner-centered, inclusive, developmentally relevant, and appropriate. In line with this, the DepEd Order 021 series of 2019 recommended that different learning areas must be taught in interdisciplinary and multidisciplinary approaches. The interdisciplinary approach was the focus of this study since it is being implemented by some of the educational institutions today to integrate learning and to maximize the use of performance-based assessments. However, the implementation of an interdisciplinary program is not an easy task. Teachers are looking for the guidance and support of their school leaders as they implement it (Holmbukt, 2018). Hence, to ensure the success of its implementation, it highly demands the role of school leaders and teachers' cooperation.

The educational setting worldwide, particularly in the Philippines, is now in the transition to the new normal. This is due to the health pandemic caused by the Corona Virus Disease in 2019 (COVID-19). The "new normal" presents a unique challenge to every school leader's decision-making process, in terms of giving quality education in the new education setting, where instruction is delivered in remote, offline, online, or blended modality. Since this scenario of learning due to COVID-19 is unprecedented, the use of an interdisciplinary approach in performance-based assessment in the time of the new normal was considered by the researcher to contribute to the adjustments to be made by the educational sector in giving quality education amid the health crisis.



The results of this study would help the educational sector, particularly the school leaders and teachers in improving the implementation of the Interdisciplinary Approach in Performance-based Assessment (IAPA) in the new normal covering both the face-to-face and the online learning or blended learning modalities. School leaders and teachers would be able to enhance how they utilize, implement, and supervise the IAPA in public and private senior high schools in Metro Manila, particularly in a science subject. They would value more the strengths of the IAPA specifically as a means in promoting students' holistic development and in lessening students' and teachers' workload in terms of assessing students' learning through performance. Also, school leaders would be able to identify the weaknesses of the IAPA's implementation and in turn create clear procedures, guidelines, and/or policies that would help in continuing their effective implementation.

LITERATURE REVIEW

This section presents literature, studies, and articles that are relevant to the study. It covers the topics: (1) Performance-based Assessment, (2) Interdisciplinary Approach to Curriculum Development, Implementation and Assessment, (3) Educational Leadership and Management, and (4) New Normal in Education.



Performance-based Assessment

Assessment is an important part of students' learning processes. DepEd Order No. 8 series of 2015 defined assessment to monitor students' progress to provide teachers the necessary information to address learning needs. Assessment is the process of collecting and interpreting information to monitor students' progress and to identify the series of actions to take in terms of the learning goals' attainment. It allows the students to improve their performances based on their teachers' feedback and allows the teachers and school leaders to review and improve their standards, curriculum, learning activities, and strategies to better align them with the needs of the students (Phelan & Phelan, 2010). Assessment can be in the form of formative or summative and can also be done through written works or performance tasks. Casidsid (2017) and Sotiriadou et al. (2019) revealed that assessment should cater to the transfer of knowledge, understanding, and skills through real-life problems.

In monitoring students' learning and its application in real life, authentic assessment is encouraged. According to Koh (2017), authentic assessment is an effective measure of learning as it allows students to demonstrate understanding through the production of exemplary tasks. Villarroel et al. (2017) defined authenticity as a realism, contextualization, and problematization in which (1) realism involves the association of academic contents with everyday life and work, (2) contextualization allows for the application of academic contents analytically and thoughtfully, and (3) problematization leads to the use of academic contents to solve and meet real-life problems. Also, they used the term authentic performance to integrate knowledge and to perform assessments using the knowledge gained. An authentic assessment provides opportunities for the learners to practice skills and competencies that are needed in the world of work today (Villarroel et al., 2017).



Sotiriadou et al. (2019) found that students favor authentic assessment since it promotes high engagement among them. Authentic assessment is found to have a positive impact on students' abilities related to the world of work and on students' learning, motivation, metacognition, and discipline (Villarroel et al., 2017).

One method in assessing students' learning authentically is using performance-based assessment. Performance-based assessment allows students to demonstrate their understanding through output productions. It has allowed the: (1) application of knowledge, skills, and understanding; (2) completion of real-life tasks or contexts; and (3) assessment based on specific predetermined criteria (Phelan & Phelan, 2010). DepEd Order No. 31 series of 2020 or the Interim Guidelines for Assessment and Grading in Light of the Basic Education Learning Continuity Plan discussed that: (1) assessment should be holistic and authentic in capturing the attainment of the most essential learning competencies, (2) assessment is integral for understanding students learning and development, (3) a variety of assessment strategies is necessary to inform teaching and promote growth and mastery, and (4) assessment and grading should have a positive impact on learning. As discussed by DepEd Order No. 31 series of 2020, in evaluating student learning during the distance learning set-up, summative assessments shall be in the form of written works and performance tasks. In the use of performance tasks, each must be accompanied with clear directions and appropriate scoring tools or rubrics to help learners demonstrate their learning, and teachers are advised to collaboratively design and implement performance tasks that integrate two or more competencies within or across subject areas. Furthermore, use of learning portfolio is one of the suggested strategies in the collection and recording of evidence of learning including self-reflections, self-evaluations of performance tasks guided by rubrics, and self-selected best outputs



in learning modules. Balagtas and Ubina (2018) stated that digital portfolios serve as comprehensive means in documenting the learning processes and outcomes and can be used in integrating ICT skills and in assessing learning.

Performance is the students' dynamic effort to produce a product using their acquired learning; it allows students to demonstrate their understanding of the concepts learned through brainstorming, exploration, research, and reflection (Clary et al., 2014). Performance tasks are like project-oriented and problem-based approaches since problems are solved through product creation (Espinosa, 2012). A performance task is a good form of authentic assessment because it rates student's learning processes (Iter, 2017). In addition, it assists teachers in gathering student's learning evidence not just in the form of conceptual understanding, but also in terms of applying what they have learned beyond the classroom level.

In line with the use of performance tasks as an authentic assessment, problems have been encountered over time by students, teachers, and school leaders despite their advantages. Sahin and Ozturk (2018) found that lack of communication, time-consuming evaluation, and insufficiency in lesson hours are being observed following the use of performance tasks. Further, Altun and Kelecioğlu (2018) revealed that performance tasks are time-consuming, exhausting, and stressful as perceived by the students and the teachers. As a result, the high school students doing different performance tasks in all their subjects cannot study well for the exams due to time-consuming activities. Metin (2013) identified that teachers had to spend too much time in the implementation of performance tasks leading to its ineffective use. Moreover, since lack of time is considered as the most important factor in the implementation of performance task, preparation of work plans, and interdisciplinary performance tasks should be done to lessen the workload of



teachers and students that requires the presence of policy for a clear and guided implementation (Sahin & Ozturk, 2018).

The policy is the set of clear and concise prescribed plan or course of action (The American Heritage, 2016) that allows the members of the organization to decide and to work on the expected outputs anchored on it. Lotich (2020) presented the uses and advantages of having a policy: (1) clarifies the set expectations, (2) presents the steps to be taken in achieving the set expectations, (3) allows for the measure of performance, (4) promotes consistency in the implementation of a certain program, and (5) serves as the foundation to improve the process of implementation of a particular program.

In line with this, DepEd Order no. 8 series of 2015 stated that since assessment is a vital part of curriculum or program implementation, policies on assessment will permit the educators to monitor and measure the progress of each student. A clear and accurate understanding of the learning goals can be achieved if a clear policy on assessments, specifically on the use of interdisciplinary performance tasks as an authentic assessment is constructed and be made accessible to both teachers and school leaders (Phelan & Phelan, 2010).

The policy is an important factor in the success of a school or curriculum program. Barman et al. (2014) suggested that when an educational policy is introduced, the members of an institution should work together according to it to ensure the achievement of the defined goals. School improvement in the form of school or curriculum program is the responsibility of each member of the organization. Every member must positively participate in whatever is implemented (Yang, 2014). Thus, for a particular school to achieve school improvement, compliance with the policy



related to it must be observed by both school leaders and teachers. In line with this, Holmbukt (2018) stated that the absence of a clear policy on integrated curriculum that also includes the policy on the assessment of learning, affects the effectiveness of the program. Also, the study revealed that teachers are looking for the guidance and support of their school leaders as they implement the program.

Interdisciplinary Approach to Curriculum Development, Implementation, and Assessment

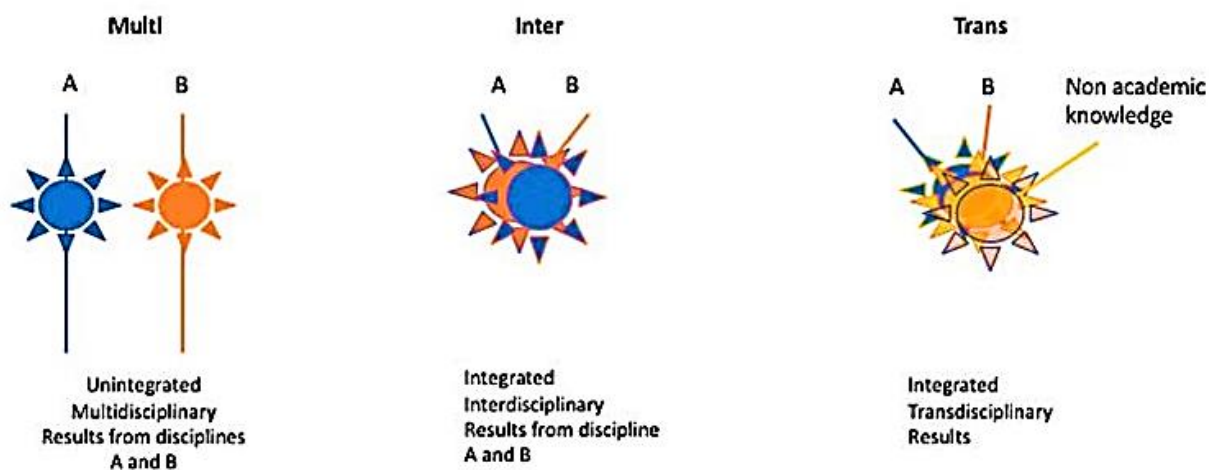
Interdisciplinary Approach

Many schools are now considering the use of an interdisciplinary approach to effectively using authentic assessments. An interdisciplinary approach is one of the classifications of integration. Integration is defined as the act of combining parts into an integral whole (Collins English Dictionary, 2014); it allows for the retention and the application of understanding in real-life situations, develops higher-order thinking skills, encourages active participation among students, and connects various academic subjects (Hallmark, 2020). Aside from the interdisciplinary approach, integration has two other classifications. These are the multidisciplinary approach and the transdisciplinary approach. Menken and Kestra (2016) showed the differences between the three classifications or levels of integration using the illustration presented in Figure 1.



Figure 1

Levels of Integration



The *multidisciplinary approach* is considered the lowest form of integration. It occurs when information from different subjects is sought to solve a problem without the intention of connecting each subject (Gonzalez-Carrasco, 2016). It aims to use an experience or theme from different disciplines to develop a profound understanding and to solve an issue, event, or problem without the intention of combining the disciplines involved (Barnes, 2015). Each discipline contributes a piece of important information to better understand the situation, but the outcomes are just parallel to each other but highly focus on the individual disciplines' perspectives (Klaassen, 2018). In a multidisciplinary approach, different disciplines investigate a common problem, individually, based on their definition and standards to identify their autonomous solution (Holbrook, 2013). Multidisciplinary lacks the distinctiveness of integration since it has a greater focus on the individual subjects involved.



On the other hand, the *transdisciplinary approach* is considered the highest form of integration (Gonzalez-Carrasco, 2016). It involves the integration of one or more academic disciplines working on a common problem beyond their academic perspectives (Holbrook, 2013) and coming to an innovative solution through the complex involvement of stakeholders (Klaassen, 2018).

The last form of integration is the *interdisciplinary approach*, which this study focuses on. The interdisciplinary approach involves the synthesis of ideas, solutions, disciplines, or processes that result in the integration and combination of approaches and assumptions of various disciplines (Holbrook, 2013; Lam et al., 2014; Appleby, 2019). It aims for the integration of two or more subjects (Frodeman, 2013; Barnes, 2015), and the promotion of higher-order thinking and decision-making skills (Barnes, 2015) by allowing the educators from different disciplines to work together (Gonzalez-Carrasco, 2016).

The interdisciplinary approach highly works when the different disciplines' knowledge, skills, and attitudes are used to address and solve a problem (Barnes, 2015; Menken & Keesstra, 2016; Klaassen, 2018). This can be supported by the key characteristics of interdisciplinary learning by Klaassen (2018): (1) the integration of different disciplinary knowledge, skills, practices, and values, (2) the possible collaboration of activities, (3) the identification of new problems, and (4) the realization of knowledge and solutions across different disciplines.

The interdisciplinary approach promotes the learning processes and the creation of products out of students' collaboration and involvement (Holmbukt, 2018). It allows the students to connect, collaborate, and perform different tasks that will promote deeper and integrated



learning. In addition, it is also a form of horizontal integration that promotes students' holistic learning and the development of higher-order thinking skills such as critical thinking, creativity, and communication (Bolat & Karakus, 2017).

The interdisciplinary approach positively and directly affects students' learning experiences; it promotes permanent learning as the disciplines are being integrated (Selma & Selen, 2012). The study of Gonzalez-Carrasco (2016) revealed that interdisciplinary works contribute to the holistic development of the students and increase their motivation (Holmbukt, 2018) by making students integrate concepts in a meaningful and advanced way (Spelt et al., 2017).

Allowing the students to explore and solve a problem without being subject-bounded leads to better understanding and offers a broad opportunity for the students to master learning and skills needed to be locally and globally competitive (Gonzalez-Carrasco, 2016). Since the interdisciplinary approach does not only focus on content integration, but it also involves process and skills integration; it provides room for a better school, lesson, and life integration (Selma & Selen, 2012). The interdisciplinary approach provides students with varying and broad outlooks necessary in the true nature of working life (Millar, 2016). Further, it helps to address the individual differences of the students and to develop real-life transferable skills that are significant in all stages of life (Appleby, 2019).

In line with the descriptions of the interdisciplinary approach, considerations in using it are presented from the different studies to help educators maximize its use. Barnes (2015) stated that teachers must consider authentic, feasible, well-planned, and well-assessed themes or problems in



using an interdisciplinary approach. In addition, no subject should be included in an interdisciplinary approach unless it contributes to the enrichment and the application of knowledge, skills, practices, and/or values. Lam et al., (2014) presented two processes to consider in the use of interdisciplinary integration: (1) the integration of two or more disciplinary elements, such as knowledge, skills, and attitudes, and (2) the generation of new elements because of the integration.

Interdisciplinary Curriculum and Its Implementation

The curriculum is an important aspect of providing quality education. It is a dynamic guide that assists educators in the teaching and learning processes (Witte et al., 2015). It contains what we want students to know, be able to do, and value as they undergo the process of learning. Barnes (2015) defined curriculum as the inclusion of the subjects to be taught, the choices to be made, pedagogy and means to deliver them, the learning activities, environments, and relationships that permeate in a school. Developing a curriculum is a continuous process that involves learning, implementing, and evaluating to guide educators properly and to ensure quality education.

With regards to the use of the curriculum, developments have been observed by the different sectors of education to make students' learning updated and relevant to real-life situations. The DepEd Order no. 021 series of 2019 stated that the curriculum shall use an integrative pedagogical approach as it promotes the importance of connections and relationships of ideas and concepts between and among disciplines. An interdisciplinary curriculum provides opportunities to work with the ideas and concepts drawn from two or more disciplines (Holley, 2017). It provides



opportunities for both the students and the teachers to engage in intellectual conversations about certain issues, themes, problems, events, or issues of shared interest and importance while connecting the different disciplines involved. Holmbukt (2018) stated that an integrated curriculum is important to respond to the complex educational standards and to identify the relationships between different subjects to ensure comprehensive and meaningful learning (Pavaloiu et al., 2015). In addition, Gombrich (2018) presented two arguments that support the use of interdisciplinary curriculum today: (1) the modern nature of work is increasingly misaligned with single discipline study, and (2) the use of the internet is transforming the way we learn.

Changes in the demands and the needs of education are continuous and involve never-ending innovations and actions of teachers and school leaders to improve the curriculum and the quality of education. Nancarrow et al. (2013) provided the ten (10) key characteristics of a successful interdisciplinary curriculum implementation: (1) leadership and management, (2) effective communication, (3) personal rewards, training, and development, (4) appropriate resources and procedures, (5) appropriate skills mix, (6) positive and enabling climate, (7) individual characteristics, (8) clarity of a shared vision, (9) quality and outcomes, and (10) respecting and understanding roles. These characteristics require planning to effectively use and implement the interdisciplinary approach as a curriculum program.

The use of an interdisciplinary curriculum requires careful planning to ensure its effectiveness. Planning is a process that involves an intellectual and mindful determination of actions and decisions based on facts and purposes (Ramasamy, 2017). Warren (2016) stated that planning is important in the implementation of a program; if clear outcomes were identified in the planning stage, then the process of implementation will be an easy one. Mason (2019) shared that



"Hello, Dolly", which is the most popular works of the golden era of American musical theatre, uses an interdisciplinary approach and greatly impacts several academic subjects. He also identified that in its success, interdisciplinary curriculum planning is observed which involves the following considerations: (1) develop a study guide that includes lessons, activities, projects, and assessments, (2) collaborate with administrators and other teachers, (3) involve students, (4) implement the integration, and (5) document the processes and outputs for future reference.

The use of an interdisciplinary curriculum demands the collaborated efforts of the concerned people and for the guidance of the school, leaders to attain its effectiveness. With this, McPhail (2016) revealed that the principal of a secondary school in New Zealand find the process of interdisciplinary curriculum implementation as a difficult one and presented the two major challenges in the use of interdisciplinary curriculum which are: (1) the identification of fundamental concepts, and (2) the decision to be made about the level of integration in the planning process. The findings of the study of McPhail can also be supported by the study of Klaassen (2018), who revealed that (1) the choice of a problem or theme, (2) the level of interaction between different disciplines, and (3) the alignment must be the considerations in interdisciplinary learning which highly demand the role of the school leaders in curriculum planning and implementation.

Planning for an interdisciplinary approach entails concerned people connecting ideas across disciplines to effectively utilize them (Brand & Triplett, 2012). In line with this, Selma and Selen (2012) mentioned that teachers should work together and be skillful as they plan for an interdisciplinary curriculum. Similarly, Al-Salami et. al (2015) in their study that involved 42 High School and Middle School Science Teachers revealed that school leaders should provide opportunities for the enhancement of teachers' collaboration and should work closely with the



teachers to identify and address their concerns and needs. The study also revealed that teachers are expected to collaborate and observe discussions with their colleagues to integrate disciplines effectively.

Employing different means to collaborate and learn from other teachers and school leaders is an important contribution to the use of interdisciplinary approach as a curriculum program. This can be supported by Brand and Triplett (2012) who mentioned that the team approach is an important consideration in terms of interdisciplinary unit planning since, in the use of interdisciplinary approach, teachers are being exposed to thoughtful discussions that allow them to learn from each other and deepen their understanding (Taylor, 2011). In addition, Warren (2016) stated that professional development in the form of meetings and discussions, allows teachers to work together to discuss and plan a common goal. Further, Anig-ig (2018) claimed that teachers and all other professionals, must grow continuously; he presented some ways of addressing the need for continuing teacher education, such as (1) learning from the best practices of other teachers, (2) learning through reading, (3) learning through membership in professional associations, (4) learning while traveling, (5) learning through information research, and (6) learning through regular faculty development programs. Considering these, supervisors and school leaders may use different supervisory assistance aligned with the needs of the teachers (Decena, 2013).

Strong consensus, clear communication, and mutual understanding are needed in attending to the responsibilities related to the use of interdisciplinary curriculum in every school. Mohapi et al. (2014) claimed that knowledgeable principals are needed to effectively manage curriculum changes. They are expected to improve their curriculum management skills by (1) delegating



teachers' responsibilities, (2) motivating teachers to be productive, (3) following school policies as the curriculum is being implemented, and (4) managing the curriculum by walking around the school to constantly monitor its progress. Dayson (2016) also revealed that strategies such as rounds in school corridors, getting students' feedback, and developing coordination with teachers are being used by the school heads to monitor and evaluate the teaching-learning processes.

In line with these, the study of Pountneya and McPhail (2017) that involved the secondary schools in the UK and New Zealand, revealed that the interdisciplinary curriculum practices in both schools are effective since both schools observed an emphasis on the management of the curriculum. Moreover, the study of Gantogtokh and Quinlan (2017) which examined the interdisciplinary curriculum-making processes, revealed that organizational support from the school leaders highly contributes to the success of its implementation.

School leaders or administrators are highly needed to have an effective curriculum/program implementation; its success also lies in the cooperation of teachers, stakeholders, and students (Naputo, 2018). Jacob (2016) pointed out that a comprehensive curriculum is nothing if its implementation is ineffective. On the other hand, Taylor (2011) revealed in her study that coordination is difficult in the implementation of an interdisciplinary approach especially at the high school level because teachers are not provided with a planning framework. Academic middle managers are also directly responsible for the planning of the changes to be made in an organization. Moreover, Shen et al. (2014) mentioned that institutional leaders should have any involvement in the implementation of the interdisciplinary approach to effectively facilitate the collaboration among the teachers of different disciplines.



In line with these, strong support from the school leaders and collaboration among teachers is considered vital in the implementation of a school program. Hence, school leaders are expected to provide encouragement, support, and guidance to achieve the goal of the organization (Supermane, 2019).

Educational Leadership and Management

Developments in the labels used to describe the educational organizations have been observed from the past up to the present, such as the terms educational administration, educational management, and educational leadership, in which the latter is the one being used in the 21st century (Bush, 2019). Educational management is usually viewed negatively since it emphasizes organizational hierarchy. On the other hand, educational leadership leads the members of the organization to achieve specific goals together with the leaders (Bush, 2019).

School leadership and management must be given equal distinction if the achievement of the defined objectives is to attain since the concepts and the functions of leadership and management are said to overlap (Bush et al., 2019). In line with this, Mendels (2012) stated that effective leadership and management begin with setting the school's vision so that the leaders and the members of the organization will be directed towards its achievement. Hence, the focus should be on the achievement of the defined educational objectives (Bush et al., 2019) which are set during the planning stage of a certain program or curriculum (Bush, 2011). In addition, the functions, tasks, and behaviors of the leaders should be given attention also to ensure well-facilitated responsibilities (Bush et al., 2019).



This study will use the term leadership since it is considered a vital element of successful organizations in the 21st century and is often associated with school improvement (Mendels, 2012; Bush et al., 2019). Anagha (2018) defined leadership as the ability to influence and inspire the members of the organization to achieve a common goal and to get the work done. It is needed to provide the best possible education to the students in terms of teaching and learning processes (Bush, 2011).

The Philippine Professional Standards for School Heads (DepEd Order no. 024 series of 2020) defines school leadership quality in the Philippines. It is a set of standards that contains what school heads should know, be able to do, and value to achieve improved learning outcomes and teacher quality. It guides the school heads to set the direction of the school, manage the systems and processes in the school, promote quality teaching and learning, nurture themselves and others, and engage stakeholders. The PPSSH involves five (5) domains in which each domain focuses on the specific roles and responsibilities that school heads should observe and maintain, namely: (1) *Leading strategically*, where school heads are expected to set direction, goals, and objectives, ensure that these are being understood by all stakeholders; (2) *Managing school operations and resources*, where school heads are expected to have a high commitment to ensuring efficiency, effectiveness, and fairness, and to understand and implement laws, policies, guidelines in managing people; (3) *Focusing on teaching and learning*, where school heads are expected to promote quality teaching and learning by providing technical assistance on instruction and by creating a learner-centered environment; (4) *Developing self and others*, where school heads are expected to nurture themselves and others; (5) *Building connections*, where school heads are expected to engage stakeholders in the improvement of school communities and to build



relationships with individuals and organizations related or that can support the improvements in education. School heads play a crucial role in ensuring an enabling and supportive environment for effective teaching and learning to happen. Their role is important especially in the implementation and achievement of a learner-centered curriculum since teachers alone cannot do and attain such significant changes without effective leadership. They have the authority, responsibility, and accountability for taking care of people in schools while maximizing organizational performance.

Similarly, the Philippine Professional Standards for Supervisors (DepEd Order no. 025 series of 2020) defines the primary role of the supervisors in creating an enabling and supportive environment for effective learning by empowering school principals so that they could in turn create innovative and caring school climates where teachers productively execute their roles in supporting the learners to reach their full potential. The PPSS involves four (4) domains in which each domain focuses on the specific roles and responsibilities that supervisors should observe and maintain. The first domain is on *Supporting Curriculum Management and Implementation* where supervisors are expected to aid with effective management and implementation of curricular reforms, learning resources, and assessment of learning outcomes. The strands of this domain that are related to the implementation of the IAPA, include: (a) supervisors are expected to provide the needs-based support for curriculum implementation through the application of effective and efficient programs aligned with curriculum standards, (b) supervisors are expected to implement and lead relevant strategies to support curriculum contextualization, and (c) supervisors are expected to demonstrate knowledge and understanding on the utilization of the results of learning outcomes assessment. The second domain is on *Strengthening Shared Accountability*, where



supervisors are expected to provide harmonized needs-based support division personnel, school heads, and other field implementers to inform forward planning and decision-making. The strand related to the implementation of the IAPA involves mentoring and leading colleagues, and conducting review and recommendation of national, regional, and/or division policies to ensure relevance within the context of one's area of concern. The third domain is on *Fostering a Culture of Continuous Improvement*, where supervisors are expected to provide support in creating an environment to ensure efficient and effective delivery of basic education services. The strand related to the implementation of the IAPA involves applying, mentoring, and leading instructional leadership support strategies to help division, districts, schools, and/or learning centers with continuous improvement of the teaching-learning process. The fourth domain is *Developing Self and Others*, where supervisors are expected to commit to ensuring people and team effectiveness. The following are the strands related to the implementation of the IAPA: (a) ensure and sustain the effective delivery of different learning and development interventions to support division, districts, schools, and/or learning centers, and (b) promote and provide learning opportunities by initiating professional reflections and recognition to improve and value practice.

In line with giving the best quality education to the students, effective school leaders know that they cannot do all the tasks alone. Hence, they highly involve the other members of the organization to function effectively and efficiently which is what school leaders are expected to do and to observe (Bush, 2011), since knowing what comprises a good school leadership is far different from putting them into actions (Mendels, 2012). In addition to these, the Wallace Foundation (2013) identified the key responsibilities of effective school leadership that can guide school leaders in giving the best possible education to the students: (1) determining a vision of



academic success; (2) creating an environment that is suitable in education; (3) nurturing leadership among the members of the organization; (4) improving instruction; and (5) managing people to attain school improvement, which is related to transformational leadership theory.

Nowadays, contemporary leadership theories are being known for they strongly support the idea of effective leadership. Anagha (2018) identified contemporary leadership as a comprehensive approach using transactional and transformational leadership that greatly empowers each member of the organization to achieve their vision, mission, goals, and objectives. Bush (2019) classified the main theories of educational management into six major models, namely: formal, collegial, political, subjective, ambiguity, and cultural, in which transformational and transactional leadership theories are both under the collegial model.

Collegial models denote a shared power among the members of the organization and each member contributes to the determination of policies based on the discussions and decisions to be made (Bush et al., 2019). In addition, Muraru and Cu (2017) presented the key features of the collegial models of Tony Bush: (1) they are normative, (2) authority to participate in the decision-making process is given to the teachers, (3) a common set of educational values and objectives is being observed by all the members of the organization, and (4) the authority of expertise prevails over the official authority.

Transactional and transformational leadership theories as collegial models differ on how school leaders and the other members of the organization interact and work towards the achievement of the organization's vision, mission, goals, and objectives. In transactional leadership, the interaction between the administrators and the teachers is said to be short and



limited, while in transformational leadership, the interaction between the administrators and the teachers is complex and promotes a high level of commitment and motivation (Bush, 2011). The *transactional leadership* model focuses more on the process of exchange in which a reward system is being observed, rather than improving the commitment and motivation of the members of the organization. While *transformational leadership* is said to be highly aligned with the collegial model since the leaders and the other members of the organization shared common values and interests leading to the achievement of the organizational goals (Bush, 2011). Transformational leaders innovate and use different strategies to go beyond managing day-to-day operations and are known to set goals and incentives to inspire and motivate the other members of the organization to function well while providing opportunities for personal and professional growth. Transformational leaders aim for a school-wide commitment to the school's vision, mission, goals, and objectives, but sometimes abuse of influence is associated with them (Bush et al., 2014; Muraru & Cu, 2017).

Therefore, to avoid such possibility of abuse of power, Kwan (2020) claimed that transformational leaders must focus on the establishment of the quality system and the implementation and strict monitoring of policies so that both the leaders and other members of the organization are aware of what is expected from them. Moreover, transformational leaders are also expected to attend to the individual concerns and needs of the teachers to improve students' outcomes and to achieve the successful implementation of a school or curriculum program.



New Normal in Education

The COVID-19 health pandemic forced most governments around the world to temporarily close educational institutions to contain the spread of the virus (UNESCO, 2020). Over 90% of the world's student population experienced their learning being disrupted (UNESCO, 2020). Further, the Department of Education (DepEd) announced that classes in the Philippines for Academic Year 2020-2021 will still be observed to ensure that despite the challenges brought by the health pandemic, the learning of the students will continue.

Learning from home is the “new normal” for the Academic Year 2020-2021 to ensure the safety of the students and that education will continue amid the threat of the COVID-19 health pandemic (Felipe & Regalado, 2020). Lessons at home will be delivered and be observed with the help of flexible learning modalities, such as online learning platforms, television, radio, and printed materials. Dimatulac (2020) cited the statement of DepEd undersecretary Tonisito Umali regarding the distance learning modalities as an alternative to face-to-face classes, which are: (1) self-learning modules, (2) online-based learning or internet-based learning, and (3) learning through television or radio.

In line with the statement of Umali, DepEd Order No. 12 series of 2020 or the Adoption of the Basic Education Learning Continuity Plan for School Year 2020-2021 In Light of the COVID-19 Public Health Emergency presented that the overall framework that governs the Academic Year 2020-2021 is the Basic Education Learning Continuity Plan (BE-LCP). This DepEd Order emphasizes that BE-LCP ensures that learning will continue amid the health pandemic, in which learning opportunities can be one or more of the following modalities



depending on the COVID-19 restrictions on a particular locality: (1) face-to-face, (2) distance learning, (3) blended learning, or (4) home-schooling. The first modality is *face-to-face learning*, which happens when both students and teachers are physically reporting to school and are actively engaged in discussions. The second modality is *distance learning*, which can be in the form of (1) Modular Distance Learning (MDL) where self-learning modules are used, (2) Online Distance Learning (ODL), which involves the use of various online learning platforms that allow students and teachers to meet in real-time or synchronously, or (3) television (TV)/Radio-Based Instruction, which involves the use of TV or radio to deliver the content of the modules. The third modality is *blended learning*, which involves the combination of face-to-face and distance learning modalities. The fourth modality is *home-schooling*, which involves trained parents, guardians, or tutors to provide quality basic education.

Even prior to COVID-19 health pandemic, the DepEd Order 021 series of 2019 presented the use of flexible learning options, specifically alternative delivery modes from which BE-LCP is anchored on. DepEd Order 021 series of 2019 discussed that in the use of the Alternative Delivery Modes (ADMs), instructions may be in face-to-face, distance learning, or blended learning that highly supports the recommendation of the Department of Education to use blended and distance learning in the time of COVID-19.

Similarly, DepEd Order No. 17 series of 2020 discussed that schools can use multiple alternative learning modalities as long as blended learning and distance learning modalities are the major options. Blended learning involves (1) integrating online and face-to-face-activities, (2) courses that are taught both in the classroom and at a distance, (3) combining technology and the actual nature of the world of work today, and (4) combining contemporary and traditional teaching



(Teach Thought Stuff, 2019). In addition, Tucker (2012) and Tucker et al. (2016) stated that blended learning is a formal education program in which students learn online and offline, and different learning modalities are connected to provide an integrated learning experience in all academic subjects. This is a common feature of blended learning since what the students will learn online informs what they will be learning face-to-face, and vice versa (Staker & Horn, 2012).

The use of blended learning is also applicable to higher education even before the time of the new normal. Jacob (2016) revealed that even before the COVID-19 period, higher education institutions are using the combination of both traditional and online classrooms in their curriculum implementation and in the use of the interdisciplinary approach to promote greater collaboration among students and teachers from the different disciplines. In connection to the use of blended learning modality in the new normal, CHED COVID Advisory No. 6 discussed the use of the combination of flexible learning modalities to reflect the best assessment of their students' outcomes, which can also be supported by CHED COVID Advisory No. 7 that recommended the adoption of a flexible learning strategy or modality in delivering instructions in the time of the new normal.

The term 'new normal' is being used to describe and address the uncertainty accompanied by the health pandemic. It presents the idea that things will never be the same as they were before (Asonye, 2020). Considering the situation brought by the health pandemic, asynchronous and synchronous learning will be maximized as the public and private schools use blended learning. Asynchronous learning can be observed using a modular approach or offline activities and synchronous will be observed using different online learning platforms that will allow for a virtual real-time meeting (P & A Grant Thornton, 2020). In addition, Picciano et al. (2013) mentioned



that various technologies such as interactive and non-interactive asynchronous discussions and synchronous conferencing can be used to meet the learning competencies of each academic subject. To this, the use of blended learning saves time and money, devotes lesser time to grading students' outputs, provides more time in doing and enjoying relevant class activities, increases one-on-one interactions, and provides students the opportunities to practice formative and summative assessments synchronously and asynchronously (Tucker, 2012).

Within the new normal, the situation presents a unique challenge to every school leader's decision-making process in terms of giving quality education despite the new educational setting. Kamalludeen (2020) identified the changes and considerations as the education sector face the new normal, which are: (1) shift of learning space from public space to personal space; (2) shift of delivery methods from one size fits all to individualized and differentiated learning; (3) shift of responsibility in the teaching and learning process; and (4) shift in learning assessments. In line with the learning assessments, DepEd Order No. 12 series of 2020 specified that the learning outcomes in the form of knowledge, skills, attitudes, and values should still be assessed in the new normal to ensure the attainment of the Most Essential Learning Competencies (MELCs) of every subject. The Most Essential Learning Competencies defined by the Department of Education have the following characteristics: (1) aligned with the national standards; (2) connect the content of each subject to higher concepts across content areas; and (3) applicable to real-life situations. Hence, changes in the grading system, assessment, and evaluation of student's performance will also be a challenge to every administrator during the time of the new normal (Tria, 2020).

In line with the use of blended learning and the considerations in facing the new normal, school leaders and other stakeholders are expected to take full ownership of their responsibilities



involving students' learning and development. One way to ensure quality education in the new normal is for the school leaders to revisit the curriculum frameworks being used before the COVID-19 period to (1) check its applicability in the present time, (2) involve teachers in the planning process, (3) focus on professional development aligned with the current needs of the education, and (4) connect and adopt the best practices applicable to the current situation (Jewell-Sherman, 2020). Hence, planning is significantly needed and requires intense and concrete processes involving blended learning preparations (Tucker et al., 2016) during and after the COVID-19.

This study is considering blended learning concerning the use of the interdisciplinary approach in performance-based assessments. Despite the long processes of learning and preparation for the use of blended learning, benefits such as convenience and flexibility to both students and teachers can greatly be observed and realized. It also provides room for student's self-paced learning, provides a more comprehensive understanding, and allows better learning interaction (Lawless, 2019). Moreover, it also allows for a greater collaboration among teachers of different disciplines using a variety of approaches.

The use of distance and blended learning in delivering quality education involves a lot of adjustments and preparations of most of the public and private schools in the Philippines since it is new to them. However, this adjustment period could be a room for a better learning opportunity for the students, since the adoption of blended learning even after the health pandemic is now being considered by the educational sector to meet the global demands for technology integration in giving quality education (P & A Grant Thornton, 2020). Hence, the educational sector is



expected to plan, adapt, and innovate to ensure quality education despite the new shifts and approaches in delivering lessons and assessments during and even after the health pandemic.

Synthesis

In summary, an interdisciplinary approach is being recommended to effectively use performance-based assessments, since it aims to address fragmented learning, promotes better understanding, and allows teachers and administrators from different disciplines to work together to effectively assess students' mastery of learning. However, studies presented in the literature also revealed that the use of this program is not an easy task. It highly requires the presence and guidance of school leaders to effectively use it, since effective school leadership is a vital element of a successful organization. Thus, for a particular organization to achieve effective curriculum improvement, the members, together with the school leaders, should interact effectively by observing an effective flow of communication and must observe shared common values and interests. The role of school leaders is vital in the use of the interdisciplinary approach in performance-based assessments, and even more needed in the time of the new normal, where blended learning will be utilized in delivering quality education despite the health pandemic. Therefore, considering the studies and articles presented, inputs to improve the implementation of the IAPA in the new normal were proposed.



CONCEPTUAL FRAMEWORK

One of the aims of the Department of Education, as it implements the K to 12 programs in the Philippines, as discussed in DepEd Order 021 series of 2019, is to equip the graduates with the 21st-century skills categorized into four: (1) information, media, and technology skills, (2) learning and innovation skills, (3) communication skills, and (4) life and career skills. This DepEd Order is in accordance with Republic Act 10533 of 2013, which states that the curriculum shall be learner-centered, inclusive, developmentally relevant, and appropriate. Hence, private, and public schools are guided by this policy on what to improve in the curriculum and instruction to meet the local and global standards. Also, this Republic Act strengthens the curriculum and increases the number of years of basic education to meet the global standards. The additional two years in basic education or the senior high school program, trains and prepares students for the rigorous college life and the world of work that covers numerous subjects that students take and complete.

Since one of the outcomes of the K to 12 program is to holistically develop Filipino learners who are ready for higher education, entrepreneurship, and work, the DepEd Order 021 series of 2019 recommended that the curriculum shall use an integrative pedagogical approach. More so, the different learning areas must be taught in interdisciplinary and multidisciplinary approaches which supported the use of the interdisciplinary approach in this study.

DepEd Order No. 31 series of 2020 or the Interim Guidelines for Assessment and Grading in Light of the Basic Education Learning Continuity Plan also discussed that: (1) assessment should be holistic and authentic in capturing the attainment of the most essential learning competencies, (2) assessment is integral for understanding students learning and development, (3)



a variety of assessment strategies is necessary to inform teaching and promote growth and mastery, and (4) assessment and grading should have a positive impact on learning. As discussed by DepEd Order No. 31 series of 2020, in evaluating student learning during the distance learning set-up, summative assessments shall be in the form of written works and performance tasks. In the use of performance tasks, each must be accompanied with clear directions and appropriate scoring tools or rubrics to help learners demonstrate their learning. Teachers are advised to collaboratively design and implement performance tasks that integrate two or more competencies within or across subject areas. Furthermore, use of learning portfolio is one of the suggested strategies in the collection and recording of evidence of learning in which Student's Learning Portfolio shall document all the evidence of learning within the grading period including self-reflections, self-evaluations of performance tasks guided by rubrics, and self-selected best outputs in learning modules.

Integrative pedagogy promotes the importance of connections and relationships of ideas and concepts between and among disciplines. Performance-based assessments are being used as a form of authentic assessment, since students are involved in the learning processes, individually or collaboratively, that promote the development of higher-order thinking and 21st-century skills. Performance-based assessments also provide students with the opportunities to demonstrate and integrate their knowledge, understanding, and skills in real-life situations as stated in DepEd Order no. 8 series of 2015.

An integrated curriculum is important to respond to the complex educational standards (Holmbukt, 2018). This study focused on the interdisciplinary approach as one of the levels of integration, which provides room to integrate ways of working and solutions to a problem beyond



one discipline (Menken & Kestra, 2016). This can be supported by the key characteristics of an interdisciplinary education of Klaassen (2018) which are: (1) the integration of different disciplinary knowledge, skills, practices, and values; (2) the possible collaboration of activities; (3) the identification of new problems; and (4) the realization of knowledge and solutions across different disciplines. Likewise, Gombrich (2018) also supports the use of interdisciplinary curriculum in the present educational setting which are: (1) the modern nature of work is increasingly misaligned with single discipline study, and (2) the use of the internet is transforming the way we learn, leading to the need of interdisciplinary curriculum.

Jacob (2016) explained that schools implementing the interdisciplinary approach in higher education use the combination of both traditional and online classrooms since technology allows for greater collaboration using a variety of approaches among teachers from different fields or disciplines. In addition, shifting instructions to online and hybrid delivery or blended learning is now being considered as a global standard. This is more evident in the time of the "new normal." As stated in DepEd Order No. 12 series of 2020 and DepEd Order No. 17 series of 2020, schools can use multiple alternative learning modalities as long as blended learning and distance learning modalities are the major options. These policies were further supported by CHED COVID Advisory No. 6 and No. 7 which recommended the adaptation of a flexible learning strategy or modality in delivering instructions and assessments by the higher education in the time of the new normal.

According to Bush et al. (2019), successful leadership prioritizes motivating and developing people and considers establishing and maintaining systems and structures as a second priority. Riggio (2014) presented the four elements of transformational leaders which are needed



to lead by example to achieve the goal of the organization, namely: (1) inspirational motivation; (2) idealized influence; (3) intellectual stimulation; and (4) individualized consideration. In *idealized influence*, leaders promote a clear and inclusive vision led by example. Moreover, the leaders show a strong commitment to the goals of the organization as they establish trust and confidence in the other members of the organization. In *inspirational motivation*, leaders present and explain the changes that the organization will undergo. They also inspire and involve the members of the organization to build strong commitment and to improve their performances. In *intellectual simulation*, leaders challenge the status quo and encourage the members to be creative to achieve the set goals. In *individualized consideration*, leaders discuss and attend to the concerns and needs of each member of the organization, act as mentors and coaches, empower them, and promote continuing personal and professional development among employees. All these elements are needed for the implementation of a school or curriculum program.

The individualized consideration of Riggio is further supported by DepEd Order No. 41 series of 2017 which presented the Philippine Professional Standards for Teachers (PPST) as a basis for all learning and development programs for teachers to ensure that they are properly equipped to implement effectively the K to 12 Education. The PPST presented the different domains that guide the teachers and the school leaders: to improve content knowledge and pedagogy; to manage the learning environment effectively; to be familiar with the diversity of learners; to be fully informed of curriculum and planning processes; to enhance teaching and learning processes through the use of assessment and reporting; to be fully involved in community linkages and professional development; and to improve performance through the help of activities that develop personal growth and professional development.



The Philippine Professional Standards for School Heads or PPSSH (DepEd order No. 024 series of 2020) defined what school heads should know, be able to do, and value to achieve improved learning outcomes and teacher quality. The PPSSH focuses on the specific roles and responsibilities that school heads should observe and maintain as they manage systems and processes in the school, promote quality teaching and learning, nurture themselves and others, and engage stakeholders. In line with the implementation of the IAPA, as defined by the PPSSH, school leaders are expected to: (1) set goals and objectives; (2) observe school planning; (3) lead policy implementation and review; (4) monitor and evaluate the processes and tools; (5) empower and lead people; (6) address the needs of learners, school personnel, and other stakeholders; (7) assist teachers in the review, contextualization, and implementation of learning standards; (8) provide technical assistance on instruction; (9) implement professional development initiatives; (10) recognize and motivate the performance of teachers; and (11) initiate a partnership with the community and stakeholders.

Likewise, the Philippine Professional Standards for Supervisors or PPSS (DepEd order no. 025 series of 2020) identified the primary role of supervisors in creating an enabling and supportive environment for effective learning. In line with the implementation of the IAPA, as defined by the PPSS, supervisors are expected to: (1) provide the needs-based support for curriculum implementation through the application of effective and efficient programs aligned with curriculum standards; (2) implement and lead relevant strategies to support curriculum contextualization; (3) demonstrate knowledge and understanding on the utilization of the results of learning outcomes assessment; (4) mentor and lead colleagues; (5) conduct review and recommendation of national, regional, and/or division policies to ensure relevance within the



context of one's area of concern; (6) provide instructional leadership support to help division, districts, schools, and/or learning centers with continuous improvement of the teaching-learning process; (7) sustain the effective delivery of different learning and development interventions; and (8) initiate professional reflections and recognition to improve and value practice.

Implementing a curriculum or program is like giving life to the planned learning topics and experiences. Jacob (2016) pointed out that no matter how comprehensive a curriculum is if the implementation is ineffective, it would break the curriculum and bring it to waste. In line with this, the DepEd Order 021 series of 2019 was used to support this study, especially in the role of school leaders in the management and implementation of a curriculum or a program. DepEd Order 021 series of 2019 stated that school heads are responsible for the management and direct implementation of the curriculum through checking of lessons and conducting classroom observations. Thus, the achievement of a particular goal and the success of its implementation lies in the hands of the school leaders, as well as the cooperation of teachers, stakeholders, and students (Decena, 2013).

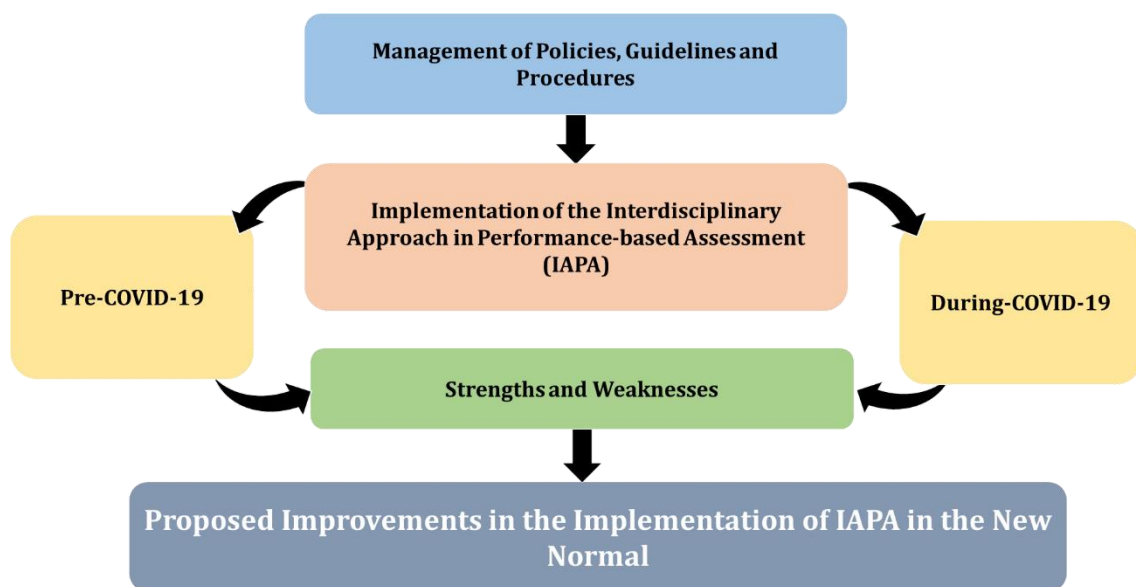
Based on Figure 2, this study sought to assess the management of the existing policies, guidelines, and procedures on the implementation of the Interdisciplinary Approach in Performance-based Assessment (IAPA) before and during the COVID-19 as the basis in proposing improvements in its implementation in the "new normal". This study identified the strengths and weaknesses of the implementation of the IAPA before and during the COVID-19. The results of the assessment on the effectiveness of the management of the policies, guidelines, and procedures in the implementation of the IAPA were used as bases in proposing improvements in its implementation in the new normal or the situation during and after the COVID-19 where the



instructional and assessment modalities may be used in both face-to-face, distance/ online, or blended learning. The conceptual framework of this study is shown in the diagram below.

Figure 2

Conceptual Framework of the Study



RESEARCH PROBLEMS

This study aimed to assess the management of the existing policies, guidelines, and procedures on the implementation of the interdisciplinary approach in performance-based assessment before and during the COVID-19 as basis in proposing improvements in its implementation in the "new normal".

Specifically, this study sought to answer the following questions:



1. How effective is the management of existing policies, guidelines, and procedures on the implementation of the Interdisciplinary Approach in Performance-based Assessment (IAPA) in the Senior High School (SHS) before and during the COVID-19 period as perceived by the school leaders and the teachers?
2. What are the strengths and the weaknesses of the IAPA in the SHS before and during the COVID-19 period as perceived by the school leaders and the teachers?
3. How could the implementation of the IAPA be improved to make it more effective and relevant in the time of the “new normal” covering both the face-to-face and the online learning modalities?

DEFINITION OF TERMS

The key terms indicated in this section are defined constitutively and operationally based on how they were used in the study.

Assessment. The systematic process of collecting information to determine the knowledge or skills gained and to identify the strategies to be used to improve learning. The purpose of assessment is to provide constructive feedback based on the information gathered to further enhance the learning experiences of the students. On the other hand, evaluation is conducted to compare and make a judgment on the learned skills and qualities of the students (Bhasin, 2019). In this study, the term *assessment* refers to the process of documenting the extent of the effectiveness of the school leaders’ management of existing policies, guidelines, and procedures



on the use of the IAPA in the SHS before and during the COVID-19 period as perceived by the school leaders themselves and the teachers.

Authentic Assessment. An effective measure of learning by allowing students to demonstrate understanding through the production of exemplary tasks (Koh, 2017). In this study, the term *authentic assessment* refers to the use of performance-based assessments to assess the mastery and application of learning in real-life situations.

Blended Learning. The most suggested learning modality in the Basic Education Learning Continuity Plan that can be used during the time of the COVID-19 health pandemic as discussed in DepEd Order No. 12 series of 2020. Blended learning involves the combination of face-to-face and distance learning modalities. In this study, the term *blended learning* refers to the use of the Interdisciplinary Approach in Performance-based Assessment in the new normal that is anchored on the statement of the DepEd Order No. 12 series of 2020 that learning outcomes in the form of knowledge, skills, attitudes, and values should still be assessed in the new normal to ensure the attainment of the Most Essential Learning Competencies (MELCs) of every subject.

Guideline. A standard statement that determines a policy or course of action (The American Heritage, 2016). In this study, the term *guideline* refers to the part of a policy or standards that provides instructions on how to act in a situation that is set by the administrators in the implementation of the interdisciplinary approach in teaching and assessment of learning.

Implementation. The process in carrying something into effect (Webster's New World College Dictionary, 2010). In this study, the term *implementation* refers to the execution or



administration of a policy or academic program that pertains to the assessment of students' learning.

Improvement. This term refers to the enhancement of a value or quality (Merriam Webster Dictionary, 2020). In this study, the term *improvement* refers to the improved implementation of the IAPA in the new normal based on the assessment of its use before and during the time of COVID-19.

Integration. The act of combining parts into an integral whole (Collins English Dictionary, 2014). In this study, the term *integration* refers to making learning a whole or united by synthesizing ideas from different subject areas.

Interdisciplinary Approach. The integration of two or more subjects that are focused on one problem (Holbrook, 2013); occurs when educators from different disciplines work together and observe actual interactions that result in a shared and common enrichment (Gonzalez-Carrasco, 2016). In this study, the term *interdisciplinary approach* refers to a type of integration that involves the collaboration of educators in combining science and other subjects into one activity as they design performance-based assessments to promote holistic learning and to address fragmented learning.

New Normal. A previously unfamiliar or atypical situation that has become standard, usual, or expected (Lexico-Oxford Dictionary, 2020). In this study, the term *new normal* refers to the changes in the educational setting particularly in the learning assessments to be used during and after the COVID-19 period.



Performance-based Assessment. Measures the students' ability to apply the skills and knowledge learned from a particular unit of study (Hilliard, 2015). In this study, the term *performance-based assessment* refers to an authentic task that allows students to transfer learning beyond the classroom level.

Policy. The set of clear and concise prescribed plans or course of action (The American Heritage, 2016). In this study, the term *policy* refers to the standard operating procedures and protocols in the implementation of the IAPA as a curriculum program.

Procedure. Outlines the steps in attaining the set expectations (Lotich, 2020). In this study, the term *procedure* refers to a series of detailed steps on how to implement the interdisciplinary approach in performance-based assessment during and after the COVID-19 or in the remote, online, offline, or blended learning modalities.

School Leader. The school principal or other school administrator serving in a similar capacity, as determined by the local board of trustees (Edutopia, 2014). In this study, the term *school leader* refers to the principals, assistant principals, and subject coordinators who are directly involved in the implementation of an interdisciplinary approach in performance-based assessment in the SHS before and during the COVID-19.



CHAPTER 2

METHODOLOGY

This chapter presents the research design for the study. It includes sections that address the following topics: research design, sampling and participants, instrumentation and validation method, data gathering procedure, data analysis, and ethical considerations in the study.

RESEARCH DESIGN AND METHOD

This study used a descriptive research design. Descriptive research is used to describe a phenomenon and its characteristics (Nassaji, 2015). It is concerned with *what* rather than *how* or *why* something has happened that uses observation and survey tools to gather data (Nassaji, 2015). It largely depends on the premise that problems can be solved, and practices can be improved through observation, analysis, and description. Thomlison as cited by Creswell (2014) stated that descriptive research has generally no hypotheses, but in some instances, if hypotheses were made, they were made to address correlations and associations but not causal relationships. Descriptive research does not intend to examine the effects of a phenomenon nor confirm independent and dependent variables' relationship. It only determines the distribution of variables or how the sample can be characterized (Creswell, 2014). This study utilized a descriptive research design in assessing the extent to which existing policies, guidelines, and procedures on the implementation of the IAPA manage effectively in the SHS before and during the COVID-19 as perceived by the school leaders and teachers, and to identify the strengths and the weaknesses of the IAPA in the SHS within the mentioned period. The results of the assessment were used as bases in proposing



improvement in the implementation of the IAPA in the new normal or the situation during and after the COVID-19.

SAMPLING AND PARTICIPANTS

The researcher used purposive non-probability sampling in the selection of the participants. Non-probability sampling does not attempt to select a random sample from the population of interest; rather, subjective methods are used to decide which elements are included in the sample (Vehovar et al., 2016). Purposive sampling is also known as judgment sampling. It is a sampling technique that involves the researchers' own judgment in selecting study participants (Creswell, 2014). The main objective is to produce a sample representing the population, which is based on the idea that selecting the best cases for the study will lead to best data (Vehovar et al., 2016). Hence, it allowed the researcher to select whom she thought could provide and strengthen the information needed.

The participants of this study were selected based on the following criteria: 1) they are in the SHS; 2) they teach science subjects; 3) they use performance-based assessment in assessing students' learning; and 4) they are from public and private schools in Metro Manila. Meanwhile, the study does not include the following criteria: 1) all other school leaders and teachers from the identified schools that do not meet all the first three inclusion criteria, and 2) all other public and private schools outside Metro Manila.



This study focused on: (1) SHS, since the additional two years in basic education train and prepare students for the rigorous college life and the world of work that cover numerous subjects that students take and complete; (2) science, since it is a body of knowledge that requires the application of concepts in real-life situations to make learning more relevant to the students; (3) performance-based assessment, since it provides opportunities (a) to demonstrate and integrate knowledge, understanding, and skills in real-life situations, and (b) to attain holistic, authentic, and integral learning; and (4) public and private schools in Metro Manila, to gain a good scope of responses to propose inputs on the improvement of the IAPA's implementation.

Table 1 shows the summary of information about the respondents of this study.

Table 1

Respondents' Profile

	f	%
School Employer		
Public	15	50
Private	15	50
Total	30	100
Sex		
Male	10	33
Female	20	67
Total	30	100
Age Group (years)		
21 to 30	14	47
31 to 40	7	23
41 to 50	4	13
51 and above	5	17
Total	30	100



Highest Educational

Attainment

Master's Degree with Doctoral Units	1	3
Doctorate Degree	4	13
Bachelor's Degree	5	17
Master's Degree	7	23
Bachelor's Degree with MA Units	13	44
Total	30	100

Area of Specialization

General Science	1	3
Science/ EdM	1	3
Physics	3	10
Chemistry	5	17
Biology	6	20
Science	14	47
Total	30	100

Position

School administrator	9	30
Faculty	21	70
Total	30	100

Handled Year Level

Not Applicable	7	23
Grade 12	10	34
Grade 11	13	43
Total	30	100

Teaching Experience (years)

16 to 20	1	3
11 to 15	4	14
21 and above	7	23
0 to 5	9	30
6 to 10	9	30
Total	30	100

The proposed number of schools for this study was eight (8) private schools and eight (8) public schools in Metro Manila. Out of thirty-nine (39) private schools and fifteen (15) public schools from whom the researcher sent requests and sought approval, only five (5) private schools



and five (5) public schools approved the request to conduct a study and participated in the study. Other schools that first approved to be part of the study later failed to participate and decided to withdraw due to busy schedule and the work-from-home setup of teachers and school leaders. Their decision was respected by the researcher.

Out of thirty (30) participants, fifteen (15) participants were from private schools, and fifteen (15) participants were from public schools. As shown in Table 1, most participants were from the 21-30 years old age group, and a considerable portion of the respondents was with MA units, followed by those with master's degrees. Also, all the participants met the inclusion criteria, which requires Senior High School science teachers and school leaders of grade 11 or 12 that implement an interdisciplinary approach in performance-based assessment. Moreover, 23% of the respondents had no teaching load since they were part of the school administrators, but they monitored the use of the IAPA.

INSTRUMENTS

The research instruments used in this study were researcher-made survey questionnaire and an interview guide. Related literature, DepEd order, and national acts or policies were used as bases for the contents of the instruments. The basis for the formulation of the items for the survey questionnaire is in Appendix K on page 187.



Survey Questionnaire

The research instrument, “Survey Questionnaire for the Assessment of the Implementation of the Interdisciplinary Approach in Performance-based Assessment Before and During the COVID-19 Period”, was used to measure the extent to which existing policies, guidelines, and procedures on the implementation of the IAPA were managed effectively in the SHS before and during the COVID-19 as perceived by the school leaders and teachers. The survey questionnaire was divided into two (2) parts: Part I: Respondent’s Profile; and Part II: Research Data. The research data were categorized into: (1) before the COVID-19; and (2) during the COVID-19. Each category is divided into three sub-categories: (1) Management of Policies of the IAPA which included five statements; (2) Management of Guidelines of the IAPA which included five statements; and (3) Management of Procedures of the IAPA which included four statements.

The survey questionnaire used in this study was in a Likert Rating Scale. A Likert Scale is used to measure respondents’ opinions, perceptions, or attitudes through rating the items on a given level of agreement (Word Press, 2016). The survey instrument used a four-point ordinal Likert Scale ranging from *strongly agree* to *strongly disagree*. The survey questionnaire used in this study is in Appendix I on page 181.

Table 2 shows the scale used by the participants in answering the survey questionnaire.



Table 2

Likert Scale for Survey Questionnaire

Scale	Interpretation
4	Strongly Agree
3	Agree
2	Disagree
1	Strongly Disagree

Since the survey questionnaire was researcher-made, content validity and reliability were established. The instruments were validated by twelve (12) experts in the field of education. The experts who validated the instruments were: (1) teachers who are knowledgeable and well-experienced in the use of the interdisciplinary approach in performance-based assessment; (2) school leaders or administrators who are knowledgeable and well-experienced in curriculum development and implementation; and (3) experts in the field of curriculum or leadership and management. The validators were asked to review and judge the content-validity of the items in the survey questionnaire and to check if the items correspond to the study's research questions. The validation form is in Appendix F on page 163.

Table 3 shows how the researcher interpreted the 4-point rating scale used by the experts in the validation of the research instruments.



Table 3

Basis for the Interpretation of the Research Instruments' Validation Results

Mean of Ratings	Interpretation
3.5 to 4.0	Acceptable without any revision.
2.5 to 3.4	Acceptable with minor revision.
1.5 to 2.4	Acceptable with major revision.
1.0 to 1.4	Not acceptable.

The twelve (12) experts validated the instruments using the 4-point rating scale. The researcher interpreted the data by identifying the mean of the ratings provided by the twelve experts per statement under the three sub-categories of the survey questionnaire. The mean of ratings in all the statements under the survey questionnaire for both before and during the COVID-19 categories was in the range of 3.8 to 4.0, which was interpreted as *acceptable without any revision*. Even if the interpretation indicated no revision, the researcher still considered the suggestions of the validators to improve the questionnaires. Suggestions such as improving the wordings and sentence construction of the statements as recommended by seven (7) validators and organizing the statements into categories and sub-categories as recommended by validator five (5) were considered. The summary of the validators' feedback is in Appendix G on page 171.

In establishing reliability, specifically the internal consistency of the survey questionnaire, Cronbach's Alpha was used. Cronbach's Alpha is a measure of internal consistency, which explains how closely related a set of items are as a group (Leavy, 2017). It is mostly used when



multiple Likert questions in a survey form a scale, and the researcher wishes to determine if the scale is reliable (Leavy, 2017). The formula for the Cronbach's alpha is as follows:

$$\alpha = \left(\frac{n}{n-1}\right)\left(1 - \frac{\sum V_i}{V_t}\right)$$

where V_i is the variance of question i
 V_t is the total observed-score variance
 n is the number of questions.

Table 4 shows the reliability threshold for alpha values according to Zikmund et al. (2013). The researcher used this reliability threshold in interpreting the computed Cronbach's Alpha value for the survey questionnaire's pilot test.

Table 4

Reliability Threshold for Cronbach's Alpha Value

α Score	Threshold
0.81 – 0.95	Very good reliability
0.71 – 0.80	Good reliability
0.61 – 0.70	Fair reliability
< 0.60	Poor reliability

Note: α is the symbol for the Cronbach's alpha.

As shown in Table 4, the Cronbach's alpha value should be more than 0.70 to show a good reliability threshold. If the Cronbach's alpha value is lower than 0.60, it is indicative of poor reliability. Thus, to increase the alpha value, changing, revising, or adding an item should be considered (Zikmund et al., 2013 & Taber, 2017). However, it should also be noted that an alpha



value higher than 0.95 might be a manifestation of redundancy as they are testing the same question but in a different form (Tavakol & Dennick, 2011). Hence, an alpha that is too high or close to 1 may raise suspicions that the items may be redundant or testing the same construct over and over. Taber (2017) suggested that discarding an item is a good consideration to lower the alpha value.

The survey questionnaire has undergone pilot testing, cleaning of data, and testing of reliability twice with different sets of respondents since the computed Cronbach's alpha value for the sub-category, Management of policies of the IAPA was lower than the acceptable threshold and the computed alpha value for the last statement of the sub-category, Management of procedures of the IAPA was higher than the acceptable threshold and had shown redundancy. The revised research instruments with the old items are in Appendix H on page 174.

The Cronbach's alpha measure for the Policies (0.820) and Guidelines (0.828) before COVID-19 and the Guidelines (0.824) and Procedures (0.891) during COVID-19 showed a very good reliability. While the Procedures (0.704) before COVID-19 and the Policies (0.724) during COVID-19 showed a good reliability based on the reliability threshold of Zikmund et al. (2013).

The results of the validation and the second pilot test established the content validity and the reliability of the survey questionnaire which indicated that the instrument is suitable for the purpose of the study.



Interview Guide

The research instrument, “Interview Guide for the Assessment of the Implementation of the Interdisciplinary Approach in Performance-based Assessment Before and During the COVID-19 Period”, was used to identify the strengths and the weaknesses of the IAPA in the SHS before and during the COVID-19 as perceived by the school leaders and the teachers based on their experiences and to support the results of the survey questionnaire. The interview guide was composed of three (3) open-ended questions that elicit detailed explanations about the respondents' particular answer in the survey questionnaire. Interviews are conducted to study the experiences, views, or beliefs on a specific subject or topic (Bhasin, 2019). In semi-structured interviews, the researchers prepare a list of questions to be asked in the interview, but they can also ask follow-up questions to get greater and detailed explanation from the respondents (Bhasin, 2019). Semi-structured interviews allow the researchers to deviate from the interview guide to ask follow-up questions to strengthen the respondent's claim or answer. The interview guide used in this study is in Appendix J on page 186.

Since the interview guide was researcher-made that was also content-validated by the twelve (12) experts in the field of education. The validators reviewed and judged the content-validity of the three interview guide questions and checked if the items correspond to the study's research questions using the same scale used in the survey questionnaire (see Table 3). The validation form is in Appendix F on page 163.

The researcher interpreted the validation data using the mean of ratings provided by the twelve experts (12) for the three open-ended questions of the interview guide. The mean of the



validation ratings to the interview guide questions was in the range of 3.8 to 4.0, which was interpreted as *acceptable without any revision*. Like what the researcher did in the survey questionnaire, even if the interpretation indicated no revision, the researcher still considered the suggestions of the validators to improve the questions, such as improving the wordings and sentence construction of the instruments as recommended by four (4) validators. The summary of the validators' feedback is in Appendix G on page 171.

The results of both the survey questionnaire and the interview guide were used as basis in proposing inputs to improve the implementation of the IAPA in the new normal or the situation during and after the COVID-19.

DATA GATHERING PROCEDURE

There were three phases that the researcher observed in gathering data: Pre-Data Collection, Actual Data-Collection and Post-Data Collection.

Pre-Data Collection. This is the first phase of the data collection with twelve steps. The **first (1st) step** under the Pre-data collection was the development of the researcher-made instruments - survey questionnaire and interview guide, in which related literature, DepEd order, and national acts or policies were used as bases for the contents of the instruments.

The **second (2nd) step** was the validation of the instruments by the twelve (12) experts in the field of education. Prior to the validation, the researcher sent the letter of requests to 12 validators together with the validation form (See Appendix E on page 161). The expert validators



were teachers, school leaders, and experts or professors in curriculum or leadership management.

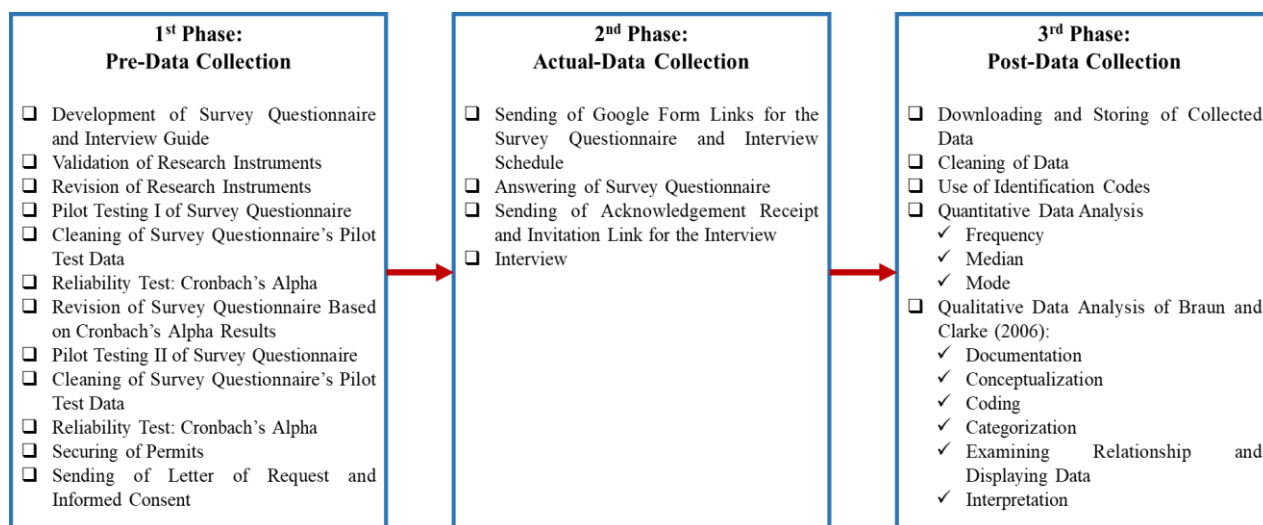
The survey questionnaire and the interview guide have undergone content validity.

The **third (3rd) step** was revision of both the survey questionnaire and interview guide based on the validation results. The mean of the validators' ratings was identified for every statement under the survey questionnaire and the interview guide questions as basis in the revision of items. Wordings, sentence construction, and organization of statements were also considered based on the experts' suggestions. A copy of the revised validated instruments was emailed to this study's twelve (12) validators.

Figure 3 shows the graphical representation of the data collection procedure of the study.

Figure 3

Data Gathering Procedure





The **fourth (4th) step** was the pilot testing of the survey questionnaire to the selected subset of intended survey participants. According to Leavy (2017), interview questions do not need to run a pilot test. That is why only the survey questionnaire had undergone the pilot study. Prior to the actual pilot testing, the researcher sent the informed consent and letter of request to the target participants of the pilot study via email. The purpose, content, duration, and potential risks and benefits of the study, guidelines, and informed consent form (See Appendix D on page 157) were given to the participants. The target participants were assured of anonymity and confidentiality of their identities. Ten (10) participants agreed to participate with the assurance of anonymity and confidentiality as stated in the consent form. They answered the pilot test for the survey questionnaire using the Google Form link provided to them through email. The researcher acknowledged the participation of the pilot testing participants by sending them acknowledgement receipts. Ten (10) participants were considered as the pilot sample size since the target participants for the actual study was thirty (30). Cadete (2017) stated that sample size may vary in pilot studies, while Namoco (2020) stated that a pilot study sample could be 10% of the projected sample.

After the completion of data, the **fifth (5th) step** was observed, which was the cleaning of collected data. Dunaetz (2017) explained that cleaning of survey data helps the researchers to identify if the participants do not match the target respondents or did not answer the questions thoughtfully. The collected responses were downloaded from the Google Form and converted into a spreadsheet to clean them prior to the **sixth (6th) step**, establishing the instruments' reliability using the Cronbach's Alpha. SPSS software was used to calculate the Cronbach's Alpha. After using the SPSS software, revisions were made based on the results of the Cronbach's alpha which was the **seventh (7th) step** observed by the researcher. The result of the Cronbach's Alpha



required the researcher to undergo another pilot testing to ensure the reliability of the instrument since items under the first sub-category, *Management of Policies of the IAPA*, was revised to increase the computed alpha value, and the last item under the third sub-category, *Management of Procedures of the IAPA*, was deleted to lower the computed alpha value and avoid redundancy.

The **eighth (8th) step** was the same as step four (4). However, a different subset of intended survey participants was requested to participate to avoid any bias and ensure reliability. Ten (10) individuals who also qualified for the inclusion criteria answered the second pilot test. After the completion of data, the **ninth (9th) step** was observed, which was the cleaning of collected data and was followed by the **tenth (10th) step** that involved establishing the instruments' reliability using the Cronbach's Alpha. SPSS software was used to calculate the Cronbach's Alpha. The result showed that the questionnaire is reliable, and so no further revision was done.

After ensuring that the questionnaire is reliable and valid, the researcher observed the **eleventh (11th) step**, which involved sending a letter of request and form to conduct a study to the target private and public schools in Metro Manila through email. The researcher also personally went to the Division office of Manila to submit a letter of request to conduct a study in the SHS public schools within the division of Manila. Fortunately, the good office approved the request of the researcher. The letter of request to conduct a study and approval letter from the Division Office of Manila are in Appendix A and B on pages 149 and 153. Also, some schools required the researcher to personally go to the school to submit the letter of request and form (See Appendix C on page 154) to conduct a study. In line with this, as mandated by Executive Order



No. 11 series of 2020, section 5 General Provisions, item 3 (pp. 12) of the Inter-Agency Task Force, the researcher strictly observed wearing of face mask and face shield and monitoring of body temperature to ensure no transmission of COVID-19.

The **twelfth (12th) step** that the researcher observed was gathering participants from the schools who approved to participate in the study by sending a letter via email that included the purpose, content, duration, and potential risks and benefits of the study guidelines, and informed consent (See Appendix C and D on pages 154 and 157). The respondents who agreed to participate in this study were assured of anonymity and confidentiality.

Actual-Data Collection. This is the second phase of the data collection with four steps. This involved the administration of the online survey and online interview to the respondents of the study. The survey was used to gather quantitative data to answer research question 1, the interview was used to gather sufficient data to answer research question 2 and support research question 1, and both survey and interview results were used to answer research question 3. Clay (2020), in the article released by the American Psychological Association, stated that researchers should consider the knowledge of the respondents in the online platform to use as they gather data, and should document when data were received as part of storing information. In line with these, the respondents had the options of what online platform they were familiar with or comfortable using for the virtual interview, Zoom or Google Meet, and acknowledgement receipts were sent to them thru email after participating in the study.

The **first (1st) step** under the Actual-data collection was sending of Google form link for the survey questionnaire to the respondents, particularly, the school principals and coordinators



using the researcher's official University email. In the Google Form link, asking of respondent's available schedule for the virtual interview was included for scheduling purposes. The **second (2nd) step** was the respondents' answering of the survey questionnaire. The **third (3rd) step** was sending acknowledgement receipts and Zoom or Google Meet invitation link to the respondents for the interview part of the study. Lastly, the **fourth (4th) step** was the one-on-one virtual interview with the respondents based on their provided schedule.

During the conduct of the online interview, the following sub-steps were observed: a) the researcher introduced herself to the respondent; b) the researcher presented the guidelines on the conduct of online interview and confirmed the approval of the participant to record the meeting for proper and concise transcription; c) the researcher presented the purpose and ethical considerations such as anonymity and confidentiality; and d) the researcher presented the general directions for the interview.

The duration of the interview lasted for twenty to forty (20-40) minutes. After the interview, the recorded video was downloaded and saved in the Google Drive of the researcher's official University email to ensure that the files were organized and encrypted. The guidelines on the conduct of the online survey and interview were included in the informed consent form (See Appendix D on page 157).

Post-Data Collection. This is the third phase of the data collection with five steps. The **first (1st) step** involved storing the data gathered from the survey and the recorded interviews in the Google Drive of the researcher's official University email to ensure encryption. The researcher observed non-disclosure of data to anyone other than the concerned respondent and the researcher.



After all the data were completed, the **second (2nd) step** that the researcher observed was organizing the survey questionnaire responses in a spreadsheet and cleaning of data. The researcher also observed the second step for the interview responses. The **third (3rd) step** was the use of identification codes as data analyses were made for both survey and interview data. Descriptive statistical tools such as frequency, median, and mode were used to analyze the quantitative data of this study which was the **fourth (4th) step**, and Qualitative Data Analysis of Braun and Clarke (2006) was the **fifth (5th) step** observed as the researcher transcribed and mapped the responses of the participants. This step involved documentation, conceptualization, coding, categorization, examining the relationship and displaying data, and interpretation. The researcher did not link respondents' identifiers to the responses as data analyses were observed.

DATA ANALYSIS

Quantitative Data Analysis

The quantitative data were used to answer the research question 1 of this study “*How effective is the management of existing policies, guidelines and procedures on the implementation of the Interdisciplinary Approach in Performance-based Assessment (IAPA) in the Senior High School (SHS) before and during the COVID-19 period as perceived by the school leaders themselves and the teachers?*” The quantitative data were tabulated and analyzed to produce a relatively valid conclusion. In analyzing the responses obtained from the survey questionnaire, the quantitative data were presented using frequencies and percentages. Further, median and mode were identified to describe the participants' responses for the statements under the categories,



before and during COVID-19 for the management of existing policies, guidelines, and procedures of the IAPA in the SHS.

Descriptive statistical tools were used for the quantitative data analysis, such as frequency, median, and mode, since the different kinds of descriptive statistics describe and summarize the data (Leavy, 2016). The frequency will help to count the number of occurrences of a category and be reported in percentages to describe the part of a whole based on the respondents' answers. Measures of central tendency are measures of location within a distribution. The measures of central tendency are the mean, median, and mode, in which each measure calculates the location of the central point using a different method. Since the data gathered using the Likert Scale are in ordinal level, Frost (2018) stated that the best measure of central tendency with respect to ordinal data is median or mode.

Median is the value that occupies the middle position when all the observations are arranged in descending or ascending order. It is usually preferred to other measures of central tendency when dealing with ordinal data. On the other hand, mode is the value that occurs the most frequently in the data set. Some data sets do not have a mode because each value occurs only once. On the other hand, some data sets can have more than one mode. This happens when the data set has two or more values of frequency, greater than that of any other value. Mode is used to describe a bimodal distribution (Frost, 2018).



Qualitative Data Analysis

The qualitative data were used to answer research question 2, *“What are the strengths and the weaknesses of the IAPA in the SHS before and during the COVID-19 period as perceived by the school leaders and the teachers?”* and to support the results of the research question 1. The qualitative data were tabulated and analyzed using the six steps of qualitative data analysis of Braun and Clarke (2006), including: (1) *Documentation*, where the responses were documented and reviewed several times; (2) *Conceptualization*, where gathered data were reviewed to analyze the commonality of respondents’ perceptions through focusing on the questions; (3) *Coding*, where respondents’ answers were segmented to identify the emerging themes and patterns and organize them into coherent categories; (4) *Categorization*, where patterns and connections of the segmented answers were categorized according to the common themes that emerged; (5) *Examining Relationship and Displaying Data*, where the themes that emerged were intertwined and narrated; and (6) *Interpretation*, where an authentic conclusion was made based on the emerging themes to show the meaning and significance of the respondents’ answers (Creswell, 2014).

The results of the data analyses for questions 1 and 2 were used to answer the research question 3 of this study *“How could the implementation of the IAPA be improved to make it more effective and relevant in the time of the “new normal” covering both the face-to-face and the online learning modalities?”*



ETHICAL CONSIDERATIONS

The researcher first sought approval from the Research Ethics Committee of the Philippine Normal University-Manila before she proceeded to data gathering. The researcher also sought permission from the Division Office of Manila and from the private and public-school authorities to conduct the study and to access their curriculum and existing policies, guidelines, and procedures in using the IAPA. Only one school shared an IAPA sample matrix which was respected by the researcher.

After the school authorities granted the request to conduct a study, the researcher sent emails to the participants that included the purpose, content, duration, potential risks and benefits of the study, guidelines, and informed consent. The participants were assured of anonymity and confidentiality of their identities and this assurance was indicated in the informed consent form. The participants were informed that a copy of the study's executive summary would be provided to them. The participants were also informed that if in the process of conducting the study, they have decided to quit participating because of some personal reasons or because they think it could harm them, their decision will be highly respected by the researcher. No incentive, compensation, or reimbursement was given by the researcher to participate in this study. Schools and individuals who refused to participate or who have withdrawn to be part of the study were respected.

The researcher also observed the protocol in conducting online data gathering defined in the Public Advisory on the Conduct of Online Classes Using Video Conferencing Services of the Department of Justice and in the Office of the Cybercrime series of 2020 particularly the provision of not sharing the meeting room credentials to anyone not involved in the meeting such as the ID



and password. The researcher adopted the Guidelines on the Conduct of Online Survey and Interview in preparation of the informed consent form. Hence, both the researcher and the participants of this study strictly observed the given guideline. Further, the respondents were given the options to turn on or off their videos as the interview started. These considerations were observed to protect the participants' privacy according to Republic Act 10173.

The data gathered from the survey and the recorded interviews were saved in the Google Drive of the researcher's official University email to ensure strong security access and storage until the study was completed. Non-disclosure of data to anyone other than the concerned respondent and the researcher was strictly observed. Moreover, the use of identification codes for the respondents was highly observed to ensure anonymity as data analyses were made. The researcher did not link respondents' identifiers to the responses as data analyses were conducted.



CHAPTER 3

RESULTS AND DISCUSSION

This chapter presents the results, discussion, and implications of the data gathered.

Research Question 1: How effective is the management of existing policies, guidelines, and procedures on the implementation of the Interdisciplinary Approach in Performance-based Assessment (IAPA) in the Senior High School (SHS) before and during the COVID-19 period as perceived by the school leaders and the teachers?

The use of interdisciplinary approach in performance-based assessment demands for the collaborated efforts of the concerned people and for the guidance of school leaders to attain its effectiveness. Based on the knowledge and experiences of the school leaders and teachers, they identified the extent to which they agree or disagree with the statements about the management of the existing policies, guidelines, and procedures on the implementation of the Interdisciplinary Approach in Performance-based Assessment (IAPA) in the Senior High School (SHS).

Table 5 presents the median of each statement in the survey questionnaire showing the effectiveness of the management of the IAPA policies, guidelines, and procedures before and during the COVID-19 as perceived by the school leaders and the teachers.



Table 5

Level of Effectiveness of the Management of the IAPA Policies, Guidelines, and Procedures Before and During COVID-19 as Perceived by School Leaders and Teachers

Sub-category	Statements	Before COVID-19				During COVID-19			
		Median	Frequency			Median	Frequency		
			School leaders	Teachers	Total		School leaders	Teachers	Total
Policies (Management of policies of the IAPA)	1. is observed to attain a learner-centered curriculum.	3	6	10	16 (53%)	4	6	12	18 (60%)
	2. is observed to attain the holistic growth of learners.	3	5	9	14 (47%)	3	3	11	14 (47%)
	3. is observed to maximize the use of performance-based assessments or tasks.	3	5	11	16 (53%)	3	4	12	16 (53%)
	4. is observed to integrate technology in the learning process.	3	5	9	14 (47%)	4	7	13	20 (67%)
	5. is observed to cater both face-to-face and distance learning modalities or blended learning.	3	7	12	19 (63%)	3	4	13	17 (57%)
Overall Median of Policies		3				3			
Guidelines (Management of guidelines of the IAPA)	1. is specific and clear for both teachers and school leaders.	3	7	12	19 (63%)	3	4	13	17 (57%)
	2. is observed by encouraging the teachers to use the IAPA in all subjects.	3	7	14	21 (70%)	3	4	11	15 (50%)
	3. is observed by its regular review and modification based on the needs of the learners by involving them and other school partners.	3	6	16	22 (73%)	3	6	14	20 (67%)
	4. is observed by giving regular feedback from school leaders to teachers and by sharing of new updates in the use of the IAPA.	3	5	14	19 (63%)	3	6	12	18 (60%)
	5. is strengthened by benchmarking with other schools at least once a year.	3	4	12	16 (53%)	3	3	13	16 (53%)
Overall Median of Guidelines		3				3			
Procedures (Management of procedures of the IAPA)	1. is observed by plotting the intended assessments and performance standards of each subject area using a matrix as part of the planning processes.	3	6	11	17 (57%)	3	4	12	16 (53%)
	2. is observed by conducting scheduled regular meetings and planning that allow for the collaboration of teachers within the level.	3	4	12	16 (53%)	3	4	11	15 (50%)
	3. is strengthened by the monitoring of the principal, vice-principals, coordinators, and/or team leaders through classroom visits, rounds, and/or observations.	3	4	13	17 (57%)	3	5	13	18 (60%)
	4. is strengthened by holding regular professional development for teachers and school leaders.	3	2	13	15 (50%)	3	5	13	18 (60%)
Overall Median of Procedures		3				3			



As shown in Table 5, the median for most statements before and during the COVID-19 is three (3) which means that most of the respondents *agreed* with the management of policies, guidelines, and procedures of the IAPA. The median is also the most popular response in almost all items. It can be deduced that the management of existing policies, guidelines, and procedures on the implementation of the IAPA in the senior high school are all effective before and during COVID-19 as perceived by the school leaders and teachers. Statements “*Management of policies of the IAPA is observed to attain a learner-centered curriculum*” and “*Management of policies of the IAPA is observed to integrate technology in the learning process*” are perceived as very effective during the COVID-19 period as the majority *strongly agreed* with it.

The school leaders and teachers *agreed* that the *management of policies of the IAPA is observed to attain a learner-centered curriculum (statement 1)* before the COVID-19 and *strongly agreed* during the COVID-19. It can be deduced that the school leaders and teachers perceived it as effective, and they appreciated it more during the COVID-19. The result conformed to Republic Act 10533 of 2013 which states that the curriculum shall be learner-centered, inclusive, developmentally relevant, and appropriate. Further, this can be supported by the interview response about the strengths and opportunities of the IAPA’s implementation before and during the COVID-19. As one school leader stated: “*IAPA helps advance critical thinking and cognitive development. Interdisciplinary instruction helps students develop their cognitive abilities such as brain-based skills and mental processes that are needed to carry out tasks (AA4).*” However, it may be emphasized that before COVID-19, 7%; and that during the COVID-19, 10% from both



public and private schools *disagreed* with the statement: *Management of policies of the IAPA is observed to attain a learner-centered curriculum.*

The school leaders and teachers *agreed* that the *management of policies of the IAPA is observed to integrate technology in the learning process (statement 4)* before the COVID-19 and *strongly agreed* during the COVID-19. It can be deduced that the school leaders and teachers perceived it as effective and appreciated the integration of technology in the learning process more during the COVID-19. This conformed to one of the aims of the Department of Education as it implements the K to 12 program in the Philippines which equips the graduates with the 21st century skills on information, media, and technology as discussed in DepEd Order 021 series of 2019. This can be supported by the interview response about the strengths and opportunities of the IAPA's implementation before and during the COVID-19. One interviewed teacher said: "*One of the strengths of the IAPA during this pandemic is technology integration. The students must adapt so that they will be able to cope with the new normal way of learning (AC4).*" However, it may be emphasized that before COVID-19, 10%; and that during the COVID-19, 10% from both public and private schools *disagreed* with the statement: *Management of policies of the IAPA is observed to integrate technology in the learning process.*

Detailed distribution of ratings for the effectiveness of the management of the IAPA policies before and during the COVID-19 as perceived by the school leaders and the teachers is shown Table 6.



Table 6

Distribution of School Leaders and Teachers' Ratings for the Effectiveness of the Management of the IAPA Policies

Policies (Management of policies of the IAPA)	Rating Scale	Before COVID-19						Overall f	During COVID-19						Overall f
		Frequency (f)							Frequency (f)						
		Private			Public				Private			Public			
		School Leader	Teacher	Total	School Leader	Teacher	Total		School Leader	Teacher	Total	School Leader	Teacher	Total	
1. is observed to attain a learner- centered curriculum.	4	1	4	5 (33%)	2	5	7 (47%)	12 (40%)	4	6	10 (67%)	2	6	8 (53%)	18 (60%)
	3	3	7	10 (67%)	3	3	6 (40%)	16 (53%)	0	4	4 (27%)	2	3	5 (33%)	9 (30%)
	2	0	0	0 (0%)	0	2	2 (13%)	2 (7%)	0	1	1 (7%)	1	1	2 (13%)	3 (10%)
	1	0	0	0 (0%)	0	0	0 (0%)	0 (0%)	0	0	0 (0%)	0	0	0 (0%)	0 (0%)
2. is observed to attain the holistic growth of learners.	4	2	5	7 (47%)	2	5	7 (47%)	14 (47%)	3	4	7 (47%)	2	4	6 (40%)	13 (43%)
	3	2	6	8 (53%)	3	3	6 (40%)	14 (47%)	1	6	7 (47%)	2	5	7 (47%)	14 (47%)
	2	0	0	0 (0%)	0	2	2 (13%)	2 (7%)	0	1	1 (7%)	1	1	2 (13%)	3 (10%)
	1	0	0	0 (0%)	0	0	0 (0%)	0 (0%)	0	0	0 (0%)	0	0	0 (0%)	0 (0%)
3. is observed to maximize the use of performance -based assessments or tasks.	4	2	5	7 (47%)	2	4	6 (40%)	13 (43%)	4	5	9 (60%)	0	2	2 (13%)	11 (37%)
	3	2	6	8 (53%)	3	5	8 (53%)	16 (53%)	0	5	5 (33%)	4	7	11 (73%)	16 (53%)
	2	0	0	0 (0%)	0	1	1 (7%)	1 (3%)	0	1	1 (7%)	1	1	2 (13%)	3 (10%)
	1	0	0	0 (0%)	0	0	0 (0%)	0 (0%)	0	0	0 (0%)	0	0	0 (0%)	0 (0%)
4. is observed to integrate technology in the learning process.	4	1	8	9 (60%)	2	2	4 (27%)	13 (43%)	4	8	12 (80%)	3	5	8 (53%)	20 (67%)
	3	3	3	6 (40%)	2	6	8 (53%)	14 (47%)	0	2	2 (13%)	1	4	5 (33%)	7 (23%)
	2	0	0	0 (0%)	1	2	3 (20%)	3 (10%)	0	1	1 (7%)	1	1	2 (13%)	3 (10%)
	1	0	0	0 (0%)	0	0	0 (0%)	0 (0%)	0	0	0 (0%)	0	0	0 (0%)	0 (0%)
5. is observed to cater both face-to-face and distance learning modalities or blended learning.	4	1	4	5 (33%)	1	2	3 (20%)	8 (27%)	2	4	6 (40%)	1	2	3 (20%)	9 (30%)
	3	3	6	9 (60%)	4	6	10 (67%)	19 (63%)	2	6	8 (53%)	2	7	9 (60%)	17 (57%)
	2	0	1	1 (7%)	0	2	2 (13%)	3 (10%)	0	1	1 (7%)	1	1	2 (13%)	3 (10%)
	1	0	0	0 (0%)	0	0	0 (0%)	0 (0%)	0	0	0 (0%)	1	0	1 (7%)	1 (3%)

Note: Scale 4 – Strongly Agree; 3 – Agree; 2 – Disagree; 1 – Strongly Disagree



The second statement *management of policies of the IAPA is observed to attain the holistic growth of learners* before COVID-19 is *bimodal*, meaning that the school leaders and teachers *agreed* and *strongly agreed* with it. Whilst during the COVID-19, the respondents *agreed* with the given statement. It can be deduced that the respondents both from public and private schools perceived the management of policies of the IAPA to attain the holistic growth of learners as effective. Gonzalez-Carrasco (2016) revealed that interdisciplinary works contribute to the holistic development of the students, while DepEd Order No. 31 series of 2020 stated that assessment should be holistic and authentic in capturing the attainment of the most essential learning competencies especially during the time of crisis. The result can be further supported by one of the interview responses about the strengths of the IAPA's implementation before and during the COVID-19. One interviewed teacher said: "*IAPA could give holistic development and learning to the students (AA2).*" However, before the COVID-19, 7%; and during the COVID-19, 10% from both public and private schools *disagreed* with the statement: *Management of policies of the IAPA is observed to attain the holistic growth of learners.*

The school leaders and teachers *agreed* that the *management of policies of the IAPA is observed to maximize the use of performance-based assessments or tasks (statement 3)* and is *observed to cater both face-to-face and distance learning modalities or blended learning (statement 5)*. The results can be supported by Rosaroso and Rosaroso (2015) who stated that performance-based assessments are considered as one of the best assessments in the promotion of the 21st century skills. Also, DepEd Order No. 12 series of 2020 and DepEd Order No. 17 series of 2020 discussed that schools can use multiple alternative learning modalities in which blended learning and distance learning modalities are the major options especially during the new normal



education set-up. Moreover, DepEd Order No. 31 series of 2020 stated that assessment should have a positive impact on learning especially in the time of the new normal. Hence in evaluating student learning, summative assessments shall be in the form of written works and performance tasks. Teachers are expected to give particular focus on designing the assessment to allow flexibility in multiple modalities.

Detailed distribution of ratings for the effectiveness of the management of the IAPA guidelines before and during the COVID-19 as perceived by the school leaders and the teachers is shown Table 7.

Table 7

Distribution of School Leaders and Teachers' Ratings for the Effectiveness of the Management of the IAPA Guidelines

Guidelines (Management of guidelines of the IAPA)	Rating Scale	Before COVID-19						Overall f	During COVID-19						Overall f
		Frequency (f)							Frequency (f)						
		Private			Public				Private			Public			
		School Leader	Teacher	Total	School Leader	Teacher	Total		School Leader	Teacher	Total	School Leader	Teacher	Total	
1. is specific and clear for both teachers and school leaders.	4	1	5	6 (40%)	1	4	5 (33%)	11 (37%)	3	4	7 (47%)	1	2	3 (20%)	10 (33%)
	3	3	6	9 (60%)	4	6	10 (67%)	19 (63%)	1	5	6 (40%)	3	8	11 (73%)	17 (57%)
	2	0	0	0 (0%)	0	0	0 (0%)	0 (0%)	0	2	2 (13%)	1	0	1 (7%)	3 (10%)
	1	0	0	0 (0%)	0	0	0 (0%)	0 (0%)	0	0	0 (0%)	0	0	0 (0%)	0 (0%)
2. is observed by encouraging the teachers to use the IAPA in all subjects.	4	1	4	5 (33%)	1	2	3 (20%)	8 (27%)	3	4	7 (47%)	1	2	3 (20%)	10 (33%)
	3	3	7	10 (67%)	4	7	11 (73%)	21 (70%)	1	4	5 (33%)	3	7	10 (67%)	15 (50%)
	2	0	0	0 (0%)	0	1	1 (7%)	1 (3%)	0	3	3 (20%)	1	1	2 (13%)	5 (17%)
	1	0	0	0 (0%)	0	0	0 (0%)	0 (0%)	0	0	0 (0%)	0	0	0 (0%)	0 (0%)
3. is observed by its regular review and modification based on the needs of the learners by involving them and other school partners.	4	2	2	4 (27%)	1	2	3 (20%)	7 (23%)	2	3	5 (33%)	0	2	2 (13%)	7 (23%)
	3	2	9	11 (73%)	4	7	11 (73%)	22 (73%)	2	7	9 (60%)	4	7	11 (73%)	20 (67%)
	2	0	0	0 (0%)	0	1	1 (7%)	1 (3%)	0	1	1 (7%)	1	1	2 (13%)	3 (10%)
	1	0	0	0 (0%)	0	0	0 (0%)	0 (0%)	0	0	0 (0%)	0	0	0 (0%)	0 (0%)



4. is observed by giving regular feedback from school leaders to teachers and by sharing of new updates in the use of the IAPA.	4	2	4	6 (40%)	2	2	4 (27%)	10 (33%)	2	5	7 (47%)	0	2	2 (13%)	9 (30%)
	3	2	7	9 (60%)	3	7	10 (67%)	19 (63%)	2	5	7 (47%)	4	7	11 (73%)	18 (60%)
	2	0	0	0 (0%)	0	1	1 (7%)	1 (3%)	0	1	1 (7%)	1	1	2 (13%)	3 (10%)
	1	0	0	0 (0%)	0	0	0 (0%)	0 (0%)	0	0	0 (0%)	0	0	0 (0%)	0 (0%)
5. is strengthened by benchmarking with other schools at least once a year.	4	3	5	8 (53%)	1	1	2 (13%)	10 (33%)	2	3	5 (33%)	0	1	1 (7%)	6 (20%)
	3	0	4	4 (27%)	4	8	12 (80%)	16 (53%)	1	6	7 (47%)	2	7	9 (60%)	16 (53%)
	2	1	2	3 (20%)	0	1	1 (7%)	4 (13%)	1	2	3 (20%)	2	2	4 (27%)	7 (23%)
	1	0	0	0 (0%)	0	0	0 (0%)	0 (0%)	0	0	0 (0%)	1	0	1 (7%)	1 (3%)

Note: Scale 4 – Strongly Agree; 3 – Agree; 2 – Disagree; 1 – Strongly Disagree

The school leaders and teachers *agreed* that the *management of guidelines of the IAPA is specific and clear for both teachers and school leaders (statement 1)*, which corresponded to the statement of Nancarrow et al. (2013) that clarity of a shared vision must be observed to have a successful interdisciplinary curriculum implementation; as well as to the first domain of the Philippine Professional Standards for School Heads (DepEd Order No. 024 series of 2020), *Leading Strategically*, in which school heads are expected to set directions, goals, and objectives to ensure that these are being understood by all stakeholders. However, it may be emphasized that those who *disagreed* with the *management of guidelines of the IAPA is specific and clear for both teachers and school leaders*, changed from 0% before the COVID-19 to 10% during the COVID-19 from both public and private schools. This can be supported by the interview response of one of the school leaders (CG2):

“Right now, hindi pa totally structured iyong IAPA namin. Hindi pa siya concrete na program. We do this, ginagawa na namin talaga siya. Ayun nga lang wala siyang specific na flow o procedure o process na gagawin para makita kung paano talaga iyong smooth na pagsasagawa ng IAPA [Right now, IAPA has not been totally structured yet neither is



a concrete program. Though we are doing it already, there is no specific flow, procedure, or process for us to smoothly implement it.]

The *management of guidelines of the IAPA is observed by encouraging the teachers to use the IAPA in all subjects (statement 2)* is perceived as effective by the school leaders and teachers. The public-school respondents' ratings are concentrated at *agree* for both before and during the COVID-19, while the private-school respondents' ratings vary since the rating of *strongly agree* substantially increased during the COVID-19. It can be deduced that private school respondents are more encouraged to utilize the IAPA during the new normal. Further, there is a noticeable change in terms of those who *disagreed* with the statement: *management of guidelines of the IAPA is observed by encouraging the teachers to use the IAPA in all subjects*. It changed from 3% before the COVID-19 to 17% during the COVID-19 from both public and private schools. These results can be further supported by the interview response of one of the teachers (BB4):

“Pero ngayon dahil limited lang ang time at nagkaka-problema pagdating sa internet, hindi pa rin talaga nai-implement. Though they [administration] informed us that we are going to use it [IAPA] this school year. Mas papa-igtingin yung pag-gamit ng IAPA ngayong pandemic dahil nga nahihirapan iyong mga bata dahil sa dami ng performance tasks na ginagawa nila [Due to limited time and internet connection, we cannot implement the IAPA during this time of pandemic yet even though the administration informed us that we are going to strengthen its use this school year students are having difficulties due to the number of performance tasks that they must accomplish.]

These findings conformed to what Kamalludeen (2020) stated, that as the educational sector face the new normal, changes in teaching-learning process and learning assessments need to be



considered by the schools. There are many preparations that teachers and school leaders must accomplish for the new education set-up during this time of health pandemic, resulting for the other schools to not immediately utilize the IAPA during this academic year. Still, teachers are encouraged to use it to lessen the workload of their students.

The *management of guidelines of the IAPA is observed by its regular review and modification based on the needs of the learners by involving them and other school partners (statement 3)* is perceived as effective by the school leaders and teachers. It can be inferred that evaluation is being considered to improve the use of the IAPA and to address the concerns or needs related to its use. Jacob (2016) pointed out that comprehensive curriculum is nothing if its implementation is ineffective. Thus, to know whether the implementation of the IAPA is effective or not, regular review and modification should be observed. *Controlling*, as one of the functions of school leaders, should be a consideration to identify what to improve or to retain the given program. Moreover, *Leading Strategically and Focusing on Teaching and Learning* domains according to DepEd Order No. 024 series of 2020 (PPSSH), should also be considered by the school leaders of both public and private schools as they implement the IAPA. *Leading Strategically* domain supports the role of school leaders in implementing the IAPA by observing school planning, policy implementation and review, and by monitoring and evaluating processes and tools. On the other hand, *Focusing on Teaching and Learning* domain supports the role of school leaders in implementing the IAPA by assisting teachers in the review, contextualization, and implementation of learning standards to make curriculum relevant to the learners. These can be supported by the interview response of one of the teachers, who said that “*Schools should consider the outcomes that they produced from the previous academic years by having a portfolio*



which teachers can use as a reference in identifying what output to improve or to retain. (CII)."

However, based on the data gathered, there were some respondents who *disagreed* with the statement: *management of guidelines of the IAPA is observed by its regular review and modification based on the needs of the learners by involving them and other school partners*, from 3% before the COVID-19 to 10% during the COVID-19 from both public and private schools. Thus, the school leaders of the concerned schools must ensure the strict observance of the IAPA's evaluation and modification.

The school leaders and teachers *agreed* that the *management of guidelines of the IAPA is observed by giving regular feedback from school leaders to teachers and by sharing of new updates in the use of the IAPA (statement 4)*. This conformed to DepEd Order 021 series of 2019 stating that school heads are responsible in the management and direct implementation of the curriculum; Warren (2016) supported this further stating that professional development, in the form of meetings and discussions, allows teachers to work together to discuss and plan a common goal. These must be observed by school leaders as part of their management on the use of the IAPA to give feedback and to share new updates. Despite the good result, there were still some respondents (before the COVID-19, 3%; during the COVID-19, 10%) from both public and private schools who *disagreed* with the statement: *management of guidelines of the IAPA is observed by giving regular feedback from school leaders to teachers and by sharing of new updates in the use of the IAPA*. Hence, school leaders must see to it that they address concerns related to the management of IAPA guidelines especially during this time of new normal.

The *management of guidelines of the IAPA is strengthened by benchmarking with other schools at least once a year (statement 5)* is perceived as effective by the school leaders and the



teachers. This can be associated with the claim of Anig-ig (2018) saying that teachers and all other professionals must grow continuously. This result can be further supported by DepEd Order 021 series of 2019, which emphasizes that external linkages and partnerships must be expanded and strengthened to ensure proper coordination, resource sharing, and sustainability of inclusive education's implementation. Furthermore, DepEd Order No. 024 series of 2020 (PPSSH) under *Building Connections* domain supports this role of school leaders in implementing the IAPA since they are expected to engage stakeholders in the improvement of school communities and to build relationships with individuals and organizations related or that can support the improvements in education that may be observed through benchmarking. However, there were some respondents (before the COVID-19, 13%; during the COVID-19, 23%) from both public and private schools who *disagreed* with the *management of guidelines of the IAPA is strengthened by benchmarking with other schools at least once a year*. Hence, it can be deduced that since the use of distance or online learning set-up has just started this academic year, benchmarking or learning from the practices of other schools is not yet being fully maximized by some participating schools of this study due to restrictions associated to the health pandemic and preparations with the new educational set-up.

Detailed distribution of ratings for the effectiveness of the management of the IAPA procedures before and during the COVID-19 as perceived by the school leaders and the teachers is shown Table 8.



Table 8

Distribution of School Leaders and Teachers' Ratings for the Effectiveness of the Management of the IAPA Procedures

Procedures (Management of procedures of the IAPA)	Rating Scale	Before COVID-19							During COVID-19							Overall f
		Frequency (f)						Overall f	Frequency (f)							
		Private			Public				Private			Public				
		School Leader	Teacher	Total	School Leader	Teacher	Total		School Leader	Teacher	Total	School Leader	Teacher	Total		
1. is observed by plotting the intended assessments and performance standards of each subject area using a matrix as part of the planning processes.	4	1	7	8 (53%)	2	2	4 (27%)	12 (40%)	3	5	8 (53%)	0	2	2 (13%)	10 (33%)	
	3	3	4	7 (47%)	3	7	10 (67%)	17 (57%)	1	5	6 (40%)	3	7	10 (67%)	16 (53%)	
	2	0	0	0 (0%)	0	1	1 (7%)	1 (3%)	0	1	1 (7%)	2	1	3 (20%)	4 (13%)	
	1	0	0	0 (0%)	0	0	0 (0%)	0 (0%)	0	0	0 (0%)	0	0	0 (0%)	0 (0%)	
2. is observed by conducting scheduled regular meetings and planning that allow for the collaboration of teachers within the level.	4	3	4	7 (47%)	2	3	5 (33%)	12 (40%)	3	5	8 (53%)	1	2	3 (20%)	11 (37%)	
	3	1	6	7 (47%)	3	6	9 (60%)	16 (53%)	1	4	5 (33%)	3	7	10 (67%)	15 (50%)	
	2	0	1	1 (7%)	0	1	1 (7%)	2 (7%)	0	2	2 (13%)	1	1	2 (13%)	4 (13%)	
	1	0	0	0 (0%)	0	0	0 (0%)	0 (0%)	0	0	0 (0%)	0	0	0 (0%)	0 (0%)	
3. is strengthened by the monitoring of the principal, vice-principals, coordinators, and/or team leaders through classroom visits, rounds, and/or observations.	4	3	5	8 (53%)	2	2	4 (27%)	12 (40%)	3	4	7 (47%)	0	2	2 (13%)	9 (30%)	
	3	1	6	7 (47%)	3	7	10 (67%)	17 (57%)	1	6	7 (47%)	4	7	11 (73%)	18 (60%)	
	2	0	0	0 (0%)	0	1	1 (7%)	1 (3%)	0	1	1 (7%)	1	1	2 (13%)	3 (10%)	
	1	0	0	0 (0%)	0	0	0 (0%)	0 (0%)	0	0	0 (0%)	0	0	0 (0%)	0 (0%)	
4. is strengthened by holding regular professional development for teachers and school leaders.	4	3	5	8 (53%)	3	3	6 (40%)	14 (47%)	1	4	5 (33%)	1	3	4 (27%)	9 (30%)	
	3	0	6	6 (40%)	2	7	9 (60%)	15 (50%)	2	6	8 (53%)	3	7	10 (67%)	18 (60%)	
	2	1	0	1 (7%)	0	0	0 (0%)	1 (3%)	1	1	2 (13%)	1	0	1 (7%)	3 (10%)	
	1	0	0	0 (0%)	0	0	0 (0%)	0 (0%)	0	0	0 (0%)	0	0	0 (0%)	0 (0%)	

Note: Scale 4 – Strongly Agree; 3 – Agree; 2 – Disagree; 1 – Strongly Disagree

The school leaders and teachers agreed that the management of procedures of the IAPA is observed by plotting the intended assessments and performance standards of each subject area using a matrix as part of the planning processes (statement 1). Planning is a process that involves intellectual and mindful determination of actions and decisions based on facts and purposes



(Ramasamy, 2017). The use of the IAPA requires careful planning to ensure its effectiveness. It is a critical part in the implementation of the IAPA since it entails the consideration, preparation, and discussion of all the important aspects that will also determine its success. This can be supported by the interview response of one of the teachers (PV):

“We have our meetings, and we usually present the performance standards first to identify the activity to be given to the students. The teachers are brainstorming, and we meet half-way in designing an interdisciplinary task. For example, I am a science teacher and I collaborated with Oral Communication subject, and we had a mock hearing about the science concept presented in the given task. From there, we were able to meet the standards for Science and the other subject as well.”

Plotting the intended assessments and performance standards of each subject area during the planning process helps the teachers and school leaders to plan for a good and well-integrated performance-based assessment since they can easily visualize and identify the interconnectedness of different subjects. Most of the respondents agreed with the statement: *management of procedures of the IAPA is observed by plotting the intended assessments and performance standards of each subject area using a matrix as part of the planning processes*. However, it is important to note that there were still some respondents (before the COVID-19, 3%; during the COVID-19, 13%) from both public and private schools who *disagreed* with it.

The *management of procedures of the IAPA is observed by conducting scheduled regular meetings and planning that allow for the collaboration of teachers within the level (statement 2)* is perceived as effective by the school leaders and the teachers. However, there were some respondents (before the COVID-19, 7%; during the COVID-19, 13%) from both public and private



schools who *disagreed* with the statement: *management of procedures of the IAPA is observed by conducting scheduled regular meetings and planning that allow for the collaboration of teachers within the level*. The results can be supported by the interview response of one of the school leaders: *“I would recommend planning this ahead of time so that we can really plot, for example, plot in during summer so that we can see what are the possible performance tasks that we can work on (CD4).”* and by the interview response of one of the teachers: *“Manage time – have a proper scheduling. If you are using the IAPA, you must find time for the teachers to be available at the same time so that they will not do it after the class time (CD11).”* These show that meetings and planning are being observed in line with the implementation of the IAPA, however concerns are identified as presented in the given interview responses of a public and a private school respondent. This led to what Shen et al. (2014) mentioned in which institutional leaders are expected to have an involvement in the implementation of interdisciplinary approach to effectively facilitate collaboration among the teachers of different disciplines and to the *Leading Strategically* domain of DepEd Order No. 024 series of 2020 (PPSSH) which defines the role of school leaders in planning, implementing, reviewing, monitoring, and evaluating the processes and tools of a curriculum or program to ensure its success.

The school leaders and teachers perceived that the *management of procedures of the IAPA is strengthened by the monitoring of the principal, vice-principals, coordinators, and/or team leaders through classroom visits, rounds, and/or observations (statement 3)* as effective. In the use of the IAPA, monitoring of its implementation is an integral part in ensuring its success which greatly depends on the functions of school leaders. This conformed to DepEd Order 021 series of 2019 which states that school heads are responsible in the management and direct implementation



of the curriculum through checking of lessons and conducting classroom observations. This is also supported by the *Leading Strategically* domain of DepEd Order No. 024 series of 2020 (PPSSH) which defines the role of school leaders in planning, implementing, reviewing, monitoring, and evaluating the processes and tools of a curriculum or program to ensure its success. Based on the data gathered, respondents' ratings for both before and during the COVID-19 period are concentrated at *agree*, to mean that classroom visits, rounds, and/or observations are being observed by the school leaders of the participating schools of this study. This can be supported by the interview response of one of the teachers, who said that "*Someone is monitoring it and the teacher would have to explain why the program was not implemented or did not push through and must provide an alternative activity - instead of the festival of talents (PB).*" Further, there were some respondents (before the COVID-19, 3%; during the COVID-19, 10%) from both public and private schools who *disagreed* with the statement: *management of procedures of the IAPA is strengthened by the monitoring of the principal, vice-principals, coordinators, and/or team leaders through classroom visits, rounds, and/or observations.* These results can be associated to the interview response of one of the teachers, who said that "*The implementation is not that strict in making it difficult for us to use it (BI4).*" In line with this, the presence and functions of school leaders must be highly observed in ensuring a consistent and effective management of the IAPA procedures in the concerned schools. Riggio (2014) stated that school leaders are expected to discuss and attend to the concerns and needs of each member of the organization, act as mentors and coaches, empower them, and promote continuing personal and professional development among employees. Further, Focusing on Teaching and Learning domain of DepEd Order No. 024 series of 2020 (PPSSH) supports the role of school leaders in implementing the IAPA by assisting



teachers in the review, contextualization, and implementation of learning standards to make curriculum relevant to the learners, by providing technical assistance on instruction and by creating a learner-centered environment.

The school leaders and teachers *agreed* that the *management of procedures of the IAPA is strengthened by holding regular professional development for teachers and school leaders (statement 4)*. Warren (2016) stated that professional development in the form of meetings and discussions, allows teachers to work together to discuss and plan a common goal. Also, Anig-ig (2018) claimed that teachers and all other professionals, must grow continuously and he presented some ways of addressing the need for continuing teacher education, such as: (1) learning from the best practices of other teachers; (2) learning through reading; (3) learning through membership in professional associations; (4) learning while travelling; (5) learning through information research; and (6) learning through regular faculty development programs. These conformed to the interview responses of two of the school leaders who said that *“In public, we have this activity called festival of talents, in which we have our Learning Action Cell (LAC) sessions together with the other subject teachers. We try to merge all our activities and try how can we de-load the workload of the students (PB).”* and *“Sharing of experiences and professional sharing are part of our scheduled meetings (PV).”* Nevertheless, there were still some respondents (before the COVID-19, 3%; during the COVID-19, 10%) from both public and private schools who *disagreed* that the *management of procedures of the IAPA is strengthened by holding regular professional development for teachers and school leaders*. School leaders play a crucial role in ensuring an enabling and supportive environment for effective teaching and learning to happen. School leaders are expected to nurture themselves and others by implementing and attending professional



development initiatives to enhance strengths and address performance gaps among teachers as stated in Developing Self and Others domain of DepEd Order No. 024 series of 2020 (PPSSH). Also, teachers are expected to improve their performances through the help of activities that develop personal growth and professional development as stated in DepEd Order No. 41 series of 2017 or the Philippine Professional Standards for Teachers (PPST).

Research Question 2: What are the strengths and the weaknesses of the IAPA in the SHS before and during the COVID-19 period as perceived by the school leaders and the teachers?

Strengths of the IAPA's Implementation Before and During the COVID-19

Interdisciplinary approach is being recommended to effectively use performance-based assessments since it aims to address fragmented learning, promote better understanding, and allows teachers and administrators from different disciplines to work together to effectively assess students' mastery of learning. Based on the knowledge and experiences of the school leaders and teachers, they identified the strengths of the Interdisciplinary Approach in Performance-based Assessment (IAPA) in the Senior High School (SHS) during the interviews.

Table 9 presents the summary of the strengths of the IAPA's implementation before and during the COVID-19 and the sample responses of the participants. As shown in the table, the three themes with the greatest number of responses are (1) IAPA promotes mastery and meaningful learning, (2) IAPA promotes less workload and saves time, and (3) IAPA promotes holistic



development, in which all these three identified strengths of the IAPA are being observed in both before and during the COVID-19.

Table 9

Strengths of the IAPA's Implementation

Strengths	Applicable Before / During COVID-19 / BOTH	Number of Responses for the Identified Theme	Sample Responses
Promotes holistic development	Both	11	- The strengths of the IAPA before and during the COVID-19 are the same. IAPA ensures the holistic learning of the students across grade levels (AA1). - There is no relative difference between the strengths of the IAPA before and during the COVID-19. IAPA helps the students to think critically and to be more creative. It helps them deal with more communications and for holistic learning. These strengths of IAPA are also applicable to the teachers (AA8).
Promotes mastery and meaningful learning	Both	25	- In IAPA, we are trying to integrate the different subjects to our own subjects. We are doing this to help our students know the significance of why we need to study this kind of topic and to make them realize that in one subject, other subject matter can also relate to it (AB2). - In IAPA, the mastery of skill and the enhancement of the required skill is strengthened (AB20).
Promotes creativity and resourcefulness during the online learning-set-up	During COVID-19	5	- During this time of pandemic, I believe that one of the strengths of the IAPA is that students and teachers become resourceful especially that for the teachers, sometimes, it is a challenge for us to think of performance-based assessment given that the students are at home, and they have limited resources. But then the strength and opportunities in that is that teachers as well as the students become resourceful (AC2). - One of the strengths of the IAPA during this pandemic is technology integration. The students must adapt so that they will be able to cope with the new normal way of learning (AC4).
Promotes less workload and saves time.	Both	17	- IAPA is beneficial not only for teachers but also for students. It is beneficial for teachers since it allows for lesser preparation and lesser papers to mark. For the students, considering that they are doing several performance tasks at the same time, it is also beneficial for them since there will be less outputs to be accomplished. For example, in one week, the students may have three performance tasks and that would be stressing for them. If IAPA will be applied, then the number of tasks will be lessened (AD5). - IAPA is an opportunity that allows students to submit quality outputs. Since there are fewer tasks to do, they can focus more on their tasks and can exert more time and effort in accomplishing them (AD15).
Helps meet the learning competencies	Both	4	In IAPA, the standard skills to master are being highlighted and attained since the connections of each subject are being identified and different subjects help each other to attain the mastery of competencies (AE1).



Promotes collaboration and teamwork	Both	4	- It ensures that the outputs to be submitted are with efforts and the skills that must be observed are seen properly (AE2). - IAPA enhances and promotes more the collaboration among teachers across subject areas (AF1). - I do love this integration. It is good for the students since they can collaborate even if they are far from each other, hence learning is still there (AF4).
Encourages students' motivation	Both	3	- IAPA helps the students to become more competitive with respect to their different subjects, specifically here in science, biology, the students can show their creativity, resourcefulness, and development of higher order thinking skill (AG1). - IAPA really helps the students since it is interactive and requires the students to focus on the specific activity (AG2).
Promotes less stress for students	Both	3	- IAPA is effective, and it really helps the students not to be too stressed when it comes to their performance tasks (AH1) - IAPA lessens the workload of the students making them not to be too stressed in terms of the number of tasks that they must accomplish. (AH3).

IAPA promotes holistic development. It develops the 4C's; it advances students' critical thinking, creativity, communication, and collaboration. It also promotes self-directed learning and holistic development among students. These can be associated with the attainment of DepEd Order No. 021 Series of 2019 which states that K to 12 education equips the graduates with the 21st century skills such as learning and innovation skills as well as communication skills. Notice the sample statements that led to the identified strengths in Table 9, and they are as follows:

- The strengths of the IAPA before and during the COVID-19 are the same. IAPA ensures the holistic learning of the students across grade levels (AA1).*
- There is no relative difference between the strengths of the IAPA before and during the COVID-19. IAPA helps the students to think critically and to be more creative. It helps them deal with more communications and for holistic learning. These strengths of IAPA are also applicable to the teachers (AA8).*



These can be supported by the study of Gonzalez-Carrasco (2016) which revealed that interdisciplinary works contribute to the holistic development of the students and the claim of Bolat and Karakus (2017) stating that interdisciplinary approach is a form of horizontal integration that promotes students' holistic learning and the development of higher order thinking skills such as critical thinking, creativity, and communication. Also, the identified strength is supported by DepEd Order No. 31 series of 2020 saying that assessment should be holistic and authentic in capturing the attainment of the most essential learning competencies. Further, Hallmark (2020) stated that integration allows for the retention and the application of understanding in real-life situations, develops higher order thinking skills, encourages, and ensures active participation among students, and connects various academic subjects. Interdisciplinary approach is one of the classifications of integration (Menken & Kestra, 2016) that promotes higher order thinking and decision-making skills (Barnes, 2015) which supports the strength that *IAPA promotes holistic development*. Furthermore, since the IAPA uses performance-based assessments as it encourages the development of the 4C's, Rosaroso and Rosaroso (2015) stated that performance-based assessments are considered as one of the best assessments in the promotion of the 21st century skills.

IAPA promotes mastery and meaningful learning. It shows connections between different disciplines by allowing students to connect, collaborate, and perform different tasks that will promote deeper and integrated learning. IAPA deepens students' understanding and mastery of learning through real-life applications since the tasks given to them are authentic and are performance-based. Notice the sample statements that led to the identified strengths in Table 9, and they are as follows:



- *In IAPA, we are trying to integrate the different subjects to our own subjects. We are doing this to help our students know the significance of why we need to study this kind of topic and to make them realize that in one subject, other subject matter can also relate to it (AB2).*
- *In IAPA, the mastery of skill and the enhancement of the required skill is strengthened (AB20).*

Frodeman (2013) and Barnes (2015) said that interdisciplinary approach aims for the integration of two or more subjects by allowing the educators from different disciplines to work together. Also, allowing the students to explore and solve a problem without being subject-bounded leads to better understanding and offers a broad opportunity for the students to master learning and the skills needed to be locally and globally competitive (Gonzalez-Carrasco, 2016). Furthermore, the identified strength that *IAPA promotes mastery and meaningful learning*, can also be supported by DepEd Order No. 31 series of 2020, which states that assessment should be holistic and authentic in capturing the attainment of the most essential learning competencies, and should have a positive impact on learning.

IAPA promotes creativity and resourcefulness during the online learning-set-up. It allows teachers and school leaders to become more creative and resourceful in designing performance-based assessments during the online learning set-up which maximizes the use of technology. Notice the sample statements that led to the identified strengths in Table 9, and they are as follows:



- *During this time of pandemic, I believe that one of the strengths of the IAPA is that students and teachers become resourceful especially that for the teachers. Sometimes, it is a challenge for us to think of performance-based assessment, given that the students are at home, and they have limited resources. But then the strength and opportunities in that is that teachers as well as the students become resourceful (AC2).*
- *One of the strengths of the IAPA during this pandemic is technology integration. The students must adapt so that they will be able to cope with the new normal way of learning (AC4).*

Considering the changes brought by the health pandemic, distance learning has been adopted by schools since the opening of the Academic Year 2020-2021, may they be private or public schools. This abrupt change in the educational set-up challenges and allows teachers and school leaders to become more creative and resourceful in designing performance-based assessments and in ensuring the delivery of quality education. Also, it leads students and teachers to maximize the use of technology to be able to communicate and to have an interaction despite the restrictions accompanied by the health pandemic. Jewell-Sherman (2020) stated that one way to ensure quality education in the new normal is for the school leaders to revisit the curriculum frameworks being used before the COVID-19 to: (1) check its applicability in the present time; (2) involve teachers in the planning process; (3) focus on professional development aligned with the current needs of the education; and (4) connect and adopt the best practices applicable to the current situation. Hence, the use of the IAPA during the new normal educational set-up is still aligned with technology integration and calls for the creativity and resourcefulness of teachers and school leader



to be able to provide quality learning and assessments to learners despite the distance learning set-up.

IAPA promotes less workload and saves time. It lessens the workload of students by merging the performance tasks of two or more disciplines into one. Also, it lessens the workload of teachers in terms of checking and grading outputs, thus, saves time for both teachers and students since students can work longer to accomplish their tasks and teachers can allot more time in scrutinizing students' outputs. DepEd Order No. 31 series of 2020 stated that in the observance of distance learning set-up, teachers are advised to collaboratively design and implement performance tasks that integrate two or more competencies within or across subject areas to allow holistic, authentic, and integral learning as most essential learning competencies are being attained. It also addresses the lessening of workload among students. Notice the sample statements that led to the identified strengths in Table 9, and they are as follows:

- *IAPA is beneficial not only for teachers but also for students. It is beneficial for teachers since it allows for lesser preparation and lesser papers to mark. For the students, considering that they are doing several performance tasks at the same time, it is also beneficial for them since there will be less outputs to be accomplished. For example, in one week, the students may have three performance tasks and that would be stressing for them. If IAPA will be applied, then the number of tasks will be lessened (AD5).*
- *IAPA is an opportunity that allows students to submit quality outputs. Since there are fewer tasks to do, they can focus more on their tasks and can exert more time and effort in accomplishing them (AD15).*



Sahin and Ozturk (2018) and Altun and Kelecioğlu (2018) found that performance tasks are time-consuming, exhausting, and stressful as perceived by the students and the teachers. Also, Davalos and Malaluan (2018) found that as performance-based assessments are being used to assess students' learning in science, common problems are encountered such as: (1) too much time required in performance tasks' assessment, (2) too much time required in developing localized performance tasks, and (3) difficulty and insufficient time to execute the activity. Based on the identified theme, the use of interdisciplinary approach in performance-based assessment helps in addressing the problem encountered in the mentioned studies in relation to the use performance-based assessments. IAPA promotes lesser workload, thus allowing the students to save time and focus more on their tasks. This means that since they will have longer time to accomplish their performance tasks, production of quality performance tasks can be observed.

IAPA helps meet the learning competencies. It allows students to meet and master the standard learning competencies of each subject matter involved in the IAPA. Notice the sample statements that led to the identified strengths in Table 9, and they are as follows:

- *In IAPA, the standard skills to master are being highlighted and attained since the connections of each subject are being identified and different subjects help each other to attain the mastery of competencies (AE1).*
- *It ensures that the outputs to be submitted are with efforts and the skills that must be observed are seen properly (AE2).*

These conformed to what Pavaloiu et al. (2015) have stated that interdisciplinary approach helps learners to integrate concepts to various disciplines to advance students' capacity to understand



issues, propose solutions, and solve problems. As different subjects observe performance task integration, each of them also helps in attaining the standard learning competencies assigned by the Department of Education. IAPA allows students to meet and master the standard learning competencies of each subject matter involved while attaining deeper, integrated, and meaningful learning which can be supported by DepEd Order No. 31 series of 2020. It discussed that assessment should be holistic, authentic, and integral as the most essential learning competencies are being attained.

IAPA promotes collaboration and teamwork. It allows teachers and students to communicate and collaborate and fosters harmonious relationship among teachers and among students. Notice the sample statements that led to the identified strengths in Table 9, and they are as follows:

- *IAPA enhances and promotes more the collaboration among teachers across subject areas (AF1).*
- *I do love this integration. It is good for the students since they can collaborate even if they are far from each other, hence learning is still there (AF4).*

Interdisciplinary approach promotes the learning processes and the creation of products out of students' collaboration and involvement (Holmbukt, 2018). It allows students to communicate and collaborate while attaining integrated learning processes which is also true among teachers. It promotes harmonious relationship not only among students but also among teachers since they are collaborating with each other as they plan and prepare for IAPA implementation. This can be supported by Gonzalez-Carrasco (2016) who stated that IAPA allows educators from different



disciplines to work together and by DepEd Order No. 31 series of 2020 which states that in the observance of distance learning set-up, teachers are advised to collaboratively design and implement performance tasks that integrate two or more competencies within or across subject areas to allow for holistic, authentic, and integral learning as the most essential learning competencies are being attained. IAPA provides opportunities for both students and teachers to engage in intellectual conversations about certain issues, themes, problems, events, or issues of shared interest and importance while connecting the different disciplines involved (Holley, 2017).

IAPA encourages students' motivation. It allows students to become more competitive and motivated since they are working collaboratively. Notice the sample statements that led to the identified strengths in Table 9, and they are as follows:

- *IAPA helps the students to become more competitive with respect to their different subjects, specifically here in science, biology, the students can show their creativity, resourcefulness, and development of higher order thinking skill (AG1).*
- *IAPA really helps the students since it is interactive and requires the students to focus on the specific activity (AG2).*

IAPA encouraged students to perform and participate more since authentic and integrated tasks challenged them to use their critical thinking and creativity. Since the tasks given to them require them to connect different subjects, students are required to think beyond what is being discussed in the classroom and to interact more with their classmates to get more ideas from their discussions especially if the tasks are to be done by group. This identified strength conformed to Holmbukt (2018) who revealed that interdisciplinary works contribute to the holistic development of the



students and increase their motivation through making students integrate concepts in a meaningful and advanced way (Spelt et al., 2017).

IAPA promotes less stress for students. It helps students to lessen the stress related to their workload since fewer tasks are to be accomplished compared to the total number of their subjects. IAPA is also pertinent during the online learning set-up since it helps in lessening the anxiety brought by the pandemic due to overwhelming tasks to be accomplished by the students. Notice the sample statements that led to the identified strengths in Table 9, and they are as follows:

- *IAPA is effective, and it really helps the students not to be too stressed when it comes to their performance tasks (AH1).*
- *IAPA lessens the workload of the students making them not to be too stressed in terms of the number of tasks that they must accomplish (AH3).*

These observations of respondents in line with the use of interdisciplinary approach in performance-based assessments address what Altun and Kelecioğlu (2018) revealed in their study that performance tasks are time-consuming, exhausting, and stressful as perceived by the students and teachers. Considering the stress that the students might be encountering during this time of pandemic and as the effect of the new educational set-up, lessening the workload of students using the IAPA could also contribute to lessening their stress. It would be a good opportunity to maximize the use of the IAPA in assessing learning despite the restrictions accompanied by the new educational set-up.



Weaknesses of the IAPA's Implementation Before and During the COVID-19

The role of school leaders is vital in the use of interdisciplinary approach in performance-based assessments, and even more needed in the time of the new normal in which instructional and assessment modalities may be used in face-to-face, distance learning, or blended learning as defined by DepEd Order 021 series of 2019 and DepEd Order No. 12 series of 2020. Based on the knowledge and experiences of the school leaders and teachers, they identified the weaknesses of the Interdisciplinary Approach in Performance-based Assessment (IAPA) in the Senior High School (SHS) during the interviews.

Table 10 presents the summary of the weaknesses of the IAPA's implementation before and during the COVID-19 and the sample responses of the participants. As shown in the table, the three themes with the greatest number of responses are: 1) technical difficulties or limitations; 2) difficulty in communication and collaboration; 3) IAPA not being strictly implemented, in which technical difficulties or limitations are being observed during the COVID-19 while the other two weaknesses are being observed in both before and during the COVID-19.

Table 10

Weaknesses of the IAPA's Implementation

Weaknesses	Applicable Before / During COVID-19 / BOTH	Number of Responses for the Identified Theme	Sample Responses
IAPA implementation is more intensified before COVID-19	During COVID-19	4	• IAPA implementation was more intensified before because we can easily have our activity with the students (BA1). • In online set-up, we are only relying on the available schedule of the students considering that they still must answer their modules (BA3).
Technical difficulties/ limitations	During COVID-19	22	• The first challenge during this time of COVID-19 is communication since students and teachers are just communicating only through online (BB5).



			The students are mentioning that they are too burdened in most of their subjects due to the performance tasks that require video presentations. (BB15).
Students are out of focus	During COVID-19	5	- The students are out of focus in their tasks (BC1). - During this COVID-19, the focus of the students is divided into many factors such as their family, module, school, and others (BC2).
One-time big-time task	Both	6	- It (IAPA) is a one-time big-time task since one output will cover two or more subjects. Yes, it lessens the workload of the students but if the output of the students is not that good, automatic it will greatly affect their grades (BD1). - Creating rubrics suitable for IAPA and that will measure the attainment of the objectives is the most challenging one (BD1).
Teacher's hesitance and resistance to change	Both	5	- Teachers are hesitant to do the IAPA (BE2). - Teachers are afraid to change what they are already doing (BE3).
Difficulty in communication and collaboration	Both	10	- Before the COVID-19 period, it is much way easier to collaborate with other teachers to find out what their target performance standards are and because of that we could seek ways on how to possibly merge with the PT (Performance Task) output (BF3). - How we find a common time to discuss the IAPA among ourselves since most of the time, we can only accommodate discussions after classes. But, since teachers have their own tasks, obligation, and at the same time it is beyond the work hours, it is hard for us to find a common schedule to talk about the articulation of performance tasks. Though, we really try to find time (BF7).
Difficulty in integrating subjects/ topics	Both	6	- There are subjects that are difficult to integrate with (BG1). - It would really be difficult to implement it since there is a huge gap between lessons among the different subjects that affects the performance task integration (BG2).
Designing a good IAPA	Both	6	- Thinking about the specific performance task (during the collaboration) is really a challenge. Like, how can it be applied in mathematics, computer, and science considering these subjects have different topics. For example, if we are talking about Astronomy and then in Mathematics, they have algebra, I think it is complicated. But then, the challenge comes in thinking of task, assessment, and rubrics that will cater the standard learning competencies of both subjects involved (BH3). - As a teacher, you might be worried that some students of yours are not focusing on your subject anymore. There is a possibility that the students will focus more on the other subject that has more technicalities than your subject. Hence, one subject or two subjects might be compromised (BH6).
Not strictly implemented	Both	7	- The implementation of IAPA is not strict, so what happens is that the subject teachers work on their own without considering the IAPA (BI3). - For the teachers, as far as I know, none. But I think for the administrators, they have the guidelines. They are just giving us instructions on what to do during the meeting (PV).

IAPA implementation is more intensified before COVID-19. Since many preparations are being observed in line with the distance learning set-up, some schools are still preparing for the



IAPA implementation this school year leading to the observation that its implementation is more intensified before the COVID-19 than today. Also, there is no specific schedule to implement the IAPA yet since some teachers are only relying on the available schedule of the students considering that most schools in the country are maximizing the use of module in distance learning set-up. Notice the sample statements that led to the identified weaknesses in Table 10, and they are as follows:

- *IAPA implementation was more intensified before because we can easily have our activity with the students (BA1).*
- *In online set-up, we are only relying on the available schedule of the students considering that they still must answer their modules (BA3).*

These can be supported by Kamalludeen (2020) who identified the changes and considerations as the educational sector faces the new normal which are: (1) shift of learning space from public space to personal space, (2) shift of delivery methods from one size fits all to individualized and differentiated learning, (3) shift of responsibility in the teaching and learning process, and (4) shift in learning assessments. Since all schools are still adjusting to the new learning set-up, proper scheduling of the IAPA implementation has not been considered yet due to the bulk of tasks and responsibilities that they are attending to in relation to the shift in the educational set-up.

Technical difficulties/ limitations. Students, teachers, and school leaders are encountering technical difficulties during the online learning set-up. Most of them are only using mobile data connection that oftentimes have poor signal at home making it hard for them to communicate and collaborate during the distance learning set-up. This problem is also associated to a longer time



allotted for the IAPA meetings during the said set-up among teachers and school leaders who are utilizing it under the new normal. Notice the sample statements that led to the identified weaknesses in Table 10, and they are as follows:

- *The first challenge during this time of COVID-19 is communication since students and teachers are just communicating only through online (BB5).*
- *The students are mentioning that they are too burdened in most of their subjects due to the performance tasks that require video presentations. (BB15).*

The use of technology integration during this time of pandemic greatly helps in ensuring that education will still be delivered even if students are learning from home and that work-from-home set-up is being followed by most of the teachers and school leaders. However, online learning platform's limitations affect the efficiency of meetings for the IAPA planning and implementation. Moreover, technical difficulties are associated with limited means in verifying if the students are the ones performing their tasks. This resulted to the scenario that most of the time, students were asked to make video presentations as their performance task outputs. This allows teachers to verify if the students are the ones who really perform the tasks making it hard and boring on the part of the students. These can still be associated with what Kamalludeen (2020) identified in terms of the changes and considerations as the educational sector face the new normal, specifically, the shift of responsibility in the teaching and learning process, and the shift in learning assessments.

Students are out of focus. Based on the responses of the participants, since students are just staying at home, students tend to lack focus or to be out of focus in their tasks due to different factors affecting their attention during this time of health pandemic. Also, another factor is that



students are working according to self-paced or self-directed learning which is far different from what they are used to observe during the face-to-face set-up. Notice the sample statements that led to the identified weaknesses in Table 10, and they are as follows:

- *The students are out of focus in their tasks (BC1).*
- *During this COVID-19, the focus of the students is divided into many factors such as their family, module, school, and others (BC2).*

These conformed to Fermin (2020) who identified that shorter attention span is highly noticeable in online classes because students are more vulnerable to distractions since they can always multitask even, they are having their actual classes.

One-time big-time task. The possibility that students might fail or get low grades in many subjects if their IAPA output is not well accomplished. Notice the sample statements that led to the identified weaknesses in Table 10, and they are as follows:

- *It (IAPA) is a one-time big-time task since one output will cover two or more subjects. Yes, it lessens the workload of the students but if the output of the students is not that good, automatic it will greatly affect their grades (BD1).*
- *Creating rubrics suitable for IAPA and that will measure the attainment of the objectives is the most challenging one (BD1).*

These are also considerations in the use of the IAPA due to the weight of one performance task that involves two or more subjects. Teachers and school leaders should ensure that each subject matter creates and uses their own efficiently designed good and objective rubrics to be used in evaluating the IAPA outputs of the students for valid and consistent grading. These conformed to



Phelan and Phelan (2010) who presented that interdisciplinary approach has allowed the assessment of learning based on specific predetermined criteria and to DepEd Order No. 31 series of 2020 which states that in evaluating student learning, summative assessments shall be in the form of written works and performance tasks, and in the use of performance tasks, each must be accompanied with clear directions and appropriate scoring tools or rubrics to help learners demonstrate their learning.

Teacher's hesitance and resistance to change. Some teachers are hesitant to adopt the IAPA since they are not fully aware of its advantages which led them to resist change in their means of assessment. Notice the sample statements that led to the identified weaknesses in Table 10, and they are as follows:

- *Teachers are hesitant to do the IAPA (BE2).*
- *Teachers are afraid to change what they are already doing (BE3).*

When employees are poorly introduced to changes that affect how they work and they do not see the importance of adjusting what they used to do, and are not part of decision-making process, they greatly tend to be resistant (Heathfield, 2021). Hence, school leaders are expected to establish a culture of trust, transparent communication, employee involvement and engagement, and positive interpersonal relationships to lessen the occurrence of resistance to change (Heathfield, 2021). In doing these, school leaders must see to it that the benefits and importance of the IAPA are presented to teachers and even to students. Also, school leaders should take consideration on how they motivate and lead teachers to encourage active involvement and participation. These could be further supported by the four elements of transformational leaders of Riggio (2014)



stating that leaders: (1) establish trust and confidence in other members of the organization; (2) clearly present and explain the changes that the organization will undergo; (3) attend to the concerns and needs of each member of the organization; and (4) act as mentors and coaches. All these roles of leaders are in connection with the five domains of DepEd Order No. 024 series of 2020 (PPSSH) stating that leaders should observe and maintain: (1) empowering and leading people by addressing their needs; (2) assisting teachers in the review, contextualization, and implementation of learning standards to make curriculum relevant to the learners; and (3) providing technical assistance on instruction to create a learner-centered environment. School heads play a crucial role in ensuring an enabling and supportive environment for effective teaching and learning to happen. Their role is important especially in the implementation and achievement of a learner-centered curriculum. Since teachers alone cannot do and attain such significant changes without effective leadership especially in the new normal in which changes in the teaching methods and approaches, learning assessments, and learning set-ups have been implemented.

Difficulty in communication and collaboration. The difficulty in communication and collaboration among teachers is due to the busy schedule and to no specific schedule allotted for meetings and planning with partner subject teachers during official school hours, making it hard for them to plan and polish the IAPA. Also, the new learning set-up difficulties limit them to meet their possible partner teachers for the IAPA. Notice the sample statements that lead to the identified weaknesses in Table 10, and they are as follows:

- *Before the COVID-19 period, it is much way easier to collaborate with other teachers to find out what their target performance standards are and because of*



that we could seek ways on how to possibly merge with the PT (Performance Task) output (BF3).

- *How we find a common time to discuss the IAPA among ourselves since most of the time, we can only accommodate discussions after classes. But, since teachers have their own tasks, obligation, and at the same time it is beyond the work hours, it is hard for us to find a common schedule to talk about the articulation of performance tasks. Though, we really try to find time (BF7).*

Sahin and Ozturk (2018) found in their study that in the use of performance task, lack of communication is the common problem. Even in interdisciplinary approach which is being considered in this study together with the use of performance-based assessments, almost the same problem has been identified. Al Salami et al. (2015) revealed in their study that school leaders should provide opportunities for the enhancement of teachers' collaboration and should work closely with the teachers to identify and address their concerns and needs. Further, the study also revealed that teachers are expected to collaborate and discuss with their colleagues to integrate disciplines effectively. However, there is no specific common schedule for teachers to meet with their partners to plan or to polish the IAPA.

Difficulty in integrating subjects/ topics. Difficulty in integrating subjects or topics as one of the challenges identified in the use of the IAPA in this study is comparable to what Margot and Kettler (2019) found in their studies that a great challenge for teachers and school leaders in STEM subjects is the process of designing learning activities that integrate two or more subjects in a meaningful and relevant way. Moreover, the study of McPhail (2016) revealed that the identification of fundamental concepts is one of the two major challenges in the implementation



of interdisciplinary curriculum. The participants of this study, particularly the teachers, claimed that some topics from different disciplines are not possible for the IAPA making it hard for them to implement this. Notice the sample statements that led to the identified weaknesses in Table 10, and they are as follows:

- *There are subjects that are difficult to integrate with (BG1).*
- *It would really be difficult to implement it since there is a huge gap between lessons among the different subjects that affects the performance task integration (BG2).*

Hallstrom and Schonborn (2019) found that integrating STEM subjects remains an intricate challenge that demands for innovative experts and means of the school leaders and teachers. In addition, Klaassen (2018) revealed that (1) the choice of a problem or theme, (2) the level of interaction between different disciplines, and (3) the alignment must be the considerations in an interdisciplinary learning which highly demand for the role of the school leaders in curriculum planning and implementation. Hence, the presence and guidance of school leaders as teachers plan and do the IAPA is highly needed and must be observed so that they will be guided well in utilizing it and have more ideas and suggestions as they identify the possible integration.

Designing a good IAPA. Designing a good IAPA without compromising the standard learning competencies of each subject matter involved and the tendency of the students to focus on one subject are deduced from the interview responses of teachers and school leaders. Notice the sample statements that led to the identified weaknesses in Table 10, and they are as follows:

- *Thinking about the specific performance task (during the collaboration) is really a challenge. Like, how can it be applied in mathematics, computer, and science*



considering these subjects have different topics. For example, if we are talking about Astronomy and then in Mathematics, they have algebra, I think it is complicated. But then, the challenge comes in thinking of task, assessment, and rubrics that will cater the standard learning competencies of both subjects involved (BH3).

- *As a teacher, you might be worried that some students of yours are not focusing on your subject anymore. There is a possibility that the students will focus more on the other subject that has more technicalities than your subject. Hence, one subject or two subjects might be compromised (BH6).*

Lam et al. (2014) presented two processes to consider in the use of interdisciplinary integration: (1) the integration of two or more disciplinary elements, such as knowledge, skills, and attitudes, and (2) the generation of new elements because of the integration. These two processes are good considerations to avoid compromising the subjects involved. Also, the use of rubrics intended per subject matter will also help in ensuring that equal weights and attention will be given to each subject matter involved in an IAPA. These are aligned with DepEd Order No. 31 series of 2020 which stated that teachers are advised to collaboratively design and implement performance tasks that integrate two or more competencies within or across subject areas, and in evaluating student learning using performance tasks, each must be accompanied with clear directions and appropriate scoring tools or rubrics to help learners demonstrate their learning. Further, another consideration that needs to be addressed related to designing a good IAPA is the tendency of the teachers not to identify the level of difficulty in designing performance tasks. IAPA must be authentic and must be in the Philippine context so that students can easily relate to it. These conformed to what



Villarroel et al. (2017) have stated that authentic tasks: (1) involve the association of academic contents with everyday life and work; (2) allow for the application of academic contents in an analytical and thoughtful way; and (3) lead to the use of academic contents to solve and meet real-life problems. Hence, these should be considered as teachers and school leaders work together in designing a good IAPA.

Not strictly implemented. Based on the responses of the teachers and school leaders, it is identified that IAPA is being used before and during the COVID-19, but not strictly implemented. Notice the sample statements that led to the identified weaknesses in Table 10, and they are as follows:

- *The implementation of IAPA is not strict, so what happens is that the subject teachers work on their own without considering the IAPA (BI3).*
- *For the teachers, as far as I know, none. But I think for the administrators, they have the guidelines. They are just giving us instructions on what to do during the meeting (PV).*

Some of the respondents found it challenging to implement the IAPA in both face-to-face and online learning set-ups. Factors related to guidelines, monitoring, and scheduling were identified from the interview responses especially during the new normal education setting. There are more pressing matters that teachers and school leaders must accomplish to cater to the new educational set-up during this time of health pandemic resulting for the other schools not to immediately utilize the IAPA. However, teachers are encouraged to use it to help students lessen their workload. Considering that teachers and school leaders are still adapting to the changes accompanied by the



new normal and are still in the progress of implementing the distance learning modality, the implementation of the IAPA is yet to be strictly implemented. School leaders and teachers are still preparing to incorporate and utilize it in the new normal. School leaders play a crucial role in ensuring an enabling and supportive environment for effective teaching and learning especially during the new normal in which abrupt changes have been observed and greatly impact the educational system especially in giving quality education despite the uncertainty brought by the health crisis. The role of school leaders in the implementation and achievement of a learner-centered curriculum, and in the fulfillment of such significant changes can be associated with DepEd Order No. 021 series of 2019 which stated that school heads are responsible in the management and direct implementation of a curriculum, and with DepEd Order No. 024 series of 2020 (PPSSH) which that school leaders are expected to: (1) set direction, goals, and objectives; and (2) empower and lead people. Furthermore, the role of supervisors in creating an enabling and supportive environment for effective learning, especially in public schools, is important in addressing the identified weakness: *not strictly implemented*, since they are expected to support curriculum management and implementation, strengthen shared accountability, foster a culture of continuous improvement, and develop self and others as stated by DepEd Order No. 025 series of 2020 or the Philippine Professional Standards for Supervisors (PPSS).



Research Question 3: How could the implementation of the IAPA be improved to make it more effective and relevant in the time of the “new normal” covering both the face-to-face and the online learning modalities?

Suggestions in Improving the IAPA Implementation in Both Face-to-Face and Online Learning Set-up

The use of distance and/or blended learning in delivering quality education really involves a lot of adjustments and preparations of most public and private schools in the Philippines since it is new to them. However, this adjustment period could be a room for better learning opportunities for the students since the adoption of blended learning even after the health pandemic is now being considered by the educational sector to meet the global demands for technology integration in giving quality education (P & A Grant Thornton, 2020). Based on the knowledge and experiences of the school leaders and teachers, several suggestions on how to improve the implementation of IAPA in the Senior High School (SHS) have been provided.

Table 11 presents the summary of the said suggestions in improving the IAPA’s implementation in the new normal covering both the face-to-face and the online learning modalities. As shown in the table, the themes with the greatest number of responses are (1) including the IAPA planning, meetings, and actual implementation in the academic calendar, (2) providing series of trainings and seminars on IAPA, module making and designing assessments, (3) assigning a person who will monitor the implementation of the IAPA, (4) observing benchmarking and collaborating with different stakeholders, and (5) providing a clear guideline on the use of the IAPA.



Table 11

Suggestions in Improving the IAPA's Implementation

Suggestions in Improving the IAPA Implementation	Applicable to Face-to-Face/ Online Learning Set-up/ Both	Number of Responses for the Identified Theme	Sample Responses
Provide series of trainings and seminars on IAPA, module making and designing assessments	Both	14	- Do not rush the conduct of trainings. Most of the time during the training period, discussion is observed in the morning, and presentation of outputs is observed in the afternoon leading to a half-baked output and learning. The administration really needs to think on how to maximize the trainings in a sense that teachers will use and implement them during the school year (CA2). - Primarily, designing assessments skills must be strengthened to ensure that the interdisciplinary tasks given to students are relevant and appropriate (CA11).
Present the benefits and importance of the IAPA to students and teachers	Both	3	- Make the teachers realize the importance of IAPA because of course if the teachers will not realize its importance, then they will not do it. Even if you tell them that IAPA is good and beneficial, they will still not do it. Why will they do it if they already have existing activities given to their students? Why do they need to transfer from one strategy to another? So, teachers really need to realize its importance for them to do it (CB1). - Explain that the concept of the IAPA is to help the students build their ability and transfer their learning into a new setting or in a real-life situation (CB3).
Assign a person who will monitor the implementation of the IAPA.	Both	8	- The presence of strict monitoring is important. If you will not monitor it, then teachers will not do it (CC1). - Proper channeling of communications, I think, must really be a suggestion. It is really a must. So, students, school leaders, and teachers will be enamored with the objectives and the procedure proper of the assessment (CC2).
Include IAPA planning, meetings, and actual implementation in the academic calendar	Both	15	- I would recommend planning this ahead of time so that we can really plot. For example, plot in during summer so that we can see what are the possible performance tasks that we can work on (CD4). - Manage time – have a proper scheduling. If you are using the IAPA, you must find time for the teachers to be available at the same time so that they will not do it after the class time (CD11).
Contextualize and consider the level of difficulty when designing the IAPA	Both	5	- Context. We are in the Philippines, contextualize the assessment with that of student's environment. Most of the time, we, teachers get or develop our assessments from the internet, from the US, or from the other resources, and we usually forget to contextualize them (CE1). - Level the task to the availability of the resources and if it is achievable (CE2).
Observe benchmarking and collaborate with different stakeholders	Both	8	- For the teachers, they must be given or supported by many references, benchmarking, so that they can get another idea on how to maximize and improve the use of the IAPA (CF1). - The teachers can observe the other teachers or the middle administrators to get new ideas as part of the mentoring program (CF3).
Provide a clear guideline on the use of the IAPA	Both	8	Right now, IAPA is not totally structured yet. It is not a concrete school program yet, but we are doing it already. Unfortunately, we are not yet



			<i>provided with specific flow, procedure nor process on how to do it or to smoothly implement it (CG2).</i> • <i>It is good not only in our school but also in other schools to: (1) have a structured program; (2) follow a smooth and effective implementation of IAPA; and (3) ensure the quality of instruction and performance-based assessments that are given to the students (CG4).</i>
Consider school leader's motivation to teachers	Both	5	• <i>The best thing is to have a leader who will motivate the teachers in the implementation of the IAPA (CH1).</i> • <i>The manner the leader monitors the teacher is also an important factor in the IAPA implementation. The leader must show motivation and energy to also encourage the teachers to do the same (CH2).</i>
Document and evaluate the use and outputs of the IAPA	Both	4	• <i>Schools should consider the outcomes that they produced from the previous academic years by having a portfolio in which teachers can use as a reference in identifying what output to improve or to retain (CI1).</i> • <i>Compilation of outputs and instructions should be considered so that teachers can use them as their references (CI2).</i>
Use of rubrics intended per subject matter	Both	3	• <i>Interdisciplinary approach is good, and one advantage is that you are basically lessening the workload of students because in one single output everything is there. But one thing that everybody must be careful with in using it, is that all the performance standards must be properly assessed, and the use of proper scoring rubric must be observed. Rubrics should be properly designed to assess the specific performance standard, that the Department of Education has in the curriculum guide (CJ1).</i> • <i>Creating rubrics suitable for IAPA and that will measure the attainment of the objectives, are the most challenging one (CJ2).</i>

Provide series of trainings and seminars on IAPA, module making and designing assessments. The responses of the teachers and school leaders led to the idea of providing series of trainings and seminars on the use and importance of the IAPA to encourage them to utilize it and be more knowledgeable on it. Notice the sample statements that led to the identified suggestions in Table 11, and they are as follows:

- *Do not rush the conduct of trainings. Most of the time during the training period, discussion is observed in the morning, and presentation of outputs is observed in the afternoon leading to a half-baked output and learning. The administration really needs to think on how to maximize the trainings in a sense that teachers will use and implement them during the school year (CA2).*



- *Primarily, designing assessments skills must be strengthened to ensure that the interdisciplinary tasks given to students are relevant and appropriate (CA11).*

These suggestions of the teachers and school leaders can be further supported by the data gathered from their demographics particularly in terms of attending an interdisciplinary approach related seminar or workshop in which only 20% of the participants observed it for 1 to 4 months ago, 6.7% for 5 to 8 months, 20% for 9 to 12 months, 10% for 2 years ago, 16.7% for 3 or more years ago, and 26.7% for never. Also, giving of reasonable and realistic time to master the use and the implementation of the IAPA is identified from the participants' responses. These can be supported by what Anig-ig (2018) suggested for the teachers and all other professionals to grow continuously, which are: (1) learning from the best practices of other teachers; (2) learning through reading; (3) learning through membership in professional associations; (4) learning while travelling; (5) learning through information research; and (6) learning through regular faculty development programs. Since distance learning is now observed by many schools and adopting it even after the COVID-19 period is a possibility, teachers and school leaders are considering it as one of the suggestions in the use of the IAPA even in face-to-face or online learning set-up to ensure that the interdisciplinary tasks to be given to the students are relevant and appropriate. Warren (2016) stated that professional development in the form of meetings and discussions, allows teachers to work together to discuss and plan a common goal. In public schools, they have this Learning Action Cell (LAC) as a form of professional development for teachers to share new updates in teaching as well as their best practices. This also allows teachers and school leaders to observe regular meetings and professional development engagement. On the other hand, private schools, observe professional sharing as part of their official monthly meetings. DepEd Order No.



024 series of 2020 discussed the domain, *Developing Self and Others*, as one of the standards that guide the school leaders in managing and leading the improvement in learning outcomes and teacher quality. This domain supports the role of school leaders in implementing the IAPA by implementing professional development initiatives to enhance strengths and address performance gaps among teachers, and by recognizing and motivating the performance of teachers. Also, DepEd Order No. 025 series of 2020 or the Philippine Professional Standards for Supervisors (PPSS) stated that supervisors are expected to commit to ensuring people and team effectiveness by promoting and providing learning opportunities through professional reflections and recognition to improve and value practices. Moreover, DepEd Order No. 41 series of 2017 or the Philippine Professional Standards for Teachers (PPST) states that teachers are expected to be fully involved in community linkages and professional development which also supports the identified suggestion, *provide series of trainings and seminars on IAPA, module making and designing assessments*.

Present the benefits and importance of the IAPA to students and teachers. Make the teachers realize the importance of the IAPA so that they will be more encouraged in utilizing it. If the teachers do not fully grasp the benefits of the IAPA, then they will be less motivated to maximize it. If they cannot see its advantage over the approach that they are already using for many years, such as giving performance tasks without integrating with other subjects, then definitely they will not adopt it. One of the suggestions identified in the use of the IAPA is to present its rationale, benefits, and importance to both students and teachers to increase their awareness on its advantages and to encourage teachers in using it. Notice the sample statements that led to the identified suggestions in Table 11, and they are as follows:



- *Make the teachers realize the importance of IAPA because of course if the teachers will not realize its importance, then they will not do it. Even if you tell them that IAPA is good and beneficial, they will still not do it. Why will they do it if they already have existing activities given to their students? Why do they need to transfer from one strategy to another? So, teachers really need to realize its importance for them to do it (CB1).*
- *Explain that the concept of the IAPA is to help the students build their ability and transfer their learning into a new setting or in a real-life situation (CB3).*

These corresponded to what Pavaloiu et al. (2015) have stated, that interdisciplinary approach helps learners to integrate concepts to various disciplines to advance students' capacity to understand issues, propose solutions, and solve problems. Hence, by *presenting the benefits and importance of the IAPA to students and teachers*, they would be more encouraged to utilize it and to strictly implement it in promoting students' mastery of learning through integrated works.

Assign a person who will monitor the implementation of the IAPA. Assigning a person who will monitor the use of the IAPA to ensure strict and proper implementation should be considered in attaining the success of its implementation. Notice the sample statements that led to the identified suggestions in Table 11, and they are as follows:

- *The presence of strict monitoring is important. If you will not monitor it, then teachers will not do it (CC1).*



- *Proper channeling of communications, I think, must really be a suggestion. It is really a must. So that student, school leaders, and teachers will be enamored with the objectives and the procedure proper of the assessment (CC2).*

Through assigning a person who will monitor the implementation of the IAPA, proper channeling of communication, proper coordination of concerns, and consistent implementation of the IAPA will be guaranteed. These conformed to what Holmbukt (2018) presented saying that teachers look for the guidance and support of their school leaders as they implement an interdisciplinary program. Pountneya and McPhail (2017) revealed in their study that interdisciplinary curriculum practices in UK and New Zealand secondary schools are effective due to the emphasis on the management of the curriculum, and Gantogtokh and Quinlan (2017) revealed that organizational support from the school leaders highly contributes to the success of interdisciplinary curriculum implementation. Hence, school leaders' presence and guidance in the use and in the implementation of the IAPA are highly needed in its success. These can be associated with the individualized consideration of Riggio (2014) saying that leaders discuss and attend to the concerns and needs of each member of the organization, act as mentors and coaches, empower them, and promote continuing personal and professional development among employees. Likewise, DepEd Order No. 024 series of 2020 or PPSSH, states that school leaders are expected to: (1) empower and lead people; (2) address the needs of learners, school personnel, and other stakeholders; and (3) address the performance gaps among teachers. In line with these, Dayson (2016) revealed that strategies such as rounds in school corridors, getting students' feedback, and developing coordination with teachers are being used by the school heads to monitor and evaluate the teaching-learning processes, thus these can be considered by the school leaders who are



implementing and monitoring the IAPA in their respective schools. The mentioned strategies can also be applied even in online learning set-up or distance learning set-up, in which instead of having rounds in school corridors, school leaders can also join or visit their official learning management system or online learning platform to monitor the use of the IAPA and to get feedback on its use.

Include IAPA planning, meetings, and actual implementation in the academic calendar.

Allocating enough time for planning and preparation especially before the start of the school year or semester is important in line with the IAPA implementation. This can help teachers to properly plan the possible integration and to design a good IAPA. Also, it can help them in designing a good and well-comprehensive module and learning materials for distance learning or blended learning in which possible IAPA can already be included. Notice the sample statements that led to the identified suggestions in Table 11, and they are as follows:

- *I would recommend planning this ahead of time so that we can really plot. For example, plot in during summer so that we can see what are the possible performance tasks that we can work on (CD4).*
- *Manage time – have a proper scheduling. If you are using the IAPA, you must find time for the teachers to be available at the same time so that they will not do it after the class time (CD11).*

These conformed to the functions of school leaders as presented in DepEd Order No. 024 series of 2020 or PPSSH, stating that school leaders should observe setting of goals and objectives, planning, implementing, reviewing, monitoring, and evaluating the processes and tools being used



in the implementation of a school or curriculum program. Planning is significantly needed and requires intense and concrete processes involving blended learning preparations (Tucker et al., 2016). Hence, to allocate enough time for planning and preparation, including the IAPA planning, meetings, and actual implementation in the academic calendar can help in ensuring a realistic and well-organized schedule. These can also give teachers time to meet their partner teachers to plan and polish the IAPA during the official scheduled meeting. The use of interdisciplinary approach requires careful planning to ensure its effectiveness.

Contextualize and consider the level of difficulty when designing the IAPA. Teachers should always contextualize and consider the level of difficulty when designing the IAPA to ensure its appropriateness and authenticity. Contextualizing the IAPA can also help teachers consider the availability of resources that students may have in both face-to-face and distance learning set-up. Notice the sample statements that led to the identified suggestions in Table 11, and they are as follows:

- *Context. We are in the Philippines, contextualize the assessment with that of student's environment. Most of the time, we, teachers get or develop our assessments from the internet, from the US, or from the other resources, and we usually forget to contextualize them (CE1).*
- *Level the task to the availability of the resources and if it is achievable (CE2).*

According to Koh (2017), authentic assessment is an effective measure of learning as it allows students to demonstrate understanding through the production of exemplary tasks. Further, authentic tasks that are contextualized allow for the application of academic contents in an



analytical and thoughtful way (Villarroel et al., 2017). Hence, teachers should always make sure that they are also considering the difficulty of performance tasks being given to the students aside from ensuring that what they give to the students will meet the learning competency and will allow students to apply their learning in real-life situations.

Observe benchmarking and collaborate with different stakeholders. The responses of teachers and school leaders suggested that IAPA should be included as part of school's official program for teacher's development and should include observing more benchmarking to improve its use. Notice the sample statements that led to the identified suggestions in Table 11, and they are as follows:

- *For the teachers, they must be given or supported by many references, benchmarking. So that they can get another idea on how to maximize and improve the use of the IAPA (CF1).*
- *The teachers can observe the other teachers or the middle administrators to get new ideas as part of the mentoring program (CF3).*

These can be supported by the suggestions of Anig-ig (2018) in ensuring the continuous professional growth among teachers, such as learning through regular faculty development programs. In addition, DepEd Order No. 024 series of 2020 or PPSSH, states that in the improvement of learning outcomes and teacher quality, school leaders are expected to observe: (1) developing self and others by implementing professional development initiatives to enhance strengths and address performance gaps among teachers; and (2) building connections by initiating partnership with the community and stakeholders to strengthen the school or curriculum



improvement. Through these, teachers will be updated with the trends in teaching, specifically in the use of the IAPA. Mentoring program and providing references can also be considered to guide teachers in utilizing the IAPA. Benchmarking can also be used to learn more and to discover possible and applicable methods or practices that could be adopted by the school. Also, teachers and school leaders should collaborate with different stakeholders to strengthen the use of the IAPA. Stakeholders such as parents can also help in recommending IAPA experts who can serve as resource speakers during the trainings and seminars related to IAPA. Further, collaborating with parents can help in the success of the IAPA implementation since they can help teachers in monitoring their children's performances.

Provide a clear guideline on the use of the IAPA. The schools that participated in this study were already doing the IAPA even before the COVID-19. However, most of them do not have concrete guidelines yet or even policies on how to implement it. Most of the teachers in the participating schools are just relying on the instructions on what to do in line with the use of IAPA during their meetings. Notice the sample statements that led to the identified suggestions in Table 11, and they are as follows:

- *Right now, IAPA is not totally structured yet. It is not a concrete school program yet, but we are doing it already. Unfortunately, we are not yet provided with specific flow, procedure nor process on how to do it or to smoothly implement it (CG2).*
- *It is good not only in our school but also in other schools to: (1) have a structured program; (2) follow a smooth and effective implementation of IAPA; and (3) ensure*



the quality of instruction and performance-based assessments that are given to the students (CG4).

Holmbukt (2018) revealed that the absence of a clear policy on integrated curricula that also includes the policy on the assessment of learning, affects the effectiveness of the program. Planning and developing a policy as one of the functions of school leaders is important in the success of a school or curriculum program which can be supported by DepEd Order No. 024 series of 2020 or PPSSH, stating that school leaders should observe policy planning, implementation, review, monitoring, and evaluation of the school or curriculum program. Hence, considering the IAPA as an academic program will help in establishing concrete procedures, guidelines, and/or policies on its use and implementation. The guidelines should also be distributed to the teachers so that they will be guided in using and implementing it. DepEd Order No. 025 series of 2020 or PPSS states that supervisors are expected to aid with effective management and implementation of curricular reforms, learning resources, and assessment of learning outcomes. In line with this, supervisors could help or initiate the development of guidelines, procedure, and/or policies in the use of the IAPA to help in the attainment of its success. These conformed to DepEd Order no. 8 series of 2015 stating that since assessment is a vital part of curriculum or program implementation, policies on assessment will permit the educators to monitor and measure the progress of each student. Lotich (2020) stated that having a policy for a specific school or curriculum program, allows for a clear and consistent implementation. Therefore, by *providing a clear guideline on the use of the IAPA*, most of the problems encountered in the use of the IAPA could be addressed since students, teachers, and school leaders will be well-guided.



Consider school leader's motivation to teachers. IAPA implementation will not be successful if school leaders' presence and guidance is not visible to the teachers. Notice the sample statements that led to the identified suggestions in Table 11, and they are as follows:

- *The best thing is to have a leader who will motivate the teachers in the implementation of the IAPA (CH1).*
- *The manner the leader monitors the teacher is also an important factor in the IAPA implementation. The leader must show motivation and energy to also encourage the teachers to do the same (CH2).*

These are in accordance with the study of Holmbukt (2018) which acknowledged that teachers are looking for the guidance and support of their school leaders as they implement an interdisciplinary program. In line with this, Mason (2019) shared that in the success of IAPA's implementation, interdisciplinary curriculum planning should be observed and collaboration with administrators and other teachers should be considered. In addition, Mohapi et al. (2014) claimed that knowledgeable principals are needed to effectively manage curriculum changes and are expected to motivate teachers to be productive. Since successful leadership prioritizes motivating and developing people and considers establishing and maintaining systems and structures as second priority (Bush et al., 2019). Also, DepEd Order No. 024 series of 2020 or PPSSH states that as school leaders work in the improvement of learning outcomes and teacher quality, they should also empower and lead people by addressing their needs. Furthermore, supervisors could help in addressing the identified suggestion: *consider school leader's motivation to teachers*, since supervisors are expected provide harmonized needs-based support division personnel, school heads, and other field implementers to inform forward planning and decision-making as stated in



DepEd Order No. 025 series of 2020 or PPSS. Hence, in line with the implementation of the IAPA, school leaders should consider encouraging and empowering teachers to maximize its use not only to their advantage but to students' advantage.

Document and evaluate the use and outputs of the IAPA. Documenting the outputs of the IAPA and evaluating its use can help in improving its implementation. This can also serve as references for teachers as they design and improve their IAPA. Notice the sample statements that led to the identified suggestions in Table 11, and they are as follows:

- *Schools should consider the outcomes that they produced from the previous academic years by having a portfolio in which teachers can use as a reference in identifying what output to improve or to retain (CI1).*
- *Compilation of outputs and instructions should be considered so that teachers can use them as their references (CI2).*

Mason (2019) identified that documenting the processes and outputs of the IAPA to be used for future references contributes to the success of its implementation. This can be associated with one of the functions of leaders as they manage and lead the improvement of learning outcomes and teacher quality as discussed in *Leading Strategically* domain under DepEd Order No. 024 series of 2020 or PPSSH. According to PPSSH, school leaders should observe the monitoring and evaluation of the processes and tools being used in the implementation of a school or curriculum program to ensure its success. Using a portfolio as part of the IAPA implementation is being considered in this study since it could help the teachers and school leaders to improve the IAPA's use and implementation through the outputs, reflections, and evaluation that it may contain. This



is also aligned with DepEd Order No. 31 series of 2020, stating that learning portfolio should be considered in the collection and recording of evidence of learning, since it includes self-reflections, self-evaluations of performance tasks, and self-selected best outputs from their learning modules. Portfolio is an approach to assess learning and is considered as a performance-based in which it allows for multiple learning evidence that cover both the actual processes and product of learning (Balagtas, 2020). Since the identified suggestion covers both face-to-face and distance learning, digital portfolios could also be used by both public and private participating schools in blended learning set-up. Balagtas and Ubina (2018) suggested that digital portfolios should be used for teachers' preparation and professional development since they serve as comprehensive means in documenting the learning processes and outcomes and can be used in integrating ICT skills and in assessing learning. Moreover, the use of portfolio is also a good means to properly document the evaluation of the IAPA's use and implementation. Barnes (2015) stated that developing a curriculum is a continuous process that involves learning, implementing, and evaluating to guide educators properly and to ensure quality education. Since IAPA is part of the curriculum being offered to the students, evaluation must strictly be observed to improve its implementation.

Use of rubrics intended per subject matter. Teachers should use and design rubrics intended for their subject matter whenever they are utilizing the IAPA to objectively grade students' outputs based on the subject matter's performance standards. Notice the sample statements that led to the identified suggestions in Table 11, and they are as follows:

- *Interdisciplinary approach is good, and one advantage is that you are basically lessening the workload of students because in one single output everything is there. But one thing that everybody must be careful with in using it, is that all the*



performance standards must be properly assessed, and the use of proper scoring rubric must be observed. Rubrics should be properly designed to assess the specific performance standard, that the Department of Education has in the curriculum guide (CJ1).

- *Creating rubrics suitable for IAPA and that will measure the attainment of the objectives, are the most challenging one (CJ2).*

Phelan and Phelan (2010) presented that interdisciplinary approach has allowed the assessment of learning based on specific predetermined criteria. Also, DepEd Order No. 31 series of 2020 stated that in evaluating student learning using performance tasks, each must be accompanied with clear directions and appropriate scoring tools or rubrics to help learners demonstrate their learning. Hence, in the use of the IAPA, the subjects involved should strictly observe creating their own rubrics to ensure objective grading and to avoid inconsistency.

Considering that teachers and school leaders are still adapting to the changes accompanied by the new normal and are still working the progress of the implementation of distance learning modality, the implementation of the IAPA is still not being strictly implemented yet. Drawing from the weaknesses and the suggestions of the IAPA's implementation as identified by the school leaders and teachers, Table 12 shows the summary of the identified weaknesses and the corresponding suggestions in improving its implementation in the new normal covering both the face-to-face and the online learning modalities. The suggestions could serve as guide for teachers and school leaders in implementing the IAPA in the time of the new normal.



Table 12

Summary of the Weaknesses and Suggestions in Improving the IAPA's Implementation in the New Normal

Weaknesses of the IAPA	Suggestions in Improving the IAPA's the Implementation	Face-to-Face Modality	Online Learning Modality
1. Difficulty in integrating subjects/ topics	• Trainings and Seminars. Provide series of trainings and seminars on the IAPA, designing assessments, and module making.	✓	✓
2. Designing a good IAPA	• Contextualize and Level the Difficulty. Contextualize and consider the level of difficulty when designing the IAPA. • Document and Evaluate. Document and evaluate the use and outputs of the IAPA for references.	✓ ✓	✓ ✓
3. IAPA as one-time big-time task	• Trainings and Seminars. Provide trainings and seminars on designing assessments. • Rubrics. Use rubrics intended per subject matter.	✓ ✓	✓ ✓
4. Difficulty in communication and collaboration	• Proper Schedule. Allocate enough time for planning and preparation. Include IAPA planning, meetings, and actual implementation in the academic calendar.	✓	✓
5. Teacher's hesitance and resistance to change	• IAPA's Benefits and Importance. Present the benefits and importance of the IAPA to students and teachers.	✓	✓
	• Motivation. Consider school leader's motivation to teachers.	✓	✓
	• Guidelines. Provide a clear guideline on the use of the IAPA.	✓	✓
	• Trainings and Seminars. Provide series of trainings and seminars on the IAPA, designing assessments, and module making. • Benchmarking. Observe benchmarking and collaborate with different stakeholders.	✓ ✓	✓ ✓
6. IAPA is not strictly implemented and IAPA implementation is more intensified before COVID-19	• Person-in-charge. Assign a person who will monitor the implementation of the IAPA. • Proper Schedule. Include IAPA planning, meetings, and actual implementation in the academic calendar.	✓ ✓	✓ ✓
7. Technical difficulties/ limitations and Students' lack of focus	• Guidelines. Provide a clear guideline on the use of the IAPA. • Series and Trainings. Provide series of trainings and seminars on the IAPA, designing assessments, and module making.	✓ ✓	✓ ✓

Teachers from both public and private schools are encountering difficulty in integrating subjects or topics in doing the IAPA especially those subjects with diverse learning competencies.



In line with this, school leaders of private and public schools could consider providing series of trainings and seminars on IAPA, designing assessments, and making modules to widen their understanding on its use and benefits. These will help them learn more strategies on designing assessments suitable for integrating content, skills, and values. Also, teachers could get new ideas on how to engage and get students' attention as they utilize the IAPA, especially during the online learning set-up. Through these, the management of procedures of the IAPA through (a) holding regular professional development for teachers and school leaders, and (b) managing of policies of the IAPA by maximizing the use of performance-based assessments would be strengthened too.

In designing a good IAPA, contextualizing and identifying the level of difficulty should be taken into consideration. IAPA must be authentic and contextualized so that students can easily relate to it. Also, the availability of resources that students may have in both face-to-face and distance learning set-up could be taken into consideration as teachers plan and design a good IAPA. The use rubrics intended per subject matter should also be considered so that equal weight and attention be observed by the students. This will lessen the tendency of the students to focus on one subject and the possibility of compromising the subjects involved. Moreover, documenting the IAPA processes and outputs using portfolio and evaluating it regularly could also help in designing a good IAPA, since teachers and school leaders may refer to it as they design their IAPA. Through these, (a) the management of guidelines of the IAPA by regular review and modification, and (b) the management of policies of the IAPA through maximizing the use of performance-based assessments would be strengthened too.

Creating and using intended rubrics per subject matter suitable for the IAPA should always be observed as teachers utilize it to ensure objective grading. The use of rubrics could also address



the perception of IAPA being a one-time big-time task. This will make students recognize that each subject involved in the IAPA is of equal weight and will give independent grade depending on how they meet the rubrics allotted per subject matter. Further, to encourage the use of individual rubrics per subject matter, trainings, and seminars on designing assessments could be considered to help teachers improve their skills more. Through these, (a) the management of procedures of the IAPA by holding regular professional development for teachers and school leaders, and (b) the management of policies of the IAPA by maximizing the use of performance-based assessments would be strengthened too.

Difficulty in communication and collaboration in the use of the IAPA could be addressed by including its planning, meetings, and actual implementation in the academic calendar. This would provide definite and enough time for teachers of different subject areas to meet and plan the IAPA. Also, teachers and school leaders can sit together during the scheduled meeting or planning that may result to a clear and definite integration. Allocating enough time for IAPA planning and preparation could give way in achieving a good and well-comprehensive learning materials and assessments suitable for face-to-face and online learning set-up. This proposed input could help in strengthening (a) the management of procedures of the IAPA by conducting scheduled regular meetings and planning that allow for the collaboration of teachers within the level, and (2) the management of procedures of the IAPA by plotting the intended assessments and performance standards of each subject area using a matrix as part of the planning processes.

Teacher's hesitance and resistance to change could be addressed by: (1) presenting the benefits and importance of the IAPA to students and teachers to make them realize the importance of the IAPA; (2) considering school leader's motivation to teachers through guiding and



empowering them to encourage active involvement and participation; (3) providing a clear guideline on the use of the IAPA so that both teachers and school leaders will be guided accordingly on how to utilize and implement the IAPA; (4) providing series of trainings and seminars on the IAPA, designing assessments, and module making; and (5) observing benchmarking and collaborating with different stakeholders so that teachers and school leaders will learn more on IAPA and will expand possible resources and connections. These proposed inputs could help in improving the IAPA's implementation in both face-to-face and online learning set-up and could help strengthening the management of procedures and guidelines of the IAPA.

To strictly implement the IAPA, school leaders could consider assigning a specific point person who will monitor the use and implementation of the IAPA. So that intensified monitoring, giving of feedback, and proper channeling of concerns could be done. In addition, having a specific and official schedule allotted for its planning, preparation, and implementation could be taken into consideration by including the IAPA planning, meetings, and actual implementation in the academic calendar so that students, teachers, and school leaders will be well-guided with the schedule allotted for it. Through these, (a) the management of guidelines of the IAPA by giving regular feedback from school leaders to teachers, and (b) the management of procedures of the IAPA by monitoring of the principal, vice-principals, coordinators, and/or team leaders through classroom visits, rounds, and/or observations, (c) the management of procedures of the IAPA by conducting scheduled regular meetings and planning that allow for the collaboration of teachers within the level, and (d) the management of procedures of the IAPA by plotting the intended assessments and performance standards of each subject area using a matrix as part of the planning processes would be strengthened too in both face-to-face and online learning set-up.



Since most of the schools in the country are still adapting with the new learning set-up, the school leaders could consider providing procedures, guidelines, and/or policies on the use of the IAPA that will cover both the face-to-face and the online learning set-up so that teachers and school leaders will be well-guided on how to implement it despite the challenges associated with technical difficulties. Also, providing series of trainings and seminars on the IAPA, designing assessments, and module making could better assist teachers and school leaders in addressing concerns associated with online learning platforms' limitations. These proposed inputs could help in improving the IAPA's implementation in both face-to-face and online learning set-up and could help strengthening the management of policies, procedures, and guidelines of the IAPA.

In line with the improvement of the IAPA's implementation, may it be in face-to-face or online learning set-up, the role of school leaders in managing and leading the teachers is important and has great effects on the attainment of its success. However, without the support and cooperation of teachers, the efforts of the school leaders in line with the IAPA improvement will be wasted. As stated by Decena (2013), the achievement of a particular goal and the success of its implementation lie on the hands of the school leaders, as well as on the cooperation of teachers, stakeholders, and students. Thus, to ensure the success of the IAPA and to maximize its use, teachers and schools should work hand in hand to improve its implementation.



CHAPTER 4

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter presents the summary of the study, summary of results, limitations of the study, the conclusions based on the results, and the recommendations based on the conclusions.

SUMMARY OF THE STUDY

This study aimed to assess the management of the existing policies, guidelines, and procedures on the implementation of the interdisciplinary approach in performance-based assessment (IAPA) before and during the COVID-19 as basis in proposing improvement in its implementation in the “new normal”. It used a descriptive research design. Thirty senior high school science teachers and school leaders from five private and five public schools in Metro Manila participated in the study. They were asked to assess the management of existing policies, guidelines, and procedures on the implementation of the IAPA in the SHS before and during the COVID-19 using a survey questionnaire and to identify the strengths and the weaknesses of the IAPA in the SHS before and during the COVID-19 using an interview guide developed by the researcher and validated by a group of twelve experts. Survey and semi-structured interviews were conducted to validate and gain a good scope of responses in proposing inputs on the improvement of the IAPA’s implementation that will cover both the face-to-face and the online learning modalities. Frequency, median, and mode were used to describe the gathered data from the survey instrument, while qualitative analysis of Braun and Clarke (2006) was used for the data gathered from the semi-structured interviews.



SUMMARY OF RESULTS

Based on the data gathered, the following results are hereby summarized:

1. The management before and during COVID-19 is effective as perceived by the teachers and school leaders based on the assessment of the management of existing policies, guidelines, and procedures on the implementation of the IAPA in the SHS. Statements such as *“Management of policies of the IAPA is observed to attain a learner-centered curriculum”* and *“Management of policies of the IAPA is observed to integrate technology in the learning process”* are perceived as very effective during the COVID-19 period. However, weaknesses of the IAPA’s implementation were still identified.

The following are the strengths of the IAPA in the SHS before and during the COVID-19: (1) promotes holistic development; (2) promotes mastery and meaningful learning; (3) promotes creativity and resourcefulness during the online learning-set-up; (4) promotes less workload and saves time; (5) helps meet the learning competencies; (6) promotes collaboration and teamwork; (7) encourages students’ motivation; and (8) promotes less stress for students. Only strength three is applicable during the COVID-19, while the rest of the identified strengths apply to both before and during the COVID-19.

2. On the other hand, the following are the weaknesses of the IAPA in the SHS before and during the COVID-19: (1) IAPA implementation is more intensified before COVID-19; (2) technical difficulties/ limitations; (3) students are out of focus; (4) one-time big-time task; (5) teacher’s hesitance and resistance to change; (6) difficulty in



communication and collaboration; (7) difficulty in integrating subjects/ topics; (8) designing a good IAPA; and (9) not being strictly implemented. Weaknesses one to three are applicable during COVID-19, while the rest of the identified weaknesses apply to both before and during COVID-19.

3. Based on the results of the survey questionnaire and the semi-structured interviews, the following are the suggestions in improving the IAPA's implementation in the new normal covering both the face-to-face and the online learning modalities: (1) provide series of trainings and seminars on the IAPA, designing assessments, and module making; (2) contextualize and consider the level of difficulty when designing the IAPA; (3) document and evaluate the use and outputs of the IAPA for references; (4) provide trainings and seminars on designing assessments; (5) use of rubrics intended per subject matter; (6) include the IAPA planning, meetings, and actual implementation in the academic calendar; (7) present the benefits and importance of the IAPA to students and teachers; (8) consider school leader's motivation to teachers; (9) provide a clear guideline on the use of the IAPA; (9) observe benchmarking and collaborate with different stakeholders; and (10) assign a person who will monitor the implementation of the IAPA. All the suggestions could be used together with the survey questionnaire statements to improve and monitor the IAPA implementation during the "new normal", since all the inputs are associated and can further strengthen the statements under the management of the IAPA's policies, guidelines, and procedures.



LIMITATIONS OF THE STUDY

This study aimed to assess the management of the existing policies, guidelines, and procedures on the implementation of the IAPA before and during the COVID-19 as basis for an improved implementation in the “new normal”.

One limitation of this study was the participation of the respondents. The researcher encountered difficulty in gathering interview data since both school leaders and teachers were busy crafting their modules and other tasks considering the recent shift in the education set-up during the Academic Year 2020-2021. This limitation also led to time constraints since the researcher found it hard to interview the participants due to their busy schedules.

Also, the researcher encountered difficulty in accessing the target schools due to the limitations of the work-from-home set-up of the teachers and school leaders.

Further, since this study was conducted in senior high school public and private schools, results may not be used to generalize the other levels from preschool to junior high school.

CONCLUSIONS

After the results of the qualitative and quantitative instruments were analyzed and interpreted, this study therefore makes the following conclusions:

1. The management of existing policies, guidelines, and procedures on the implementation of the IAPA in the SHS before and during COVID-19 is effective as perceived by the teachers and school leaders. Effective management of existing policies, guidelines, and procedures



on the implementation of the IAPA is greatly needed to attain the success of the IAPA. School leaders should ensure that concrete guidelines, procedures, and/or policies are well-crafted and are provided to all other school leaders and teachers to be guided in the use and implementation of the IAPA. Also, school leaders and teachers are expected to work hand in hand in maximizing the use of the IAPA as an academic or curriculum program and in improving its implementation by addressing the concerns in line with its use.

2. IAPA benefits students and teachers in many ways. However, the identified weaknesses of the IAPA greatly concentrate on the role of school leaders and on the presence of concrete procedures, guidelines, and/or policies. The role of school leaders in the implementation of the IAPA is critical to its success as an academic or curriculum program. Addressing the weaknesses of the IAPA's implementation is highly necessary to improve its outcome. Further, teachers' cooperation towards the management of the IAPA implementation is also needed to achieve its objectives.
3. Suggestions to improve the implementation of the IAPA in the new normal covering both the face-to-face and the online learning modalities could be used by the school leaders and teachers together with the statements under the management of the IAPA's policies, guidelines, and procedures to improve more the IAPA's implementation and to make it more relevant under the new normal.



RECOMMENDATIONS

Given the conclusions presented, this study presents the following recommendations:

1. As the Department of Education recommends that the curriculum shall use integrative pedagogical approach and that different learning areas must be taught in interdisciplinary approach, making it as an academic or curriculum program can help in its successful implementation. Also, this can help in crafting procedures, guidelines, and/ or policies to implement it consistently and effectively, and copies should be accessible by all teachers and school leaders. The results of this study can be used by the private and public schools in crafting their procedures, guidelines, and/ or policies.
2. Schools implementing the IAPA can also use it in both face-to-face and distance/ online learning modalities. It is suggested that the Department of Education and private institutions, should provide series of trainings and seminars on the IAPA, designing assessments, and module making.
3. Internal and external stakeholders like parents, local government units, and private organizations should be tapped for support in the implementation of the IAPA in distance/ online learning modality.
4. School leaders are encouraged to observe and maintain their functions in leading and motivating the teachers, for them to learn more about the IAPA and utilize it more to help the students develop holistically. School leaders may recall and review their functions and guiding standards using the Philippine Professional Standards for School Heads (DepEd Order No. 024 series of 2020) as they utilize the IAPA.



5. The Department of Education and the private institutions should consider the allotted schedule for the IAPA planning, preparation, and implementation to ensure its success. Also, IAPA must be regularly assessed and evaluated to determine the effectivity of its implementation and benefits on students' learning. Supervisors are encouraged to observe and maintain their functions in creating an enabling and supportive environment for effective learning.
6. This assessment study may be replicated in other grade levels and institutions to further support the improvement of its implementation.
7. Further research may be done in face-to-face set-up or after the pandemic to allow more access to schools and participants.



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APPENDIX A

Letter of Request to Conduct the Study

November 19, 2020

Division Superintendent

Division of City Schools, Manila

Dear Madam:

Warmest Greetings!

I am Marjorie P. Naquita enrolled at the Philippine Normal University under the course - Master of Arts in Education with specialization in Educational Management. I am currently working on my thesis entitled “**Assessment of the Use of Interdisciplinary Approach in Performance-based Assessment: Basis for an Improved Implementation in the New Normal**”. I am conducting a survey among the Senior High School private and public schools in Metro Manila that implement Interdisciplinary Approach in Performance-based Assessments in Grade 11 or 12 level, particularly in science subject.

This study seeks to assess the management of the existing policies, guidelines, and procedures on the implementation of the interdisciplinary approach in performance-based assessment before and during the COVID-19 period as basis for an improved implementation in the “new normal”. This study seeks to answer the following questions: 1) How effective is the management of existing policies, guidelines, and procedures on the implementation of the Interdisciplinary Approach in Performance-based Assessment (IAPA) in the Senior High School (SHS) before and during the COVID-19 period as perceived by the school leaders and the teachers? 2) What are the strengths and the weaknesses of the IAPA in the SHS before and during the COVID-19 period as perceived by the school leaders and the teachers? 3) How could the



implementation of the IAPA be improved to make it more effective and relevant in the time of the “new normal” covering both the face-to-face and the online learning modalities?

In gathering data for this study, the use of Google Forms for the online survey and the use of Google Meet or Zoom for the online interview will be observed. In line with the online interview, I will humbly ask the respondents to allow me to record the meeting to be able to transcribe the answers accurately. The online survey and interview would last only for 30-40 minutes and would be arranged at a time convenient to the school leaders and the teachers to ensure no disruption of classes and/ or regular activities.

The Guidelines on the Conduct of the Online Survey and Interview are as follows:

1. Due to the threat of the COVID-19, the use of online platforms in gathering data will be observed in this study to ensure the safety of both the participant and the researcher.
2. If there is a need for the researcher to go to school personally to submit the letter of request and approval, as mandated by Executive Order No. 11 series of 2020, section 5 General Provisions, item 3 (pp. 12) of the Inter-Agency Task Force, the researcher will strictly observe wearing of face masks and face shields and monitoring of body temperature to avoid the transmission of COVID-19.
3. To ensure strong security access and storage, the researcher’s official University email will be used in gathering data through Goggle Forms.
4. In gathering data for the interview, one-on-one virtual meeting will be observed using Zoom or Google Meet. The respondent can choose which online application is more convenient for him/her to use in the conduct of the online interview.
5. The schedule of the virtual interview will be based on the availability of the respondent.
6. Sharing of the meeting room credentials, both the ID and password to anyone not involved in the meeting is prohibited to ensure the privacy of both the respondent and the researcher.
7. Recording of the meeting will be observed to be able to transcribe the answers accurately.



8. During the conduct of the online interview, the researcher will first inform the respondent before starting to record the meeting. The respondent has the options to turn on or to turn off his/her video once the recording has started.
9. The data to be gathered from the survey and the interviews will be saved in the Goggle Drive of the researcher's official University email to ensure encryption until the study is completed and will strictly observe non-disclosure to anyone other than the respondent and the researcher.

Participation in this study is entirely voluntary and there are no known or anticipated risks. Rest assured that all information herein will be treated with utmost confidentiality and the answers of the school leaders and the teachers will be used solely for the study. To ensure anonymity, the use of identification codes for the respondents of this study will be observed as answers are being transcribed and analyzed. The names of the respondents and the name of the school will not be linked as data analyses are observed and will not appear in any thesis or publication resulting from this study. If in the process of conducting the study, the school leaders or teachers have decided to quit participating because of some personal reasons, their decision will be highly respected.

After the data have been analyzed, your good office and the respondents of this study will receive a copy of the executive summary. If you would be interested in greater detail, an electronic copy of the entire thesis can be made available to you.

In this regard, I am humbly requesting your good office to allow me **to conduct my study in your schools' division. Should you allow me, I intend to purposively consider the Senior High Schools in the division that implement the use of Interdisciplinary Approach in Science subject.** The target respondents of my study are thirty (30) school leaders and teachers who will be coming from eight (8) private schools and eight (8) public schools in Metro Manila. Your approval to the above-mentioned request will be greatly appreciated.

Should you have any queries, you may contact me at 09459778451 or you may email me at naquita.mp@pnu.edu.ph

Thank you very much and stay safe always!



GOD BLESS

Respectfully yours,

A handwritten signature in black ink, appearing to read "Marjorie P. Naquita".

Marjorie P. Naquita

Graduate Student

Philippine Normal University, Manila

Noted by:

(Sgd.) Dr. Marilyn U. Balagtas

Adviser/University Professor

Philippine Normal University, Manila

Sources for the Guidelines on the Conduct of the Online Survey and Interview:

Duque, F. & Nogralas, K. (2020, April 29). Omnibus Guidelines on the Implementation of Community Quarantine in the Philippines. Inter-Agency Task Force, Republic of the Philippines. Retrieved October 10, 2020 from <https://officialgazette.gov.ph/downloads/2020/04apr/2020030-EO-112-RRD.pdf>

Department of Justice (2020, September 22). Public Advisory on the Conduct of Online Classes Using Video Conferencing Services. Department of Justice, Office of Cybercrime. Retrieved October 10, 2020 from <https://www.facebook.com/OfficeofCybercrimePH/photos/pcb.1298434053829773/1298430697163442/>

Clay, R. (2020, March 19). Conducting Research During the COVID-19 Pandemic. American Psychological Association. Retrieved October 10, 2020 from <https://www.apa.org/news/apa/2020/03/conducting-research-covid-19>



APPENDIX B

Approval Letter to Conduct the Study



Republic of the Philippines
Department of Education
National Capital Region
DIVISION OF CITY SCHOOLS
Manila

November 23, 2020

THE PRINCIPALS CONCERNED
Manila

Sirs/Mesdames,

Permission to visit school this Division is hereby granted to:

Name of Researcher
Marjorie P. Naquita

Philippine Normal University
School/University

To conduct study "Assessment of the Use of Interdisciplinary Approach Performance-based Assessment: Basis for an Improved Implementation in the New Normal"

Purpose

Note: 1. The conduct of the study shall be in consultation with the Principal/s concerned using various modalities. (Proper scheduling is requested.)

- 2. Should adhere to the existing policies and standard on health protocol**
- 3. Confidentiality of the respondents is ensured.**
- 4. This Office requests a copy of the final research output at the end of the term of study.**

Kindly extend to her the usual cooperation and hospitality.

Thank you.



APPENDIX C

Letter/Form to Conduct the Study

Date:

To:

Dear Madam/Sir,

Warmest Greetings!

I am Marjorie P. Naquita enrolled at the Philippine Normal University under the course - Master of Arts in Education with specialization in Educational Management. I am currently working on my thesis entitled “**Assessment of the Use of Interdisciplinary Approach in Performance-based Assessment: Basis for an Improved Implementation in the New Normal**”. I am conducting a survey among the Senior High School private and public schools in Metro Manila that implement Interdisciplinary Approach in Performance-based Assessments in Grade 11 or 12 level, particularly in science subject.

This study seeks to assess the management of the existing policies, guidelines, and procedures on the implementation of the interdisciplinary approach in performance-based assessment before and during the COVID-19 period as basis for an improved implementation in the “new normal”. This study seeks to answer the following questions: 1) How effective is the management of existing policies, guidelines, and procedures on the implementation of the Interdisciplinary Approach in Performance-based Assessment (IAPA) in the Senior High School (SHS) before and during the COVID-19 period as perceived by the school leaders and the teachers? 2) What are the strengths and the weaknesses of the IAPA in the SHS before and during the COVID-19 period as perceived by the school leaders and the teachers? 3) How could the implementation of the IAPA be improved to make it more effective and relevant in the time of the “new normal” covering both the face-to-face and the online learning modalities?

In gathering data for this study, the use of **Google Forms for the online survey** and the use of **Google Meet or Zoom for the online interview** will be observed. In line with the online interview, I am humbly asking you to allow me to record the meeting to be able to transcribe the answers accurately. The online survey and interview would last only for 30-40 minutes and would be arranged at a time convenient to the school leaders and the teachers to ensure no disruption of classes and/ or regular activities.

The Guidelines on the Conduct of the Online Survey and Interview are as follows:

1. Due to the threat of the COVID-19, the use of online platforms in gathering data will be observed in this study to ensure the safety of both the participant and the researcher.



2. If there is a need for the researcher to go to school personally to submit the letter of request and approval, as mandated by Executive Order No. 11 series of 2020, section 5 General Provisions, item 3 (pp. 12) of the Inter-Agency Task Force, the researcher will strictly observe wearing of face masks and face shields and monitoring of body temperature to avoid the transmission of COVID-19.
3. To ensure strong security access and storage, the researcher's official University email will be used in gathering data through Goggle Forms.
4. In gathering data for the interview, one-on-one virtual meeting will be observed using Zoom or Google Meet. You can choose which online application is more convenient for you to use in the conduct of the online interview.
5. The schedule of the virtual interview will be based on your availability.
6. Sharing of the meeting room credentials, both the ID and password to anyone not involved in the meeting is prohibited.
7. Recording of the meeting will be observed to be able to transcribe the answers accurately.
8. During the conduct of the online interview, the researcher will first inform you before starting to record the meeting. You have the options to turn on or to turn off your video once the recording has started.
9. The data to be gathered from the survey and the interviews will be saved in the Goggle Drive of the researcher's official University email to ensure encryption until the study is completed and will strictly observe non-disclosure to anyone other than the respondent (you) and the researcher.

Participation in this study is entirely voluntary and there are no known or anticipated risks. Rest assured that all information herein will be treated with utmost confidentiality and the answers of the school leaders, and the teachers will be used solely for the study. To ensure anonymity, the use of identification codes for the respondents of this study will be observed as answers are being transcribed and analyzed. The names of the respondents and the name of the school will not be linked as data analyses are observed and will not appear in any thesis or publication resulting from this study. If in the process of conducting the study, the school leaders or teachers have decided to quit participating because of some personal reasons, their decision will be highly respected.

After the data have been analyzed, your good office and the respondents of this study will receive a copy of the executive summary. If you would be interested in greater detail, an electronic copy of the entire thesis can be made available to you.

In this regard, I am humbly requesting your good office to allow me **to conduct an online survey and interview among the Senior High School Science teachers and leaders in your good institution, to access the Senior High School curriculum/document of your school that shows the interdisciplinary approach, and to access the policies, guidelines, and procedures on the implementation of the interdisciplinary approach.**



Attached is the survey questionnaire that I will use in the online survey and interview. Your approval to the above-mentioned requests will be greatly appreciated. Kindly send this **Letter/Form to Conduct the Study** through this e-mail address: naquita.mp@pnu.edu.ph

Should you have any queries, you may contact me at **09459778451** or you may email me at naquita.mp@pnu.edu.ph

Thank you very much!

GOD BLESS

Sincerely yours,

Marjorie P. Naquita

Graduate Student

Philippine Normal University, Manila

Noted by:

(Sgd.) Dr. Marilyn U. Balagtas

Adviser/University Professor

Philippine Normal University, Manila

Please check the boxes.

☐

1. I am giving my permission for the researcher to conduct the study at our school.

☐

2. I am giving my permission for the researcher to access the Senior High School curriculum of our school.

☐

3. I am giving my permission for the researcher to access the school's policies, guidelines and procedures on the implementation of the interdisciplinary approach.

Signature over Printed Name of the Respondent

Date

Sources for the Guidelines on the Conduct of the Online Survey and Interview:

Duque, F. & Nograles, K. (2020, April 29). Omnibus Guidelines on the Implementation of Community Quarantine in the Philippines. Inter-Agency Task Force, Republic of the Philippines. Retrieved October 10, 2020 from <https://officialgazette.gov.ph/downloads/2020/04apr/2020030-EO-112-RRD.pdf>

Department of Justice (2020, September 22). Public Advisory on the Conduct of Online Classes Using Video Conferencing Services. Department of Justice, Office of Cybercrime. Retrieved October 10, 2020 from <https://www.facebook.com/OfficeofCybercrimePH/photos/pcb.1298434053829773/1298430697163442/>

Clay, R. (2020, March 19). Conducting Research During the COVID-19 Pandemic. American Psychological Association. Retrieved October 10, 2020 from <https://www.apa.org/news/apa/2020/03/conducting-research-covid-19>



APPENDIX D

Informed Consent Form

Date:

To:

Dear Madam/Sir,

Warmest Greetings!

I am Marjorie P. Naquita enrolled at the Philippine Normal University under the course - Master of Arts in Education with specialization in Educational Management. I am currently working on my thesis entitled “**Assessment of the Use of Interdisciplinary Approach in Performance-based Assessment: Basis for an Improved Implementation in the New Normal**”. I am conducting a survey among the Senior High School private and public schools in Metro Manila that implement Interdisciplinary Approach in Performance-based Assessments in Grade 11 or 12 level, particularly in science subject.

This study seeks to assess the management of the existing policies, guidelines, and procedures on the implementation of the interdisciplinary approach in performance-based assessment before and during the COVID-19 period as basis for an improved implementation in the “new normal”. This study seeks to answer the following questions: 1) How effective is the management of existing policies, guidelines, and procedures on the implementation of the Interdisciplinary Approach in Performance-based Assessment (IAPA) in the Senior High School (SHS) before and during the COVID-19 period as perceived by the school leaders and the teachers? 2) What are the strengths and the weaknesses of the IAPA in the SHS before and during the COVID-19 period as perceived by the school leaders and the teachers? 3) How could the implementation of the IAPA be improved to make it more effective and relevant in the time of the “new normal” covering both the face-to-face and the online learning modalities?

In gathering data for this study, the use of Google Forms for the online survey and the use of Google Meet or Zoom for the online interview will be observed. In line with the online interview, I am humbly asking you to allow me to record the meeting to be able to transcribe the answers accurately. The online survey and interview would last only for 30-40 minutes and would be



arranged at a time convenient to you to ensure no disruption of classes and/ or regular activities.

The Guidelines on the Conduct of the Online Survey and Interview are as follows:

1. Due to the threat of the COVID-19, the use of online platforms in gathering data will be observed in this study to ensure the safety of both the participant and the researcher.
2. If there is a need for the researcher to go to school personally to submit the letter of request and approval, as mandated by Executive Order No. 11 series of 2020, section 5 General Provisions, item 3 (pp. 12) of the Inter-Agency Task Force, the researcher will strictly observe wearing of face masks and face shields and monitoring of body temperature to avoid the transmission of COVID-19.
3. To ensure strong security access and storage, the researcher's official University email will be used in gathering data through Goggle Forms.
4. In gathering data for the interview, one-on-one virtual meeting will be observed using Zoom or Google Meet. You can choose which online application is more convenient for you to use in the conduct of the online interview.
5. The schedule of the virtual interview will be based on your availability.
6. Sharing of the meeting room credentials, both the ID and password to anyone not involved in the meeting is prohibited.
7. Recording of the meeting will be observed to be able to transcribe the answers accurately.
8. During the conduct of the online interview, the researcher will first inform you before starting to record the meeting. You have the options to turn on or to turn off your video once the recording has started.
9. The data to be gathered from the survey and the interviews will be saved in the Goggle Drive of the researcher's official University email to ensure encryption until the study is completed and will strictly observe non-disclosure to anyone other than the respondent (you) and the researcher.

In this regard, I would like to request you to be one of my **respondents**. Participation in this study is entirely voluntary and there are no known or anticipated risks. Rest assured that all information herein will be treated with utmost confidentiality and your answers will be used solely for the study. To ensure anonymity, the use of identification codes for the respondents of this study will



be observed as answers are being transcribed and analyzed. Your name as one of the respondents and the name of the school will not be linked as data analyses are observed and will not appear in any thesis or publication resulting from this study. If in the process of conducting the study, you have decided to quit participating because of some personal reasons, your decision will be highly respected.

After the data have been analyzed, you will receive a copy of the executive summary. If you would be interested in greater detail, an electronic copy of the entire thesis can be made available to you.

Attached is the survey questionnaire that I wish you to answer. Should this request merit your approval, I would be glad to reach you online at any time of your convenience. **Kindly send this Informed Consent Form** through this e-mail address: naquita.mp@pnu.edu.ph

Should you have any queries, you may contact me at 09459778451 or you may email me at naquita.mp@pnu.edu.ph

Thank you very much for your time and cooperation.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Marjorie P. Naquita".

Marjorie P. Naquita

Graduate Student

Philippine Normal University, Manila

Noted by:

(Sgd.) Dr. Marilyn U. Balagtas

Adviser/University Professor

Philippine Normal University, Manila



Please check the boxes.

- ☐ 1. I confirm that I have read and understood the information about the study and the researcher's requests.
- ☐ 2. I understand that my participation is entirely voluntary, and I am free to withdraw participating at any time.
- ☐ 3. I am giving my permission for the researcher to record the online interview to transcribe the information accurately.
- ☐ 4. I understand that the information that I will share for this study will remain confidential and will be used solely for this study.
- ☐ 5. I agree to be one of the respondents of this study.

Signature over Printed Name of the Respondent

Date

Sources for the Guidelines on the Conduct of the Online Survey and Interview:

Duque, F. & Nograles, K. (2020, April 29). Omnibus Guidelines on the Implementation of Community Quarantine in the Philippines. Inter-Agency Task Force, Republic of the Philippines. Retrieved October 10, 2020 from <https://officialgazette.gov.ph/downloads/2020/04apr/2020030-EO-112-RRD.pdf>

Department of Justice (2020, September 22). Public Advisory on the Conduct of Online Classes Using Video Conferencing Services. Department of Justice, Office of Cybercrime. Retrieved October 10, 2020 from <https://www.facebook.com/OfficeofCybercrimePH/photos/pcb.1298434053829773/1298430697163442/>

Clay, R. (2020, March 19). Conducting Research During the COVID-19 Pandemic. American Psychological Association. Retrieved October 10, 2020 from <https://www.apa.org/news/apa/2020/03/conducting-research-covid-19>



APPENDIX E

Letter of Request to the Validators

Date:

To:

Dear Sir/ Madam,

Warmest Greetings!

I am Marjorie P. Naquita enrolled at the Philippine Normal University under the course - Master of Arts in Education with specialization in Educational Management. I am currently working on my thesis entitled **“Assessment of the Use of Interdisciplinary Approach in Performance-based Assessment: Basis for an Improved Implementation in the New Normal”**. I am going to conduct a survey among the Senior High School private and public schools in Metro Manila that implement Interdisciplinary Approach in Performance-based Assessments in Grade 11 or 12 level, particularly in science subject.

This study seeks to assess the management of the existing policies, guidelines, and procedures on the implementation of the interdisciplinary approach in performance-based assessment before and during the COVID-19 period as basis for an improved implementation in the “new normal”. This study seeks to answer the following questions: 1) How effective is the management of existing policies, guidelines, and procedures on the implementation of the Interdisciplinary Approach in Performance-based Assessment (IAPA) in the Senior High School (SHS) before and during the COVID-19 period as perceived by the school leaders and the teachers? 2) What are the strengths and the weaknesses of the IAPA in the SHS before and during the COVID-19 period as perceived by the school leaders and the teachers? 3) How could the implementation of the IAPA be improved to make it more effective and relevant in the time of the “new normal” covering both the face-to-face and the online learning modalities?



In this regard, I am humbly requesting for your guidance and expertise to validate the survey questionnaire and the interview guide questions that this study will use to gather the data needed to achieve the research problems of the study. Attached herewith are the research instruments for your validation.

I am looking forward that my request would merit your positive response.

Thank you very much!

Sincerely yours,

A handwritten signature in black ink, appearing to read "Marjorie P. Naquita".

Marjorie P. Naquita

Graduate Student

Philippine Normal University, Manila

Noted by:

(Sgd.) Dr. Marilyn U. Balagtas

Adviser/University Professor

Philippine Normal University, Manila



APPENDIX F

Validation Form

VALIDATION OF INSTRUMENTS

Name of the Validator: _____

Field of Specialization: _____

Affiliation: _____

Directions.

This validation form asks for your evaluation of the instruments - “Survey for the Assessment of the Implementation of Interdisciplinary Approach in Performance-based Assessment” and “Interview Guide for the Assessment of the Implementation of Interdisciplinary Approach in Performance-based Assessment” – that the study will use to gather the necessary data to answer the research problems of the study.

Please use the rating scale to determine the acceptability of the instruments. Check (✓) the number column that best describes your response.

Scale	Interpretation
4	Acceptable without any revision.
3	Acceptable with minor revision, please specify.
2	Acceptable with major revision, please specify.
1	Not acceptable, please explain why.

SURVEY QUESTIONNAIRE FOR THE ASSESSMENT OF THE IMPLEMENTATION OF THE INTERDISCIPLINARY APPROACH IN PERFORMANCE-BASED ASSESSMENT

Part I. Respondent's Profile

Directions. Please supply all the needed information.



Name (Optional): _____

Area of Specialization: _____

Name of School: _____

Sex: ☐ Male ☐ Female

Age: ☐ 20 years old and below ☐ 21-30 years old ☐ 31-40 years old

☐ 41-50 years old ☐ 51 years old and above

School Employer:

☐ Public

☐ Private

Position/Designation:

☐ Faculty

☐ School Administrator

Handled Year Level (currently teaching):

☐ Grade 11

☐ Grade 12

☐ Not Applicable

Teaching Experience (in years):

☐ 0-5

☐ 6-10

☐ 11- 15

☐ 16-20

☐ 20 or more

Highest Educational Attainment:

☐ Doctorate Degree

☐ Master's Degree with Doctoral Units

☐ Master's Degree

☐ Bachelor's Degree with MA Units

☐ Bachelor's Degree



When was the last time you attended an Interdisciplinary Approach related seminar or workshop?

- ☐ 1-4 month/s ago
- ☐ 5-8 months ago
- ☐ 9-12 months ago
- ☐ 2 years ago
- ☐ 3 or more years ago
- ☐ Never

Part II. Research Data

Research Question 1: How effective is the management of existing policies, guidelines, and procedures on the implementation of the Interdisciplinary Approach in Performance-based Assessment (IAPA) in the Senior High School (SHS) before and during the COVID-19 period as perceived by the school leaders themselves and the teachers?		Likert Scale				Remarks
		4 Acceptable without any revision	3 Acceptable with minor revision, please specify.	2 Acceptable with major revision, please specify.	1 Not acceptable, please explain why.	
A. Before the COVID-19 Period						
1.	Management of policies of the IAPA strengthens the attainment of learner-centered, inclusive, developmentally relevant, and appropriate curriculum.					
2.	Management of policies of the IAPA promotes the holistic growth of learners by allowing them to apply learning in real-life situations while addressing fragmented learning using integrative pedagogy.					
3.	Management of policies of the IAPA strengthens the use of performance-based tasks and technology integration to prepare learners in the world of work today.					



4.	Management of policies of the IAPA caters both the face-to-face learning and the distance learning modality or the blended learning.					
5.	Management of policies of the IAPA is observed by the involvement of the school leaders, experts, and teachers in the planning, implementation, monitoring, and evaluation of the IAPA.					
6.	Management of guidelines of the IAPA is specific and clear.					
7.	Management of guidelines of the IAPA is observed by highly encouraging all teachers to maximize the use of the IAPA across all subjects.					
8.	Management of guidelines of the IAPA is strengthened by observing benchmarking with other schools at least once a year to adopt and modify the best practices applicable in the school set-up.					
9.	Management of guidelines of the IAPA is observed by its regular review and modification based on the needs of the learners and their appropriateness.					
10.	Management of guidelines of the IAPA is observed by the regular feedback of the school leaders to the teachers and by the sharing of new updates in relation to the IAPA.					
11.	Management of procedures of the IAPA is observed through providing matrix before the start of the academic year or the semester that includes the performance standards and the intended assessments of each subject area as part of the planning and the implementing processes.					
12.	Management of procedures of the IAPA is observed by scheduled regular meetings and planning that					



	allow for the collaboration of teachers and their partner subject teachers with the guidance of the school leaders in relation to the use of the IAPA.					
1 3.	Management of procedures of the IAPA is strengthened by holding regular professional development for the teachers and school leaders to improve its use and implementation.					
1 4.	Management of procedures of the IAPA is strengthened by the monitoring of the principal, vice-principals, coordinators, and/or team leaders through classroom visits, rounds, and/or observations.					
1 5.	Management of procedures of the IAPA is observed by assigning coordinators and/or team leaders to regularly monitor the implementation of the IAPA and to regularly give feedback to the teachers to address the areas to improve in its implementation.					
B. During the COVID-19 Period						
1.	Management of policies of the IAPA strengthens the attainment of learner-centered, inclusive, developmentally relevant, and appropriate curriculum.					
2.	Management of policies of the IAPA promotes the holistic growth of learners by allowing them to apply learning in real-life situations while addressing fragmented learning using integrative pedagogy.					
3.	Management of policies of the IAPA strengthens the use of performance-based tasks and technology integration to prepare learners in the world of work today.					
4.	Management of policies of the IAPA caters both the face-to-face learning and the distance learning modality or the blended learning.					



5.	Management of policies of the IAPA is observed by the involvement of the school leaders, experts, and teachers in the planning, implementation, monitoring, and evaluation of the IAPA.					
6.	Management of guidelines of the IAPA is specific and clear.					
7.	Management of guidelines of the IAPA is observed by highly encouraging all teachers to maximize the use of the IAPA across all subjects.					
8.	Management of guidelines of the IAPA is strengthened by observing benchmarking with other schools at least once a year to adopt and modify the best practices applicable in the school set-up.					
9.	Management of guidelines of the IAPA is observed by its regular review and modification based on the needs of the learners and their appropriateness.					
10.	Management of guidelines of the IAPA is observed by the regular feedback of the school leaders to the teachers and by the sharing of new updates in relation to the IAPA.					
11.	Management of procedures of the IAPA is observed through providing matrix before the start of the academic year or the semester that includes the performance standards and the intended assessments of each subject area as part of the planning and the implementing processes.					
12.	Management of procedures of the IAPA is observed by scheduled regular meetings and planning that allow for the collaboration of teachers and their partner subject teachers with the guidance of the school leaders in relation to the use of the IAPA.					



1 3.	Management of procedures of the IAPA is strengthened by holding regular professional development for the teachers and school leaders to improve its use and implementation.					
1 4.	Management of procedures of the IAPA is strengthened by the monitoring of the principal, vice-principals, coordinators, and/or team leaders through classroom visits, rounds, and/or observations.					
1 5.	Management of procedures of the IAPA is observed by assigning coordinators and/or team leaders to regularly monitor the implementation of the IAPA and to regularly give feedback to the teachers to address the areas to improve in its implementation.					

INTERVIEW GUIDE FOR THE ASSESSMENT OF THE IMPLEMENTATION OF THE INTERDISCIPLINARY APPROACH IN PERFORMANCE-BASED ASSESSMENT

Research Question 2: What are the strengths and the weaknesses of the IAPA in the SHS before and during the COVID-19 period as perceived by the school leaders and the teachers?	4 Acceptable without any revision	3 Acceptable with minor revision, please specify.	2 Acceptable with major revision, please specify.	1 Not acceptable, please explain why.	Remarks
1. What are the strengths and the weaknesses of the IAPA's implementation before and during the COVID-19 period?					



2. What difficulty or challenges have you encountered or experienced in the use of the IAPA in the new normal set-up?					
3. What are your suggestions and recommendations to improve the implementation of the IAPA in both face-to-face and online learning set-ups?					

Thank you very much for your time and your guidance.



APPENDIX G

Summary of the Validators' Feedback

		Validator 1	Validator 2	Validator 3	Validator 4	Validator 5	Validator 6	Validator 7	Validator 8	Validator 9	Validator 10	Validator 11	Validator 12	Mean
INTERVIEW GUIDE														
1	What are the strengths and the weaknesses of the IAPA's implementation before and during the COVID-19 period?	4	4	4	3	4	4	4	4	4	4	4	4	3.9
2	What difficulty or challenges have you encountered or experienced in the use of the IAPA in the new normal set-up?	4	4	4	3	4	4	4	4	4	4	4	4	3.9
3	What are your suggestions and recommendations to improve the implementation of the IAPA in both face-to-face and online learning set-ups?	4	4	4	4	4	4	4	4	4	4	4	4	4.0



		Validator 1	Validator 2	Validator 3	Validator 4	Validator 5	Validator 6	Validator 7	Validator 8	Validator 9	Validator 10	Validator 11	Validator 12	Mean
SURVEY QUESTIONNAIRE														
Before the COVID-19 Period														
1	Management of policies of the IAPA strengthens the attainment of learner-centered, inclusive, developmentally relevant, and appropriate curriculum.	4	4	4	4	4	4	4	4	4	4	3	4	3.9
2	Management of policies of the IAPA promotes the holistic growth of learners by allowing them to apply learning in real-life situations while addressing fragmented learning using integrative pedagogy.	3	4	4	4	4	4	3	4	4	4	3	4	3.8
3	Management of policies of the IAPA strengthens the use of performance-based tasks and technology integration to prepare learners in the world of work today.	4	4	4	4	4	4	4	4	4	4	3	4	3.9
4	Management of policies of the IAPA caters both the face-to-face learning and the distance learning modality or the blended learning.	4	4	4	4	4	4	4	4	4	4	4	4	4.0
5	Management of policies of the IAPA is observed by the involvement of the school leaders, experts, and teachers in the planning, implementation, monitoring, and evaluation of the IAPA.	4	4	4	4	4	4	4	4	4	4	4	4	4.0
6	Management of guidelines of the IAPA is specific and clear.	4	4	4	3	4	4	4	4	4	4	4	4	3.9
7	Management of guidelines of the IAPA is observed by highly encouraging all teachers to maximize the use of the IAPA across all subjects.	4	4	4	4	4	4	4	3	4	4	3	4	3.8
8	Management of guidelines of the IAPA is strengthened by observing benchmarking with other schools at least once a year to adopt and modify the best practices applicable in the school set-up.	4	4	4	4	4	4	4	3	4	4	3	4	3.8
9	Management of guidelines of the IAPA is observed by its regular review and modification based on the needs of the learners and their appropriateness.	3	4	4	4	4	4	4	4	4	4	4	4	3.9
10	Management of guidelines of the IAPA is observed by the regular feedback of the school leaders to the teachers and by the sharing of new updates in relation to the IAPA.	4	4	4	3	4	4	4	4	4	4	4	4	3.9
11	Management of procedures of the IAPA is observed through providing matrix before the start of the academic year or the semester that includes the performance standards and the intended assessments of each subject area as part of the planning and the implementing processes.	4	4	4	4	4	4	4	4	4	4	2	4	3.8
12	Management of procedures of the IAPA is observed by scheduled regular meetings and planning that allow for the collaboration of teachers and their partner subject teachers with the guidance of the school leaders in relation to the use of the IAPA.	4	4	4	3	4	4	3	4	4	4	3	4	3.8
13	Management of procedures of the IAPA is strengthened by holding regular professional development for the teachers and school leaders to improve its use and implementation.	4	4	4	4	4	4	3	4	4	4	3	4	3.8
14	Management of procedures of the IAPA is strengthened by the monitoring of the principal, vice-principals, coordinators, and/or team leaders through classroom visits, rounds, and/or observations.	4	4	4	4	4	4	4	4	4	4	4	4	4.0
15	Management of procedures of the IAPA is observed by assigning coordinators and/or team leaders to regularly monitor the implementation of the IAPA and to regularly give feedback to the teachers to address the areas to improve in its implementation.	4	4	4	4	4	4	3	4	4	4	2	4	3.8



		Validator 1	Validator 2	Validator 3	Validator 4	Validator 5	Validator 6	Validator 7	Validator 8	Validator 9	Validator 10	Validator 11	Validator 12	Mean
SURVEY QUESTIONNAIRE														
During the COVID-19 Period														
1	Management of policies of the IAPA strengthens the attainment of learner-centered, inclusive, developmentally relevant, and appropriate curriculum.	4	4	4	4	4	4	4	4	4	4	3	4	3.9
2	Management of policies of the IAPA promotes the holistic growth of learners by allowing them to apply learning in real life situations while addressing fragmented learning using integrative pedagogy.	3	4	4	4	4	4	4	4	4	4	3	4	3.8
3	Management of policies of the IAPA strengthens the use of performance-based tasks and technology integration to prepare learners in the world of work today.	4	4	4	4	4	4	4	4	4	4	3	4	3.9
4	Management of policies of the IAPA caters both the face-to-face learning and the distance learning modality or the blended learning.	4	4	4	4	4	4	4	4	4	4	4	4	4.0
5	Management of policies of the IAPA is observed by the involvement of the school leaders, experts, and teachers in the planning, implementation, monitoring, and evaluation of the IAPA.	4	4	4	4	4	4	4	4	4	4	4	4	4.0
6	Management of guidelines of the IAPA is specific and clear.	4	4	4	3	4	4	4	4	4	4	4	4	3.9
7	Management of guidelines of the IAPA is observed by highly encouraging all teachers to maximize the use of the IAPA across all subjects.	4	4	4	4	4	4	4	3	4	4	3	4	3.8
8	Management of guidelines of the IAPA is strengthened by observing benchmarking with other schools at least once a year to adopt and modify the best practices applicable in the school set-up.	4	4	4	4	4	4	4	3	4	4	3	4	3.8
9	Management of guidelines of the IAPA is observed by its regular review and modification based on the needs of the learners and their appropriateness.	3	4	4	4	4	4	4	4	4	4	4	4	3.9
10	Management of guidelines of the IAPA is observed by the regular feedback of the school leaders to the teachers and by the sharing of new updates in relation to the IAPA.	4	4	4	3	4	4	4	4	4	4	4	4	3.9
11	Management of procedures of the IAPA is observed through providing matrix before the start of the academic year or the semester that includes the performance standards and the intended assessments of each subject area as part of the planning and the implementing processes.	4	4	4	4	4	4	4	4	4	4	2	4	3.8
12	Management of procedures of the IAPA is observed by scheduled regular meetings and planning that allow for the collaboration of teachers and their partner subject teachers with the guidance of the school leaders in relation to the use of the IAPA.	4	4	4	3	4	4	3	4	4	4	3	4	3.8
13	Management of procedures of the IAPA is strengthened by holding regular professional development for the teachers and school leaders to improve its use and implementation.	4	4	4	4	4	4	3	4	4	4	3	4	3.8
14	Management of procedures of the IAPA is strengthened by the monitoring of the principal, vice-principals, coordinators, and/or team leaders through classroom visits, rounds, and/or observations.	4	4	4	4	4	4	3	4	4	4	4	4	3.9
15	Management of procedures of the IAPA is observed by assigning coordinators and/or team leaders to regularly monitor the implementation of the IAPA and to regularly give feedback to the teachers to address the areas to improve in its implementation.	4	4	4	4	4	4	3	4	4	4	2	4	3.8



APPENDIX H

Revised Research Instruments with Old Items

SURVEY QUESTIONNAIRE FOR THE ASSESSMENT OF THE IMPLEMENTATION OF THE INTERDISCIPLINARY APPROACH IN PERFORMANCE-BASED ASSESSMENT

Part I. Respondent's Profile

Directions. Please supply all the needed information.

Name (Optional): _____

Area of Specialization: _____

Name of School: _____

Sex: ☐ Male ☐ Female

Age: ☐ 20 years old and below ☐ 21 to 30 years old ☐ 31 to 40 years old

☐ 41 to 50 years old ☐ 51 years old and above

School Employer:

☐ Public

☐ Private

Position/Designation:

☐ Faculty

☐ School Administrator

Handled Year Level (currently teaching):

☐ Grade 11

☐ Grade 12

☐ Not Applicable

Teaching Experience (in years):



- ☐ 0 to 5 ☐ 6 to 10 ☐ 11 to 15 ☐ 16 to 20 ☐ 20 or more

Highest Educational Attainment:

- ☐ Doctorate Degree
- ☐ Master's Degree with Doctoral Units
- ☐ Master's Degree
- ☐ Bachelor's Degree with MA Units
- ☐ Bachelor's Degree

When was the last time you attended an Interdisciplinary Approach related seminar or workshop?

- ☐ 1 to 4 months ago
- ☐ 5 to 8 months ago
- ☐ 9 to 12 months ago
- ☐ 2 years ago
- ☐ 3 or more years ago
- ☐ Never

Part II. Research Data

Directions.

Read each statement and please check (✓) the box or scale that best describes your response. There are no right or wrong answers to these questions.

Please be reminded that this study focuses only on the experiences of the school leaders and teachers in relation to the improvement of the Interdisciplinary Approach in Performance-based Assessment (IAPA) implementation during and after the COVID-19 period and does not cater the feelings nor experiences of the school leaders and teachers related to the preparation for the blended learning or online learning modality.



Rest assured that your answers will be treated with utmost confidentiality and will be used solely for this study. Remember to mark one box for each item only.

Please be guided with the given Rating Scale.

Scale	Interpretation
4	Strongly Agree
3	Agree
2	Disagree
1	Strongly Disagree

To what extent do you agree or disagree with the following statements about the management of the existing policies, guidelines, and procedures on the implementation of the Interdisciplinary Approach in Performance-based Assessment (IAPA) in the Senior High School.

Research Question 1: How effective is the management of existing policies, guidelines, and procedures on the implementation of the Interdisciplinary Approach in Performance-based Assessment (IAPA) in the Senior High School (SHS) before and during the COVID-19 period as perceived by the school leaders and the teachers?	Likert Scale			
	4 (Strongly Agree)	3 (Agree)	2 (Disagree)	1 (Strongly Disagree)
A. Before the COVID-19 Period				
1. Management of policies of the IAPA				
1.1 is observed to attain a learner-centered curriculum. (strengthens the attainment of learner-centered curriculum - original statement)				
1.2 is observed to attain the holistic growth of learners. (promotes the holistic growth of learners - original statement)				



1.3	is observed to maximize the use of performance-based assessments or tasks. (strengthens the use of performance-based tasks and technology integration - original statement)				
1.4	is observed to integrate technology in the learning process. (strengthens the use of performance-based tasks and technology integration - original statement)				
1.5	is observed to cater both face-to-face and distance learning modalities or blended learning. (caters both the face-to-face learning and the distance learning modality or the blended learning - original statement)				
	is observed by the involvement of the school leaders, experts, and teachers in the planning, implementation, monitoring, and evaluation of the IAPA. (deleted)				
2. Management of guidelines of the IAPA					
2.1	is specific and clear for both teachers and school leaders.				
2.2	is observed by encouraging the teachers to use the IAPA in all subjects.				
2.3	is observed by its regular review and modification based on the needs of the learners by involving them and other school partners.				
2.4	is observed by giving regular feedback from school leaders to teachers and by sharing of new updates in the use of the IAPA.				
2.5	is strengthened by benchmarking with other schools at least once a year.				
3. Management of procedures of the IAPA					
3.1	is observed by plotting the intended assessments and performance standards of each subject area using a matrix as part of the planning processes.				



3.2	is observed by conducting scheduled regular meetings and planning that allow for the collaboration of teachers within the level.				
3.3	is strengthened by the monitoring of the principal, vice-principals, coordinators, and/or team leaders through classroom visits, rounds, and/or observations.				
3.4	is strengthened by holding regular professional development for teachers and school leaders.				
	is observed by assigning coordinators and/or team leaders to regularly monitor and give feedback on the implementation of the IAPA. (deleted)				
B. During the COVID-19 Period					
1. Management of policies of the IAPA					
1.1	is observed to attain a learner-centered curriculum. (strengthens the attainment of learner-centered curriculum - original statement)				
1.2	is observed to attain the holistic growth of learners. (promotes the holistic growth of learners - original statement)				
1.3	is observed to maximize the use of performance-based assessments or tasks. (strengthens the use of performance-based tasks and technology integration - original statement)				
1.4	is observed to integrate technology in the learning process. (strengthens the use of performance-based tasks and technology integration - original statement)				
1.5	is observed to cater both face-to-face and distance learning modalities or blended learning. (caters both the face-to-face learning and the distance learning modality or the blended learning - original statement)				
	is observed by the involvement of the school leaders, experts, and teachers in the planning, implementation, monitoring, and evaluation of the IAPA. (deleted)				
2. Management of guidelines of the IAPA					



2.1	is specific and clear for both teachers and school leaders.				
2.2	is observed by encouraging the teachers to use the IAPA in all subjects.				
2.3	is observed by its regular review and modification based on the needs of the learners by involving them and other school partners.				
2.4	is observed by giving regular feedback from school leaders to teachers and by sharing of new updates in the use of the IAPA.				
2.5	is strengthened by benchmarking with other schools at least once a year.				
3. Management of procedures of the IAPA					
3.1	is observed by plotting the intended assessments and performance standards of each subject area using a matrix as part of the planning processes.				
3.2	is observed by conducting scheduled regular meetings and planning that allow for the collaboration of teachers within the level.				
3.3	is strengthened by the monitoring of the principal, vice-principals, coordinators, and/or team leaders through classroom visits, rounds, and/or observations.				
3.4	is strengthened by holding regular professional development for teachers and school leaders.				
	is observed by assigning coordinators and/or team leaders to regularly monitor and give feedback on the implementation of the IAPA. (deleted)				

Thank you very much for your time and cooperation.



INTERVIEW GUIDE FOR THE ASSESSMENT OF THE IMPLEMENTATION OF THE INTERDISCIPLINARY APPROACH IN PERFORMANCE-BASED ASSESSMENT

Directions.

Answer the given questions as comprehensive as possible based on your actual experiences in relation to the use and the implementation of the Interdisciplinary Approach in Performance-based Assessment (IAPA) in the Senior High School (SHS).

There are no right or wrong answers to these questions.

Please be reminded that this study focuses only on the experiences of the school leaders and teachers in relation to the improvement of the IAPA implementation during and after the COVID-19 period and does not cater the feelings nor experiences of the school leaders and teachers related to the preparation for the blended learning or online learning modality.

Rest assured that your answers will be treated with utmost confidentiality and will be used solely for this study. To ensure anonymity, the use of identification codes for the respondents of this study will be observed as answers are being transcribed.

Research Question 2: What are the strengths and the weaknesses of the IAPA in the SHS before and during the COVID-19 period as perceived by the school leaders and the teachers?

1. What are the strengths and opportunities of the IAPA's implementation before and during the COVID-19 period? **What are the strengths and the weaknesses of the IAPA's implementation before and during the COVID-19 period? (original question)**
2. What are the weaknesses of the IAPA before and during the COVID-19 period? **What difficulty or challenges have you encountered or experienced in the use of the IAPA in the new normal set-up? (original question)**
3. What are your suggestions and recommendations to improve the implementation of the IAPA in both face-to-face and online learning set-ups?

Thank you very much for your time and cooperation.



APPENDIX I

Survey Questionnaire

SURVEY QUESTIONNAIRE FOR THE ASSESSMENT OF THE IMPLEMENTATION OF THE INTERDISCIPLINARY APPROACH IN PERFORMANCE-BASED ASSESSMENT

Part I. Respondent's Profile

Directions. Please supply all the needed information.

Name (Optional): _____

Area of Specialization: _____

Name of School: _____

Sex: ☐ Male ☐ Female

Age: ☐ 20 years old and below ☐ 21 to 30 years old ☐ 31 to 40 years old
☐ 41 to 50 years old ☐ 51 years old and above

School Employer:

- ☐ Public
☐ Private

Position/Designation:

- ☐ Faculty
☐ School Administrator

Handled Year Level (currently teaching):

- ☐ Grade 11
☐ Grade 12
☐ Not Applicable

Teaching Experience (in years):



- ☐ 0 to 5 ☐ 6 to 10 ☐ 11 to 15 ☐ 16 to 20 ☐ 20 or more

Highest Educational Attainment:

- ☐ Doctorate Degree
- ☐ Master's Degree with Doctoral Units
- ☐ Master's Degree
- ☐ Bachelor's Degree with MA Units
- ☐ Bachelor's Degree

When was the last time you attended an Interdisciplinary Approach related seminar or workshop?

- ☐ 1 to 4 months ago
- ☐ 5 to 8 months ago
- ☐ 9 to 12 months ago
- ☐ 2 years ago
- ☐ 3 or more years ago
- ☐ Never

Part II. Research Data

Directions.

Read each statement and please check (✓) the box or scale that best describes your response. There are no right or wrong answers to these questions.

Please be reminded that this study focuses only on the experiences of the school leaders and teachers in relation to the improvement of the Interdisciplinary Approach in Performance-based Assessment (IAPA) implementation during and after the COVID-19 period and does not cater the feelings nor experiences of the school leaders and teachers related to the preparation for the blended learning or online learning modality.



Rest assured that your answers will be treated with utmost confidentiality and will be used solely for this study. Remember to mark one box for each item only.

Please be guided with the given Rating Scale.

Scale	Interpretation
4	Strongly Agree
3	Agree
2	Disagree
1	Strongly Disagree

To what extent do you agree or disagree with the following statements about the management of the existing policies, guidelines, and procedures on the implementation of the Interdisciplinary Approach in Performance-based Assessment (IAPA) in the Senior High School.

Research Question 1: How effective is the management of existing policies, guidelines, and procedures on the implementation of the Interdisciplinary Approach in Performance-based Assessment (IAPA) in the Senior High School (SHS) before and during the COVID-19 period as perceived by the school leaders and the teachers?	Likert Scale			
	4 (Strongly Agree)	3 (Agree)	2 (Disagree)	1 (Strongly Disagree)
A. Before the COVID-19 Period				
1. Management of policies of the IAPA				
1.1 is observed to attain a learner-centered curriculum				
1.2 is observed to attain the holistic growth of learners.				
1.3 is observed to maximize the use of performance-based assessments or tasks.				
1.4 is observed to integrate technology in the learning process.				
1.5 is observed to cater both face-to-face and distance learning modalities or blended learning.				



2. Management of guidelines of the IAPA				
2.1	is specific and clear for both teachers and school leaders.			
2.2	is observed by encouraging the teachers to use the IAPA in all subjects.			
2.3	is observed by its regular review and modification based on the needs of the learners by involving them and other school partners.			
2.4	is observed by giving regular feedback from school leaders to teachers and by sharing of new updates in the use of the IAPA.			
2.5	is strengthened by benchmarking with other schools at least once a year.			
3. Management of procedures of the IAPA				
3.1	is observed by plotting the intended assessments and performance standards of each subject area using a matrix as part of the planning processes.			
3.2	is observed by conducting scheduled regular meetings and planning that allow for the collaboration of teachers within the level.			
3.3	is strengthened by the monitoring of the principal, vice-principals, coordinators, and/or team leaders through classroom visits, rounds, and/or observations.			
3.4	is strengthened by holding regular professional development for teachers and school leaders.			
B. During the COVID-19 Period				
1. Management of policies of the IAPA				
1.1	is observed to attain a learner-centered curriculum.			
1.2	is observed to attain the holistic growth of learners.			
1.3	is observed to maximize the use of performance-based assessments or tasks.			
1.4	is observed to integrate technology in the learning process.			
1.5	is observed to cater both face-to-face and distance learning modalities or blended learning.			



2. Management of guidelines of the IAPA				
2.1	is specific and clear for both teachers and school leaders.			
2.2	is observed by encouraging the teachers to use the IAPA in all subjects.			
2.3	is observed by its regular review and modification based on the needs of the learners by involving them and other school partners.			
2.4	is observed by giving regular feedback from school leaders to teachers and by sharing of new updates in the use of the IAPA.			
2.5	is strengthened by benchmarking with other schools at least once a year.			
3. Management of procedures of the IAPA				
3.1	is observed by plotting the intended assessments and performance standards of each subject area using a matrix as part of the planning processes.			
3.2	is observed by conducting scheduled regular meetings and planning that allow for the collaboration of teachers within the level.			
3.3	is strengthened by the monitoring of the principal, vice-principals, coordinators, and/or team leaders through classroom visits, rounds, and/or observations.			
3.4	is strengthened by holding regular professional development for teachers and school leaders.			

Thank you very much for your time and cooperation.



APPENDIX J

Interview Guide

INTERVIEW GUIDE FOR THE ASSESSMENT OF THE IMPLEMENTATION OF THE INTERDISCIPLINARY APPROACH IN PERFORMANCE-BASED ASSESSMENT

Directions.

Answer the given questions as comprehensive as possible based on your actual experiences in relation to the use and the implementation of the Interdisciplinary Approach in Performance-based Assessment (IAPA) in the Senior High School (SHS).

There are no right or wrong answers to these questions.

Please be reminded that this study focuses only on the experiences of the school leaders and teachers in relation to the improvement of the IAPA implementation during and after the COVID-19 period and does not cater the feelings nor experiences of the school leaders and teachers related to the preparation for the blended learning or online learning modality.

Rest assured that your answers will be treated with utmost confidentiality and will be used solely for this study. To ensure anonymity, the use of identification codes for the respondents of this study will be observed as answers are being transcribed.

Research Question 2: What are the strengths and the weaknesses of the IAPA in the SHS before and during the COVID-19 period as perceived by the school leaders and the teachers?

1. What are the strengths and opportunities of the IAPA's implementation before and during the COVID-19 period?
2. What are the weaknesses of the IAPA before and during the COVID-19 period?
3. What are your suggestions and recommendations to improve the implementation of the IAPA in both face-to-face and online learning set-ups?

Thank you very much for your time and cooperation.



APPENDIX K

Basis for the Formulation of the Items for the Survey Questionnaire

No.	Item	Basis	Information
Management of Policies			
1	Management of policies of the IAPA is observed to attain a learner-centered curriculum. (strengthens the attainment of learner-centered curriculum - original statement)	Republic Act No. 10533 of 2013	The curriculum shall be learner-centered, inclusive, developmentally relevant, and appropriate.
		DepEd Order No. 21 series of 2019	
2	Management of policies of the IAPA is observed to attain the holistic growth of learners. (promotes the holistic growth of learners - original statement)	Republic Act No. 10533 of 2013	The curriculum shall use pedagogical approaches such integrative pedagogy that espouses the importance of connections and relationships of ideas and concepts between and among disciplines.
3	Management of policies of the IAPA is observed to maximize the use of performance-based assessments or tasks. (strengthens the use of performance-based tasks and technology integration - original statement)	DepEd Order No. 8 series of 2015	Performance-Task component allows learners to show what they know and can do in diverse ways. They may create or innovate products or do performance-based tasks.
4	Management of policies of the IAPA is observed to integrate technology in the learning process. (strengthens the use of performance-based tasks and technology integration - original statement)	DepEd Order No. 21 series of 2019	The K to 12 graduates are equipped with information, media, and technology skills, learning and innovation skills, life and career skills, and communication skills necessary to take advantages in the 21st century.
5	Management of policies of the IAPA is observed to cater both face-to-face and distance learning modalities or blended learning. (caters both the face-to-face learning and the distance learning modality or the blended learning - original statement)	DepEd Order 021 series of 2019	Flexible learning options, specifically alternative delivery modes offer the flexibility in instructional or learning modalities in which instructions and learning may be in face-to-face learning, distance learning, or blended learning.
		DepEd Order No. 12 series of 2020	
		DepEd Order No. 17 series of 2020	
Management of Guidelines			
6	Management of guidelines of the IAPA is specific and clear for both teachers and school leaders.	DepEd Order 021 series of 2019	The school shall observe the enhancement of curriculum implementation by aligning teaching-learning processes, formative and summative assessments, and the learning standards deemed appropriate to the learner's context.
7	Management of guidelines of the IAPA is observed by encouraging the teachers to use the IAPA in all subjects.	DepEd Order 021 series of 2019	The school shall observe the enhancement of curriculum implementation by aligning teaching-learning processes, formative and summative assessments, and the learning standards deemed appropriate to the learner's context.
		DepEd Order No. 42 series of 2017	Content knowledge and its application within and across curriculum areas as indicated in the Philippine Professional Standards for Teachers
8	Management of guidelines of the IAPA is observed by its regular review and modification based on the needs of the learners by involving them and other school partners.	DepEd Order 021 series of 2019	(1) The school shall observe the enhancement of curriculum implementation by aligning teaching-learning processes, formative and summative assessments, and the learning standards deemed appropriate to the learner's context. (2) The school shall observe regular monitoring and evaluation of initiatives by actively involving the learners and the other stakeholders as appropriate.
		DepEd Order No. 42 series of 2017	Community linkages and professional engagement under the Philippine Professional Standards for Teachers
9	Management of guidelines of the IAPA is observed by giving regular feedback from school leaders to teachers and by	DepEd Order 021 series of 2019	The school head shall provide technical support in contextualizing the curriculum and teaching learning materials and using learner-centered pedagogy and inclusive assessment



	sharing of new updates in the use of the IAPA.	DepEd Order No. 42 series of 2017	Curriculum and planning domain and assessment and reporting domain under the Philippine Professional Standards for Teachers
10	Management of guidelines of the IAPA is strengthened by benchmarking with other schools at least once a year.	DepEd Order 021 series of 2019	External linkages and partnerships must be expanded and strengthened to ensure proper coordination, resource sharing, and sustainability of inclusive education implementation.
Management of Procedures			
11	Management of procedures of the IAPA is observed by plotting the intended assessments and performance standards of each subject area using a matrix as part of the planning processes.	DepEd Order 021 series of 2019	Development of school implementing policies, mechanisms, and strategies for delivering equal and equitable opportunities for diverse learners.
		DepEd Order No. 42 series of 2017	Curriculum and planning domain and assessment and reporting domain under the Philippine Professional Standards for Teachers
12	Management of procedures of the IAPA is observed by conducting scheduled regular meetings and planning that allow for the collaboration of teachers within the level.	DepEd Order No. 42 series of 2017	Curriculum and planning domain and assessment and reporting domain under Philippine Professional Standards for Teachers
13	Management of procedures of the IAPA is strengthened by the monitoring of the principal, vice-principals, coordinators, and/or team leaders through classroom visits, rounds, and/or observations.	DepEd Order No. 42 series of 2017	Curriculum and planning domain and assessment and reporting domain under the Philippine Professional Standards for Teachers
		Transformational Leadership	In individualized consideration as one of the four elements of transformational leadership, leaders discuss and attend to the concerns and needs of each member of the organization, act as mentors and coaches, empower them, and promote continuing personal and professional development among employees.
14	Management of procedures of the IAPA is strengthened by holding regular professional development for teachers and school leaders.	DepEd Order 021 series of 2019	The school head shall provide continuous capacity-building on inclusive education of teaching and non-teaching personnel (e.g., LAC sessions, In-service training, mentorship).
		Transformational Leadership	In individualized consideration as one of the four elements of transformational leadership, leaders discuss and attend to the concerns and needs of each member of the organization, act as mentors and coaches, empower them, and promote continuing personal and professional development among employees.



APPENDIX L

Interview Responses

Interview Question 1: What are the strengths and opportunities of the IAPA's implementation before and during the COVID-19 period?			
Themes	Interpretation	Applicable Before / during COVID-19 / both	Responses
Promotes holistic development	IAPA promotes self-directed learning and holistic development. It advances students' critical thinking, creativity, communication, and collaboration	Both	AA1. The strengths of the IAPA before and during the COVID-19 are the same. IAPA ensures the holistic learning of the students across grade levels. (Teacher) AA2. IAPA could give holistic development and learning to the students. (Teacher) AA3. The strengths of the IAPA are that it focuses more on the holistic development of the learners. (Teacher) AA4. In Teaching, it (IAPA) helps advance critical thinking and cognitive development. Interdisciplinary instruction helps students develop their cognitive abilities - brain-based skills and mental processes that are needed to carry out tasks. (School Leader) AA5. Critical thinking is being developed. 4Cs – critical thinking, creativity, communication, and collaboration are being improved. (Teacher) AA6. IAPA focuses on the improvement of the 4Cs which are considered as 21st century skills. (Teacher) AA7. It gives actual opportunities for the students to be creative with subjects that seemingly is rigid and or as they would see boring with all the numbers and technicalities it has. (Teacher) AA8. There is no relative difference between the strengths of the IAPA before and during the COVID-19. Kasi, before COVID-19, IAPA helps the students to think critically and be more creative. It helps them deal with more communications and for holistic learning. Not just to the students but also to the teachers. During the COVID-19, ganoon din iyong tingin kong effect ng IAPA for the students and teachers. (Teacher) AA9. IAPA helps the students to become more creative, develop their higher order thinking skills, they are building more communication not just with their teachers but also with their classmates. (Teacher) AA10. IAPA promotes creativity and collaboration. (Teacher) AA11. IAPA provides a room for communication and collaboration among students. (Teacher)
Promotes mastery and meaningful learning	IAPA shows connections between different disciplines. It deepens students' understanding and mastery of learning through real-life applications.	Both	AB1. It shows connections between different disciplines. (School Leader) AB2. In IAPA, we are trying to integrate the different subjects to our own subjects. We are doing this to help our students know the significance of why we need to study this kind of topic and to make them realize that in one subject, other subject matter can also relate to it. (Teacher) AB3. Topic can be connected to other subjects for them (students) to understand and even the concepts discussed in the previous years are being integrated to have a better explanation. (Teacher) AB4. Shows the connections between different disciplines. (Teacher) AB5. The students are learning to connect all the subjects that they have learned into one. (Teacher) AB6. Even if the topics are far different from each other, students can identify their connectedness. (Teacher) AB7. The strengths and opportunities of the IAPA before and during the COVID-19 are almost similar. In terms of strengths of the IAPA is nagiging mas meaningful yung learning on the part of students because they can see the interconnectedness of their subjects. The students realize more that what they are studying in a particular subject is indeed useful kasi puwede siyang i-connect to another particular subject kaya mas narerealize nila na may sense yung pinag-aaralan nila. (School Leader) AB8. Through the IAPA, the students can relate one subject to another even if the topics are far different from each subject matter. (Teacher) AB9. Two to three (2 -3) subjects are being integrated. (Teacher) AB10. Strengths would be, it really is a holistic approach tackling bulk of topics not just for my specialization but also the subjects that may like to intertwine with my assessment. (Teacher) AB11. Just like mine with Chemistry, so, most of the time, it would really be fun having an experiment, intertwine with another subject or other discipline. (Teacher) AB12. We collaborate with other teachers to find out what their target performance standards are and because of that we could seek ways on how to possibly merge with the PT output that they want to come up with by just designing a performance task where both their performance standards as well as your subject's performance standards are taken into account. Let us say for example, you can just randomly ask a P.E Teacher and once you find out that they are doing a floor ball in the sports component of a subject then you'll have an idea as a physics teacher to integrate kinematics with it. (Teacher) AB13. We are implementing the IAPA even before the pandemic. In our school, we have different approach in performance or assessment. Let us say for example, in one subject, we can incorporate different subjects or in one performance task, we incorporate different subjects. Example, in Biology, the students are tasked to make a video about the awareness of the Covid-19, so the content is coming from the Biology, but the video making is from ICT. Even before the COVID-19, ginagawa na talaga naming siya in our school. (Teacher) AB14. (The) Students have the chance to see the importance of subject integration to a single task. (Teacher) AB15. The students know the value of subject integration and the relatedness among the disciplines into a single task. (Teacher) AB16. Hindi lang siya naka-anchor sa standards ng isang subject but also to the standards of other subjects. (Teacher) AB17. Generally, IAPA gives a perspective to students that the subjects they are taking are interconnected and not stand-alone only. (Teacher) AB18. It shows connections between different disciplines and their relationship to the real world. (School Leader) AB19. Application of lessons in real life situations. (Teacher) AB20. Mas nagiging malalim yung mastery at skill na dapat ma-enhance o ma-master ng mga students. (School Leader) AB21. As much as possible, we tend to give tasks to the students na pa-pasok yung maraming approach not just the traditional approach but of course we focus on how the students can apply the knowledge that they have learned to real-life situations. (Teacher) AB22. They realize that the lessons they learned can be used in various ways. (Teacher) AB23. IAPA allows students to see the interconnectedness of different subjects making their learning deeper. (Teacher) AB24. IAPA promotes the application of learning in real-life situations. (Teacher) AB25. Students are given more the chance to apply their learning beyond the classroom setting that allows them to master and understand the concepts more. (Teacher)



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Promotes creativity and resourcefulness during the online learning-set-up	IAPA allows teachers and school leaders to become more creative and resourceful in designing performance-based assessments during the online learning set-up, hence it maximizes the use of technology.	During COVID-19	AC1. Because of the restrictions, we really need to be creative in terms of implementing the IAPA during this time of COVID-19. (Teacher) AC2. During this time of pandemic, I believe that one of the strengths of the IAPA is that students and teachers become resourceful especially that for the teachers, sometimes, it is a challenge for us to think of performance-based assessment given that the students are at home and they have limited resources. But then the strength and opportunities in that is (that) teachers as well as the students become resourceful. (School leader) AC3. We try to create our own account in Facebook so that students can communicate with us using it. Using Facebook, students may ask questions anytime and the teacher will just answer to their questions or clarifications during the class hours. (Teacher) AC4. One of the strengths of the IAPA during this pandemic is technology integration. The students must adapt so that they will be able to cope with the new normal way of learning. (Teacher) AC5. This (IAPA) is especially useful during this COVID-19 pandemic. (Teacher)
Promotes less workload and saves time.	IAPA lessens the workload of students by merging the performance tasks of two or more disciplines into one. Also, it lessens the workload of teachers in terms of checking and grading outputs. Thus, saves the time of both teachers and students since students can work longer to accomplish their tasks and teachers can allot more time in scrutinizing students' outputs. IAPA allows students to work longer on the given tasks and to exert more efforts in accomplishing them.	Both	AD1. If for example the students have 9 subjects, and all these subjects will give their separate performance tasks, it would be difficult for the students unlike if subjects will combine for the performance task. (Teacher) AD2. In terms of opportunities, on the part of the learners, mas nagiging magaan sa kanila yung pag-gawa ng tasks. Instead of each subject will be giving a particular task, so halimbawa 9 na subjects, 9 na tasks ang ibibigay, e mabigat sa parte ng mga bata. In our school, we have what we called articulation where interdisciplinary approach is being considered. Through this, mas napapa-konti naming iyong tasks. (School Leader) AD3. During the COVID-19, I appreciate this IAPA when it comes to the outputs of the students. Since we only have 1 performance task covering all the subject areas. (Teacher) AD4. At first it will be difficult for the teacher to do it, but we have to see the output behind this activity and then later it will also be easier for the teachers once they checked the outputs. Checking several students' outputs and several activities is also the same when it comes to the burden of the students in which they will submit several outputs to different subjects with different grades. Unlike if we can collaborate all these areas then we just simply focus on fewer tasks. (School Leader) AD5. Maganda iyong IAPA, hindi lang for the teachers, it will be less preparation, less way of checking, but for the students as well, especially now that most students are doing several performance tasks at the same time. For example, for a week, they have three performance task and that is stressing for the students and if they will be applying the IAPA then male-lesser iyong activities ng mga students. (School leader) AD6. Implementation of IAPA during this time of pandemic where there is pedagogical shift from traditional or face-to-face to online is very relevant considering the bulk of tasks that they (students) are doing. (Teacher) AD7. I tried using the IAPA during the COVID-19 in my science subject together with oral communication and media information literacy subjects. The students were able to do it. It is good kasi nga nabawasan yung task na gagawin ng mga bata nagiging isang performance task na lang siya considering 3 disciplines are involved. (Teacher) AD8. It lessens the academic workload of the students whenever IAPA is being used since one task is being used by two or more disciplines. (Teacher) AD9. On the perspective of the students regarding its use is that less workload. Kasi for Grade 11 as far as I know 10 subjects yung time-take nila so kapag nagakakaron ng IAPA, magiging less than the number of subjects that they are taking in iyong outputs na kailangan nilang gawin. (Teacher) AD10. It lessens the bulk of requirements students must do. (Teacher) AD11. Since the environment for the students drastically changed, this (IAPA) is one way to lessen the academic obligation. (Teacher) AD12. In that case, yung mga students mas natututukan nila yung mga tasks na gagawin nila. Mas konti yung task, they will exert more time and effort to accomplish those tasks. (Teacher) AD13. IAPA saves time. (Teacher) AD14. Through this (IAPA), they can have more time to attend to themselves and to their families. (Teacher) AD15. In that case, yung mga students mas natututukan nila iyong mga tasks na gagawin nila. Mas konti iyong task, they will exert more time and effort to accomplish those tasks. It is an opportunity because it means students will submit quality outputs. (School Leader) AD16. Mas kakaunti iyong task na ginagawa ng mga bata kaya mas nagiging maayos ang output nila. (Teacher) AD17. It saves the time of both teachers and students since lesser tasks are to be done and to be checked. Both teachers and students benefit in the use of IAPA. (Teacher)
Helps meet the learning competencies	IAPA allows students to meet and master the standard learning competencies of each subject matter involved in the IAPA.	Both	AE1. Sa IAPA, mas naha-highlight yung mga skills na dapat ma-master ng mga bata kasi nakikita iyong connections ng bawat subject, nagtutulongang yung bawat subject para ma-master yung mga competency. (School Leader) AE2. It ensures that the outputs to be submitted are with efforts and the skills that must be observed are seen properly. (Teacher) AE3. In designing a performance task both the performance standards of the subjects involved are taken into account. (Teacher) AE4. Through this (IAPA), they (students) can have more time to attend to themselves and their families without sacrificing the integrity of the assessments given to them. (Teacher)
Promotes collaboration and teamwork	IAPA allows teachers and students to communicate and collaborate. It posters harmonious relationship among teachers and among students.	Both	AF1. Mas nae-enhance o mas napro-promote yung collaboration among teachers across subject areas. (School Leader) AF2. The collaboration among teachers in relation to the use of IAPA poster harmonious relationship, cooperation, and collaboration among teachers. (School Leader) AF3. We (teachers) collaborate with other teachers to find out what their target performance standards (are). We observe conversation with colleague and then ask them what they are up to for their performance task and what they plan to do with their subject. (Teacher) AF4. I do love this integration. It is really good for the students wherein they (students) will be based it on learning though they are far from each other they can collaborate. (Teacher)
Encourages students' motivation	IAPA allows students to become more competitive and motivated since they are working collaboratively.	Both	AG1. IAPA helps the students to become more competitive with respect to their different subjects, specifically here in science, biology, dito napapakita ng students iyong kanilang creativity, the development of higher order thinking skill, they are being more resourceful especially today. (Teacher) AG2. IAPA really helps the students since it is interactive and requires the students to focus on the specific activity. (Teacher) AG3. The students are active and engaged in terms of the task given to them. (Teacher)
Less stress for students	IAPA helps students to lessen the stress related to their workload since fewer tasks are to be accomplished as compared to the total number of their subjects. IAPA is also very relevant during the online learning set-up since it lessens the anxiety brought by the pandemic due to overwhelming	Both	AH1. It is really effective, and it really helps the students not to be too stressed when it comes to their performance tasks. (Teacher) AH2. To lessen the anxiety brought about by the current condition is to use IAPA. (Teacher) AH3. IAPA lessens the workload of the students making them not to be too stressed in terms of the number of tasks that they must accomplish. (Teacher)



	tasks to accomplish by the students.		
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Interview Question 2: What challenges have you encountered in the use of the IAPA before and during the COVID-19 period?			
Themes	Interpretation	Applicable Before / during COVID-19 / both	Responses
IAPA implementation is more intensified before COVID-19	Since many preparations are being observed in line with the online learning set-up, some schools are still preparing for the IAPA implementation this school year or are about to implement it during the second semester leading to the observation that its implementation is more intensified before the COVID-19 than today. No specific schedule to implement the IAPA. Teachers are only relying on the available schedule of the students considering that they still have their modules to answer.	During COVID-19	BA1. If you are going to ask if it is intensified, of course it was more intensified before because we can easily have our activity with the students or group activity. (School Leader) BA2. Mas nakakapag allot talaga kami ng time to sit down, face-to-face, to discuss. Iba kasi pag face-to-face naguusap yung mga teachers to articulate the performance tasks. (Teacher) BA3. In online, we are only relying on the available schedule of the students considering that they still have their modules to answer. BA4. We are only scheduling a meeting for the online session during this time of pandemic to meet the students, unlike if it is not online, students can easily have the communication since they can meet anytime even during their free time. (Teacher)
Technical difficulties/ limitations	Both students and teachers are encountering technical difficulties; most of the students and some teachers are just using data connection or have poor internet connection at home making it hard for them to communicate and collaborate during the online learning set-up. Longer time allotted for meetings due to online platform's limitations. Limited means to verify if the students are the ones performing the given tasks.	During COVID-19	BB1. Before the COVID-19, we can easily have the collaboration because we can meet anytime specially during our break. But now, in terms of internet connectivity it is difficult for us to discuss aside from the use of messenger. (School Leader) BB2. Even if we have power students (students who are using online/distance learning), they still struggle with internet connection and some students are also working. (School Leader) BB3. Internet connection problems. (Teacher) BB4. Pero ngayon dahil limited lang ang time at nagkaka-problema pagdating sa internet, hindi pa rin talaga nai-implement. Though they (administration) informed us that we are going to use it (IAPA) this school year. Mas papa-igtingin yung pag-gamit ng IAPA ngayong pandemic dahil nga nahihirapan iyong mga bata dahil sa dami ng performance tasks na ginagawa nila. (Teacher) BB5. The first challenge during this time of COVID-19 is communication since students and teachers are just communicating only through online. (Teacher) BB6. Ang nangyari lang because of the COVID-19, the meeting among teachers is virtual and it limits the discussion. Nakakapag-usap naman kaso iba pa rin kapag nakikita at nakakausap mo (iyong teachers), you can react and discuss things na kung saan mas makakatulong para mas maging meaningful iyong pag-gawa o articulation ng tasks. Pero kasi kapag virtual because of the pandemic, nakita namin na parang ang hirap mag-discuss. Kasi talagang limited lang ang pwedeng mag salita, isa-isa ang pagsasalita. Although nakakapag-articulate naman pero napaka limited ng discussion na nangyayari among teachers when they do it virtually. (School Leader) BB7. One factor is the internet connection. Not all teachers and students have the internet connection. They are just using their cellphone and the tablet provided by the local government. Not all students have the capacity to buy a tablet or laptop especially during this time of pandemic. (School Leader) BB8. It is something that is hard to do in this kind of set-up during the COVID-19 pandemic because of course we are more restricted when it comes to discussion. (Teacher) BB9. Before the COVID-19 period, it is much way easier to collaborate with other teachers to find out what their target performance standards are and because of that we could seek ways on how to possibly merge with the PT output. (Teacher) BB10. It is easy during the face-to-face scenario to like to sit with other teachers and discuss. (Teacher) BB11. It is easy to collaborate with teachers before the COVID-19 period. It is easy to ask them what your plans with your performance task are and knowing your target competency in your own subject, it is easy to think of ways on how you could possibly merge your performance task to some other subjects. (Teacher) BB12. Technical difficulties – most of the students are experiencing technical difficulties during this time of pandemic. In addition, bad weather also affects the internet connection in the country. (Teacher) BB13. Since limited iyong communication, iyong interaction kapag nagaarticulation kami, ang tagal sa virtual-ngayong COVID-19 pandemic. It will take us 2 hours or 3 hours, kasi sa meeting ayun palang iyong unang pag-usap kumbaga doon pa lang nililinis yung mga tasks. Hindi katulad dati na may initial usapan na, ide-defend mo na lang during the main meeting. (School Leader) BB14. Assessment on the students. It is hard to verify whether they are the one who really did the alternative tasks or IAPA. (Teacher) BB15. The students are mentioning that they are too burdened in most of their subjects due to the performance tasks that require video presentations. (Teacher) BB16. Because of the pandemic, we ended up with online distance learning. I find it to be the weakness kasi mas lalong nalimitahan kung ano man iyong interdisciplinary performance assessment na pwedeng ibigay ng mga subjects. (Teacher) BB17. There are limited activities during the new normal. (Teacher) BB18. Ang hirap ng communication ng mga bata ngayon kasi hindi lahat sila ay may access sa internet. (Teacher) BB19. Internet connection is the major concern in its implementation during the new set-up. (Teacher) BB20. Students are having difficulty in collaborating with their classmates due to the limitations of the online learning set-up. Not all students are online during the making of the task. (Teacher) BB21. Most of the time, teachers asked the students to make a video to see their actual performances. It is quite challenging to countercheck if the students are the ones doing their tasks that is why we make use of video presentations for their performance tasks. (School Leader) BB22. Communication is really difficult due to online set-up limitations. (Teacher)
Students are out of focus	Since students are just staying at home, students tend to have lack of focus on their tasks.	During COVID-19	BC1. The students are out of focus in their tasks. (Teacher) BC2. During this COVID-19, the focus of the students is divided into many factors such as their family, module, school, and others. (Teacher) BC3. If this (IAPA) is being implemented in the face-to-face learning set-up, the students will stay focus on the task given to them. (Teacher) BC4. There are many factors affecting the attention of the students during this time of pandemic making it hard for them to focus on the tasks given to them. (Teacher)



			BC5. Lack of focus is the main problem. (Teacher)
One-time big-time task	Each subject matter must create their own rubrics to be used in the IAPA to ensure that objective grading will be observed and to avoid inconsistency.	Both	BD1. It is a one-time big-time task since one output will cover two or more subjects. Yes, it lessens the workload of the students but if the output of the students is not that good, automatic it will greatly affect their grades. (Teacher) BD2. Creating rubrics suitable for IAPA and that will measure the attainment of the objectives is the most challenging one. (School Leader) BD3. Personally, the lack of reliability, inconsistency in grading. (Teacher) BD4. Designing and grading IAPA are the weaknesses. (Teacher) BD5. Use of rubrics should be observed by teachers to grade outputs properly. (Teacher) BD6. It is quite a big challenge for the students especially if they do not focus on the output well because many subjects are involved in one single task. (Teacher)
Teacher's hesitance and resistance to change	Teachers are hesitant to adopt the IAPA since they are not fully aware of its advantages making them resistant to change their means of assessment.	Both	BE1. For the challenges, since we are working together, sometimes teachers have different ideas and are resistant in which we cannot force them to follow or agree. (School Leader) BE2. Teachers are hesitant to do this (IAPA). (School Leader) BE3. Teachers are afraid to change what they are already doing. (School Leader) BE4. Teachers are hesitant to do it because we are still not familiar with it yet. (Teacher) BE5. Some teachers do not want to use the IAPA and are sticking with the old method of assessing students which is by subject area. (Teacher)
Difficulty in communication and collaboration	No specific schedule for teachers to meet their partner teachers making it hard for them to meet at a common time. Meetings of partner teachers are usually observed during their free time or beyond school hours.	Both	BF1. Communication among teachers. (School Leader) BF2. Teachers really have to collaborate; time and efforts are to be considered. (School Leader) BF3. Before the COVID-19 period, it is much way easier to collaborate with other teachers to find out what their target performance standards are and because of that we could seek ways on how to possibly merge with the PT output. (Teacher) BF4. It is easy during the face-to-face scenario to like to sit with other teachers and discuss. (Teacher) BF5. It is easy to collaborate with teachers before the COVID-19 period. It is easy to ask them what your plans with your performance task are and knowing your target competency in your own subject, it is easy to think of ways on how you could possibly merge your performance task to some other subjects. (Teacher) BF6. Time of teachers. Usually, classes end at 4:00 to 4:30 PM, meaning, the teachers are already tired during this time. However, meetings are still being observed to discuss the performance tasks which compromises the output of the meeting. (School Leader) BF7. Kung paano kami maghahanap ng common time to discuss it (IAPA) among ourselves kasi most of the time, we can only accommodate that after class. E since most of the teachers, meron din silang tasks na gagawin, meron din silang obligation, and at the same time it is beyond the work hours na tapos na iyong sa regular schedule nila, so parang ang hirap humanap ng schedule kung paanong paguusapan, u-upuan iyong articulation ng performance tasks. Though, nakakahanap naman kami ng time to discuss that among ourselves, iyon lang (ang) mahirap lang talaga iyong magkaroon ng common schedule, magkasundo kung kailan gagawin iyong articulation. (School Leader) BF8. The first challenge during this time of COVID-19 is communication since students and teachers are just communicating only through online. (Teacher) BF9. Before and during the COVID-19 almost the same problem is observed which is in terms of collaboration among teachers. It is really hard to constantly have the teachers collaboration due to their different schedule. (Teacher) BF10. Communication among teachers is challenging even before the COVID-19 because of the many tasks that we have to finish during our extra time. (Teacher)
Difficulty in integrating subjects/ topics	Some topics from different disciplines are not possible for the IAPA.	Both	BG1. There are subjects that are difficult to integrate with. (Teacher) BG2. It would really be difficult to implement it since there is a huge gap between lessons among the different subjects that affects the performance task integration. (School Leader) BG3. Not all the subjects have suitable activities for them to collaborate. For example, mathematics and oral communication, looking at the standard, iyong mga IAPA na magagawa e hindi ganoon ka suitable in other disciplines. (Teacher) BG4. Not all subjects are possible for integration. (Teacher) BG5. It is difficult to integrate subjects especially in the senior high school since some subjects are being offered in different year level or in different semester. (Teacher) BG6. Some topics are complicated to be used for integration. (Teacher)
Designing a good IAPA	Designing a good IAPA without compromising the performance standards and standard learning competencies of each subject matter involved in the IAPA. Students have the tendency to focus on one subject compromising the other subjects involved in IAPA. Tendency not to identify the level of difficulty in designing performance tasks. The IAPA must be authentic and must be in the Philippines context so that students can easily relate to it.	Both	BH1. Teachers are too excited with the task that it looks difficult for the students to achieve. There at times, we, teachers, forget the level of difficulty. We usually get excited to the point that we are really being so idealistic about it and we forget to level the difficulty of the task. (Teacher) BH2. Meeting all the objectives especially the subjects involved. (School Leader) BH3. Thinking about the specific performance task (during the collaboration) is really a challenge. Like, paano ito maaaply sa mathematics, sa computer, at sa science. But they have the different topics. For example, we are talking about astronomy and then in mathematics they have algebra, so mahirap. But then, the challenge comes in thinking of task or assessment na mamemeet yung standards ng 2 subjects na iyon, and about the rubrics as well. (School Leader) BH4. Designing a single PT (Performance Task) that attacks two or more subjects at the same time. (Teacher) BH5. Designing and grading IAPA are the weaknesses. (Teacher) BH6. As a teacher, you might be worried that some students of yours are not focusing on your subject anymore. There is a possibility that the students will focus more on the other subject that has more technicalities than your subject. Hence, one subject or two subjects might be compromised. (Teacher)
Not strictly implemented	IAPA is not strictly implemented.	Both	BI1. It is being observed even before the COVID-19 period, but not always. (School Leader) BI2. Because it is challenging, minsan lang namin siya ma-practice. So, for example, in one quarter. (School Leader) BI3. The implementation of IAPA is not strict, so what happens is that yung mga subjects ay nagkakanya-kanya na lang. Hindi na nagakakaron ng Interdisciplinary approach sa performance-based assessments. (Teacher) BI4. The implementation is not that strict making it difficult for us to use it. (Teacher) BI5. Not strictly implemented. (Teacher) BI6. We are implementing it but not yet fully implemented due to some reasons such as scheduling. (School Leader) BI7. IAPA is being implemented even before the pandemic but it is up to the teachers' initiative. It is not being monitored that much, that is why if it is not possible to use it, then we do not use it. (Teacher)



Interview Question 3: What are your suggestions and recommendations to improve the implementation of the IAPA in both face-to-face and online learning set-ups?			
Themes	Interpretation	Applicable to Face-to-Face / Online Learning Set-up / Both	Responses
Provide series of trainings and seminars on IAPA, module making and designing assessments.	Provide trainings and seminars on module making and designing assessments to ensure that the interdisciplinary tasks given to students are relevant and appropriate.	BOTH	CA1. The administration of the school really needs to train the teachers and make them realize the importance of IAPA. (Teacher) CA2. Huwag madiliin. Most of the time during the training period, discussion is being observed in the morning and presentation of outputs is being observed in the afternoon leading to a half-baked output and learning. The administration really needs to think on how to maximize the trainings in a sense that teachers will be able to use and implement them during the school year. (Teacher) CA3. Use of LAC session, so teachers can easily discuss together. (Teacher) CA4. Give extra time to conduct webinars and trainings. (Teacher) CA5. Provide more trainings and seminars for the teachers. (Teacher) CA6. More seminars, example collaboration from district 1 to district 6 in which we could get ideas or examples being exhibited in one district and that could be adopted in our school. CA7. More seminars and trainings. (School Leader) CA8. I just think that to maximize its potential, more seminars, trainings, or even modules should be provided. (Teacher) CA9. There are no formal trainings given to us. (Teacher) CA10. The DepEd (Department of Education) should really think of ways on how integration be included in the module so that the students will be de-loaded as well. (Teacher) CA11. Primarily, designing assessments skills must be strengthened to ensure that the interdisciplinary tasks given to students are relevant and appropriate. (Teacher) CA12. I hope they consider providing more trainings to us, teachers. (Teacher) CA13. They can provide more seminars for teachers and school heads for us to master the use of the IAPA. (Teacher) CA14. More professional sharing about it. (Teacher)
Present the benefits and importance of the IAPA to students and teachers.	Present its rationale, benefits, and importance to both students and teachers to be able to increase awareness on its advantages.	BOTH	CB1. Make them (teachers) realize the importance of IAPA because of course if the teachers will not realize its importance (IAPA) then they will not do it. Even if you tell them na maganda ito, okay ito, they will still not do it. Why they will do it if they already have activities given to their students. Why do they need to transfer from one strategy to another? So, teachers really need to realize its importance for them to do it. (Teacher) CB2. Focus on the positive impacts of the IAPA during the seminar, probably the speaker will have to say all the positive impacts of this IAPA: 1) depth – in one subject we can see the application or integration of the other subjects into one, 2) performance task – they also collaborate especially during the pandemic and even after the pandemic, 3) interaction – of the students. (School Leader) CB3. Let us try to explain the understanding of the concept of the IAPA is to help the students build their ability and to transfer kung ano iyong natutunan nila into a new setting or should be involved in a real-life situation. (Teacher)
Assign a person who will monitor the implementation of the IAPA.	Assign a person who will monitor the use of the IAPA to ensure its strict and proper implementation. This will help in ensuring proper channeling of communication and proper coordination of concerns.	BOTH	CC1. The presence of strict monitoring is important. If you will not monitor it then teachers will not do it. (Teacher) CC2. Proper channeling of communications, I think, must really be a suggestion. It is really a must. So that both students, school leaders, and teachers will be enamored with the objectives and the procedure proper of the assessment. (Teacher) CC3. There should be a stricter implementation of having IAPA. (Teacher) CC4. A team leader should monitor the IAPA. (Teacher) CC5. IAPA should be implemented constantly through the help of coordinators or level heads. (Teacher) CC6. There should be a school head who will address our concern about it. (Teacher) CC7. Strict monitoring should be implemented so that all teachers will use it always and not just use it whenever they want. (Teacher) CC8. The presence of school leaders in its implementation will help in its proper and strict implementation. (Teacher)
Include IAPA planning, meetings, and actual implementation in the academic calendar.	Include the IAPA planning, meetings, and actual implementation in the academic calendar to ensure a well-organized schedule. This will help in ensuring a realistic schedule for its preparation and actual implementation. This will also give teachers time to meet their partner teachers to plan the IAPA during the official scheduled meeting.	BOTH	CD1. Specific time for planning is needed. (Teacher) CD2. If the DepEd (Department of Education) will only have ample time to prepare, then they can do it. If the DepEd will only have one body who will create the module and the central office will be the one to create the module and not by division or region, then I think all the materials will be congruent since they have the specialists already who can plan on how they can integrate the different subjects. (Teacher) CD3. Before the start of the school year, presentation of all the performance standards per subject area must be observed and have the discussion on the possible collaboration among the different subject areas so that once the school has started, we can immediately present the tasks to the students. (Teacher) CD4. I would recommend planning this ahead of time so that we can really plot, for example plot in during summer so that we can see what are the possible performance tasks that we can work on. (School Leader) CD5. Teachers have to be conscientious when it comes to merging the performance standards that they want to put in the same PT (Performance Task). (Teacher) CD6. It is very important to consider a well-planned schedule of activities for the collaboration across subject areas. (Teacher) CD7. Maganda na upuan before the start of the school year. Unahin na i-list down iyong mga topics na idi-discuss. Afterwards, upuan as one academic council – all the teachers from different disciplines – then identify the topic outline, the standards of each subject, and the suggested activities. (Teacher) CD8. IAPA is effective since both learning, and the mental health of students are being considered. There should be more time to be allotted in preparation for the IAPA implementation. (Teacher) CD9. Give time for unexpected events when scheduling the academic calendar. Like last year we have multiple cancellation of classes that affects the IAPA schedule and target. For example, we planned up to lesson 7, but we were able to cover up to lesson 5 only, and when we looked at our partner subjects for IAPA, they were able to cover their target lessons which affected the collaboration for the IAPA. So, if in conducting the IAPA, I think, planning should not only be about the performance task and integrated lessons, but then also the schedule. (School Leader) CD10. Teachers have to be more consistent in collaborating with one another. (Teacher) CD11. Manage time – have a proper scheduling. If you are using the IAPA, you must find time for the teachers to be available at the same time so that they will not do it after the class time. (Teacher) CD12. IAPA should be done during the class hours. (Teacher) CD13. Enough time should be given in planning this. (Teacher) CD14. I think it would be better if it is included in our schedule so that there will be a scheduled time in which all of us can sit and discuss together. (Teacher)



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			CD15. Scheduled meetings should be taken into consideration ahead of time so that teachers who will work together will make themselves available for the identified time. This will help us plan and work for the IAPA. (Teacher)
Contextualize and consider the level of difficulty when designing the IAPA	Teachers should always contextualize and consider the level of difficulty when designing the IAPA to ensure its appropriateness and authenticity.	BOTH	CE1. Context. We are in the Philippines, contextualize the assessment with that of student's environment. Most of the time, we, teachers get or develop our assessments from the internet, from the US, or from the other resources, and we usually forget to contextualize them. (Teacher) CE2. Level the task to the availability of the resources and if it is really achievable. (Teacher) CE3. Consider the idea of minimum viable outcome, always. (Teacher) CE4. If there is something that has to be maintained, it has to be the conscientiousness that teachers put into designing performance tasks such that it is not overwhelming on the part of students but at the same time, the performance standards are still properly assessed given the design of the performance task. (Teacher) CE5. Do not force the IAPA just for the sake of integrating and lessening the workload. I know that the teachers are thinking of lessening the workload of the students in handling out performance tasks, but also think about how the students will learn more from the performance-based assessments. (Teacher)
Observe benchmarking and collaborate with different stakeholders	Observe benchmarking and mentoring to improve the use of the IAPA. Teachers and school leaders should collaborate with different stakeholders to strengthen the use of the IAPA. Stakeholders such as parents can help in recommending IAPA experts who can serve as resource speakers during the trainings and seminars. Also, collaborating with parents can help in the success of the IAPA implementation since they can help teachers in monitoring their children's performances.	BOTH	CF1. For the teachers, they must be given or supported by many references, benchmarking, so that they can get another idea on how to maximize and improve the use of the IAPA. (Teacher) CF2. The teachers must be exposed to new or other ideas. (Teacher) CF3. The teachers can observe the other teachers or the middle administrators to get new ideas as part of the mentoring program. (Teacher) CF4. References are what really lacking in public. (Teacher) CF5. Identify what type of program is to be given to the teachers. The administration should do an action in relation to those teachers who are not upgrading or not having further studies, so that they will be updated with the latest information or things happening in education. (Teacher) CF6. The school principal, together with the master teachers should train the teachers. (Teacher) CF7. After the meeting of teachers, the possible tasks for integration should be presented to the parents so that they can see the expected outputs and schedule. (Teacher) CF8. Since there is a little existing expertise in the use of IAPA in Philippines, marami pang teachers and students na hindi pa ganoon kagamay iyong IAPA. I think we need more collaboration, not just with students but also with the teachers and other stakeholders like parents and administrators. (Teacher)
Provide a clear guideline on the use of the IAPA	Since most schools do not have the concrete guidelines on how to use and implement the IAPA, making it as an academic program will help in establishing concrete guidelines on its use and implementation. The guidelines should also be distributed to the teachers so that they will be guided in using and implementing it.	BOTH	CG1. The school leaders should create a guideline on how to use the IAPA. (Teacher) CG2. Right now, hindi pa totally structured iyong IAPA namin. Hindi pa siya concrete na program. We do this, ginagawa na namin talaga siya. Ayun nga lang wala siyang specific na flow o procedure o process na gagawin para makita kung paano talaga iyong smooth na pagsasagawa ng IAPA. (School Leader) CG3. IAPA should be considered as a structured program in which it should have rationale, procedure, specific process, and evaluation. Admittedly, we were not able to evaluate, di kami nakakapag-evaluate kung successful ba, maganda ba yung nagiging implementation, okay ba iyong procedure namin. (School Leader) CG4. It is good not only in our school but also in other schools to have a structured program, to follow for a smooth and effective implementation of IAPA to ensure the quality of instruction and the quality of performance-based assessments that are given to the students. (School Leader) CG5. (Provide) clear instructions. (Teacher) CG6. Unfortunately, wala po kaming specific guidelines. Our superior and us teachers encourage ourselves to implement this (IAPA). Initiative na lang namin since we know that in a modern time mas okay talaga siya. Hindi lang for the teachers of course sa welfare din talaga ng mga students. Pero wala kaming specific guidelines for this. (Teacher) CG7. Manuals about how to systematically go about this (IAPA) be given to teachers. (Teacher) CG8. A copy of the guidelines should be given to us and not just verbally given. (Teacher)
Consider school leader's motivation to teachers	School leaders should consider encouraging and empowering teachers to maximize the use of the IAPA not only to their advantage but to students' advantage.	BOTH	CH1. The best thing is to have a leader who will motivate the teachers in the implementation of the IAPA. (School Leader) CH2. The manner the leader monitors the teacher is also an important factor in the IAPA implementation. The leader must show the motivation and energy to also encourage the teachers to do the same. (School Leader) CH3. Administrators should consider motivating and encouraging the teachers more to use it. (Teacher) CH4. Mas tulungan at gabayan sana kami sa pag-gamit nito. School heads' empowerment should be considered. (Teacher) CH5. The use of the IAPA would be better through the right motivation that administrators are giving to us, teachers. (Teacher)
Document and evaluate the use and outputs of the IAPA	Documenting the outputs of the IAPA and evaluating its use can help in improving its implementation. This can also serve as references for teachers as they design and improve their IAPA.	BOTH	CI1. One suggestion for schools is to have it formal, and I think the main text for the IAPA they have from the previous academic year. So, it's like having a portfolio for teachers to choose from or improve from. Parang just collate the previous tasks and then move from there. (Teacher) CI2. Compilation of outputs and instructions should be considered so that teachers can use them as their references. (School Leader) CI3. IAPA should be evaluated regularly for its improvement. (Teacher) CI4. Evaluation of IAPA is necessary to be conducted so that teachers and administrators can identify the areas to improve on. (Teacher)
Use of rubrics intended per subject matter	Teachers should use and design rubrics intended for their subject matter to objectively grade students' outputs based on their subject matter's performance standards.	BOTH	CJ1. Interdisciplinary approach is really good, and one advantage is that you are basically lessening the workload of students because in one single output everything is there. But one thing that everybody has to be careful with is that all of the performance standards are properly assessed and the use of proper scoring rubric. Rubrics should be properly designed to assess the specific performance standard that the Department of Education has in the curriculum guide. (Teacher) CJ2. Creating rubrics suitable for IAPA and that will measure the attainment of the objectives is the most challenging one. (School Leader) CJ3. Use of rubrics should be observed by teachers to grade outputs properly. (Teacher)



APPENDIX M

Certificate of Statistical Review

CERTIFICATE OF STATISTICAL REVIEW

CERTIFICATION

March 20, 2021

This is to certify that the data and results through statistical analysis of master's thesis entitled:
"Assessment of the Use of Interdisciplinary Approach in Performance-based Assessment: Basis for an Improved Implementation in the New Normal" by Ms. Marjorie P. Naquita have been reviewed, checked, and validated.


Mariella Anne P. Nicolas
Statistician



PHILIPPINE NORMAL UNIVERSITY

The National Center for Teacher Education

APPENDIX N

Certificate of Language Editing

CERTIFICATE OF LANGUAGE EDITING

CERTIFICATION

May 13, 2021

This is to certify that the master's thesis entitled: *"Assessment of the Use of Interdisciplinary Approach in Performance-based Assessment: Basis for an Improved Implementation in the New Normal"* by Ms. Marjorie P. Naquita has undergone language editing.

This certification is issued to Ms. Marjorie P. Naquita for whatever purpose it may serve her.

Irianne G. Labangon

Language Editor



CURRICULUM VITAE



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Master of Arts in Education with Specialization in Educational Management
Philippine Normal University-Manila (2016 – present; Thesis Writing)

Participating in Workplace Communication

TESDA – Online Course (May 2020)

Receiving and Responding to Workplace Communication

TESDA – Online Course (April 2020)

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Abangan Sur Elementary school (2006)

WORK EXPERIENCE

Senior High School Science Teacher at San Beda University-Manila

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Senior High School Club Moderator at San Beda University-Manila

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Junior High School Science Teacher at Claret School of Quezon City

2014-2019

Junior High School Class Adviser at Claret School of Quezon City

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Junior High School Club Moderator at Claret School of Quezon City

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SEMINARS/ TRAININGS ATTENDED

1st PASUC NCR Education Forum: Emerging Practices in Remote Learning Across Disciplines

PASUC NCR Education Forum – Philippine Normal University (May 31, 2021)

ICEME 2021: 5th International Conference on Educational Measurement and Evaluation

Philippines Educational Measurement and Evaluation Association Inc. (May 26-28, 2021)

Designing Distance Learning Laboratory Class in Chemistry for Basic Education Teachers

Philippines Association of Chemistry Teachers, Inc. National Chapter (July 18, 2020)



MY ULTIMATE GOAL

To provide quality education to learners and to hone them to become better individuals and citizens.

Teaching Chemistry Courses During the COVID-19 Pandemic

Philippines Association of Chemistry Teachers, Inc. National Chapter (July 10, 2020)

Instructional Design in Remote Teaching and Learning

Department of Information and Communications Technology (July 2, 2020)

Designing Student-Centered Assessment in Flexible Learning

Philippine Educational Measurement and Evaluation Association (May 29, 2020)

Transitioning the Education Ecosystem to the New Normal Webinar Series

Commission on Higher Education, Regional Office (May 28, 2020)

Integrating Assessment in Designing an Online Lesson

Philippine Educational Measurement and Evaluation Association (May 20, 2020)

The New Normal' Reality: Unraveling the New Dimensions in Research, Education, Instruction and Operations

C & E Publishing, Inc. (May 14, 2020)

Redesigning Classroom Based Lessons for Online Learning

Akadasia (May 13, 2020)

Interfacing Brain-Based Learning with Transformational Teaching for the 21st Learners

(November 24, 2018)

Qualitative Research Techniques Masterclass

(September 1, 2018)