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

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Abstract: 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 Coronavirus disease (COVID-19) as a basis for proposing improvements for its implementation in the “new normal”. 30 senior high school science teachers and school leaders from 5 private and 5 public schools in Metro Manila, Philippines, participated in this study. The participants assessed the management of existing policies, guidelines, and procedures on the IAPA’s implementation using a survey questionnaire and identified its strengths and weaknesses using an interview guide. The researchers developed the instruments used for data collection but subjected to experts’ validation and reliability test. Results reveal that the management of IAPA was effective and that it benefits students and teachers in many ways. However, it has also weaknesses, which are associated with the role of school leaders in the implementation of the policies, guidelines, and/or procedures, especially during the new normal education setting. The study provides suggestions for improving IAPA implementation in the new normal covering both the face-to-face and online learning modalities.

Keywords: *Blended learning, interdisciplinary approach in performance-based assessment, new normal.*

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Introduction

Global competitiveness is a driving factor for an academic sector to constantly improve the quality of education it delivers to produce competent and skilled citizens. To strengthen its individuals' global competitiveness and better their readiness for the workforce, the Philippines' basic education curriculum underwent a significant revision in 2013. The 10-year basic education was revised to K to 12 to align the programs and better promote skill mastery through authentic assessments (Republic of the Philippines, 2013). One assessment method that is considered authentic in gauging students' understanding is performance-based assessment (Department of Education [DepEd], 2015).

Performance-based assessment is a method in which the teacher observes and makes a judgment on students' demonstration of their skills or competencies in creating a product (McMillan, 2017). This method is increasingly used in a variety of subjects. Performance-based assessment includes the use of a learning portfolio, which is a collection of multiple pieces of evidence of the actual processes and product of learning (Balagtas, 2020). The DepEd (2020e) suggested the use of portfolios in collecting and recording the 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 portfolios serve as comprehensive means of documenting the learning processes and outcomes and can be used in integrating information and communications technology (ICT) skills and in assessing learning which can still be maximized during the distance learning setup.

There are some issues, however, on performance-based assessment to evaluate students' learning and these include (1) its time-consuming development and assessment process, and (2) insufficient time and difficulty in completing the tasks (Altun & Kelecioğlu, 2018; Davalos & Malaluan, 2018). Hence, there is a need to address these issues raised to maximize its use and effectiveness. To ensure effective use of performance-based assessments, the DepEd issued its policy guidelines on the K to 12 basic education programs, which covers the need for different learning areas to be taught through interdisciplinary and multidisciplinary approaches (DepEd, 2019). Interdisciplinary approach is a form of integration (Menken & Keestra, 2016) as it allows educators from different disciplines to work together (Barnes,

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2015; Frodeman, 2013). However, the implementation of an interdisciplinary approach is not an easy task for teachers (Holmbukt, 2018), as it requires guidance and support from their school leaders. The school leaders should promote the use of interdisciplinary approach particularly during the “new normal” as part of their expected function is to create an enabling and supportive environment for effective learning (DepEd, 2020c, 2020d).

The concept “new normal” emerged during the outbreak of the COVID-19. In the new normal period, education has shifted from school-based instructional setting into home-based or virtual set-up due to schools’ closure to curb COVID-19 from spreading. In the Philippines, the DepEd released a policy that informs teachers, parents, and students on how to respond to the global health pandemic. In this policy, schools are encouraged to use multiple alternative learning modalities with the blended or distance learning as the major options (DepEd, 2020a, 2020b). Given that instruction is increasingly being offered in remote, offline, online, or blended modalities, and is being considered a global standard, the situation provides a unique challenge to every school leader’s decision-making process. Since this scenario of learning due to COVID-19 is unprecedented, the use of an IAPA in the time of the new normal is found fit in assessing the quality of learning that students acquire amidst the health crisis.

The foregoing assumption on the appropriateness of IAPA in the period of the new normal prompted the researchers 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 a 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 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?; and (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 face-to-face and online learning modalities?

Methodology

Research Design

This study used a descriptive-research design to assess the effectiveness of existing policies, guidelines, and procedures on the implementation of the IAPA and to identify its strengths and weaknesses in the SHS before and during the COVID-19, as perceived by school leaders and teachers. Descriptive research determines the distribution of variables or how the sample can be characterized (Creswell, 2014). The results of the assessment were used as bases for proposing improvements in the implementation of the IAPA in the new normal or the situation during and after COVID-19.

Sample and Data Collection

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 (Wolf et al., 2016). Purposive sampling involves the researchers’ judgment in selecting study participants (Creswell, 2014). 30 participants were selected from 5 public and 5 private schools 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, Philippines. 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, Philippines.

The researchers first sought approval from the division office as well as the administrators of both private and public schools. After the school authorities granted the request to conduct a study, the researchers 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. No incentive, compensation, or reimbursement was given to participate in this study. Schools and individuals who declined to take part in the study were respected. An executive summary of the study was provided to the participants after the study was completed.

The research instruments used in this study were researcher-made survey questionnaires and interview guides. Related literature and national policies on education were used as bases for the contents of the instruments. The survey questionnaire used in this study was a four-point Likert Scale, ranging from strongly agree to strongly disagree. The content validity and reliability were established. The instruments were validated by twelve (12) experts in the field of education. 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 mean of ratings in all the statements under the survey questionnaire for both before and during COVID-19 categories were in the range of 3.8 to 4.0, which was interpreted as acceptable without any revision. The survey questionnaire had undergone pilot testing, data cleaning, and reliability testing, specifically the internal consistency using Cronbach’s alpha. The Cronbach’s alpha reliability

coefficients for the policies ($r=0.820$) and guidelines ($r=0.828$) before COVID-19 as well as the guidelines ($r=0.824$) and procedures ($r=0.891$) during COVID-19 showed very reliable survey instruments. The procedures ($r=0.704$) before COVID-19 and the policies ($r=0.724$) during COVID-19 showed good reliability indices based on the reliability threshold of Zikmund et al. (2013). 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. The mean of the validation ratings for the interview guide questions was in the range of 3.8 to 4.0, which was interpreted as acceptable without any revision.

There were three phases that the researchers observed in data gathering: pre-data collection, actual data-collection, and post-data collection. Figure 1 depicts the graphical representation of the data collection procedure of the study.

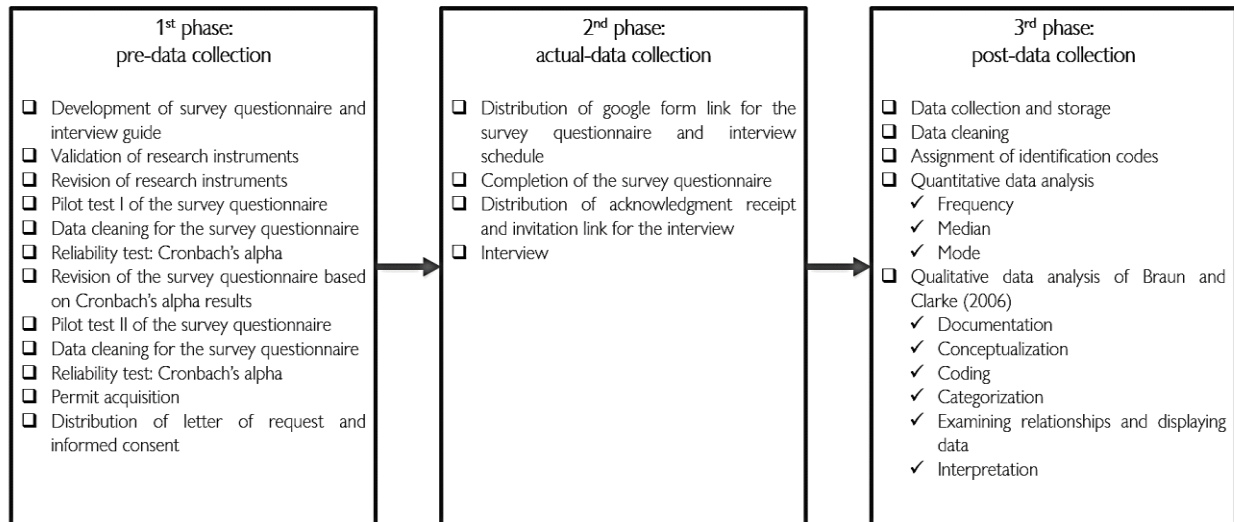


Figure 1. Data Gathering Procedure

Data Analysis

The quantitative data were used to describe the effectiveness of the management of the existing policies, guidelines, and procedures in the implementation of the IAPA in the SHS before and during the COVID-19 period as perceived by the school leaders and teachers. The quantitative data were tabulated and analyzed to produce a relatively valid conclusion based on the results of a 4-point Likert scale. Using the median score rounded to the nearest whole, 4 was regarded as very effective, 3 as effective, 2 as ineffective, and 1 as very ineffective. The percentage of respondents who chose the same median score supports the analysis of the data. The qualitative data were used to describe the strengths and weaknesses of the IAPA in the SHS before and during the COVID-19 period as perceived by the school leaders and teachers to support the quantitative data. The qualitative data were tabulated and analyzed using the six steps of qualitative data analysis (Braun & Clarke, 2006; Creswell, 2014) to include: (1) *documentation*, where the responses were documented and reviewed several times; (2) *conceptualization*, where data gathered were reviewed to analyze the commonality of respondents' perceptions through focusing on the questions; (3) *coding*, where respondents' answers were initially read and carefully examined and reviewed before segmenting them into emerging categories and considering the recurring patterns; (4) *categorization*, where patterns and connections of the segmented answers were categorized according to the common themes that emerged; (5) *examining relationships 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. The results of the quantitative and qualitative data supported the analysis of the needed improvement in the implementation of the IAPA 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.

Findings / Results

Management of IAPA's Implementation

The use of an interdisciplinary approach in performance-based assessment demands the collaborative efforts of the concerned people and for the guidance of school leaders to attain its effectiveness (Al Salami et al., 2017). 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 indicating the effectiveness of the management of the existing policies, guidelines, and procedures on the implementation of the IAPA in the SHS. The median for most statements before and during COVID-19 is three (3), which means that most of the respondents agreed with the effective management of policies, guidelines, and procedures of the IAPA. The median is also the most popular response in almost all items. Table 1 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 COVID-19 as perceived by the school leaders and the teachers.

Table 1. 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	Median Score	Before COVID-19			Median Score	During COVID-19		
			Frequency (n=30)				Frequency (n =30)		
			School leaders	Teachers	Total		School leaders	Teachers	Total
Policies	1. Management of policies of the IAPA is observed to attain a learner-centered curriculum.	3 (effective)	6	10	16 (53%)	4 (very effective)	6	12	18 (60%)
	2. Management of policies of the IAPA is observed to attain the holistic growth of learners.	3 (effective)	5	9	14 (47%)	3 (effective)	3	11	14 (47%)
	3. Management of policies of the IAPA is observed to maximize the use of performance-based assessments or tasks.	3 (effective)	5	11	16 (53%)	3 (effective)	4	12	16 (53%)
	4. Management of policies of the IAPA is observed to integrate technology in the learning process.	3 (effective)	5	9	14 (47%)	4 (very effective)	7	13	20 (67%)
	5. Management of policies of the IAPA is observed to cater both face-to-face and distance learning modalities or blended learning.	3 (effective)	7	12	19 (63%)	3 (effective)	4	13	17 (57%)
Overall Median of Policies		3 (effective)				3 (effective)			
Guidelines	1. Management of guidelines of the IAPA is specific and clear for both teachers and school leaders.	3 (effective)	7	12	19 (63%)	3 (effective)	4	13	17 (57%)
	2. Management of guidelines of the IAPA is observed by encouraging the teachers to use the IAPA in all subjects.	3 (effective)	7	14	21 (70%)	3 (effective)	4	11	15 (50%)
	3. 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.	3 (effective)	6	16	22 (73%)	3 (effective)	6	14	20 (67%)
	4. Management of guidelines of the IAPA is observed by giving regular feedback from school leaders to teachers and by sharing new updates in the use of the IAPA.	3 (effective)	5	14	19 (63%)	3 (effective)	6	12	18 (60%)
	5. Management of guidelines of the IAPA is strengthened by benchmarking with other schools at least once a year.	3 (effective)	4	12	16 (53%)	3 (effective)	3	13	16 (53%)

Table 1. Continued

Sub-category	Statements	Median Score	Before COVID-19			Median Score	During COVID-19		
			Frequency (n=30)				Frequency (n =30)		
			School leaders	Teachers	Total		School leaders	Teachers	Total
Overall Median of Guidelines		3 (effective)				3 (effective)			
Procedures	1. 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.	3 (effective)	6	11	17 (57%)	3 (effective)	4	12	16 (53%)
	2. 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.	3 (effective)	4	12	16 (53%)	3 (effective)	4	11	15 (50%)
	3. 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.	3 (effective)	4	13	17 (57%)	3 (effective)	5	13	18 (60%)
	4. Management of procedures of the IAPA is strengthened by holding regular professional development for teachers and school leaders.	3 (effective)	2	13	15 (50%)	3 (effective)	5	13	18 (60%)
	Overall Median of Procedures	3 (effective)				3 (effective)			

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

An interdisciplinary approach is recommended to effectively use performance-based assessments since it aims to address fragmented learning and it promotes better understanding. It allows teachers and administrators from different disciplines to work together to effectively assess students' mastery of learning (Barnes, 2015; Frodeman, 2013). Based on the knowledge and experiences of the school leaders and teachers, they identified the strengths and weaknesses of the IAPA in the SHS during the interviews (See Table 2).

Table 2. Strengths and Weaknesses of the IAPA's Implementation

Strengths	Applicable before / during COVID-19 / both	Number of responses for the identified theme	Weaknesses	Applicable before / during COVID-19 / both	Number of responses for the identified theme
Promotes holistic development	Both	11	More intensified implementation before COVID-19	During COVID-19	4
Promotes mastery and meaningful learning	Both	25	Technical difficulties	During COVID-19	22
Promotes creativity and resourcefulness during the online learning setup	During COVID-19	5	The short attention span of students	During COVID-19	5
Promotes less workload thus saving time	Both	17	One-time big-time task	Both	6
Helps meet the learning competencies	Both	4	Hesitation and resistance to change of teachers	Both	5
Promotes collaboration and teamwork	Both	4	Difficulty in communication and collaboration	Both	10
Encourages students' motivation	Both	3	Difficulty in integrating subjects/ topics	Both	6
Promotes less stress for students	Both	3	Difficulty in designing a good IAPA	Both	6
			Inconsistency of implementation	Both	7

As shown in Table 2, what emerged as strengths of the IAPA's implementation before and during COVID-19 include its emphasis on meaningful learning that promotes students' mastery of their lessons. IAPA also promotes the holistic development of the students. It also requires less workload thus saving teachers' preparation time. On the other hand, what emerged as weaknesses or challenges in the IAPA's implementation before and during COVID-19 include its susceptibility to technical difficulties that impact the efficiency of its implementation. It is also susceptible to difficulty in communication and collaboration among teachers that could be due to poor planning and scheduling. There is also inconsistency in its implementation due to lack of official guidelines to include monitoring and scheduling.

Suggestions for Improving the IAPA's Implementation in Both Face-to-Face and Online Learning Setup

The use of distance and/or blended learning in delivering quality education involves a lot of adjustments and preparations for most public and private schools in the Philippines. However, such adjustments could lead to better learning opportunities for the students since the learning modalities during the pandemic were adopted even after the health crisis to meet the global demands for technology integration in providing quality education (Obana, 2020). Table 3 summarizes the corresponding suggestions in improving the IAPA's implementation in the new normal covering both face-to-face and online learning modalities.

Table 3. Summary of the Weaknesses and Suggestions for Improving the IAPA's Implementation in the New Normal

Suggestions for Improving the IAPA's Implementation	Face-to-Face Modality	Online Learning Modality
• Training sessions and seminars. Conduct a series of training sessions and seminars on IAPA, designing assessments, and module making.	✓	✓
• Presentation of benefits and importance. Present the benefits and importance of the IAPA to students and teachers.	✓	✓
• Assignment of a person-in-charge. Assign a person who will monitor the implementation of the IAPA.	✓	✓
• Schedule allocation. Allocate enough time for planning and preparation by including IAPA planning, meetings, and actual implementation in the academic calendar.	✓	✓
• Contextualization and adjustment of difficulty level. Contextualize and consider the difficulty level of the task when designing an IAPA.	✓	✓
• Benchmark. Observe benchmarking and collaborating with different stakeholders.	✓	✓
• Guidelines. Provide clear guidelines on the use of IAPA.	✓	✓
• Motivation. Consider the school leader's motivation for teachers.	✓	✓
• Documentation and evaluation. Document and evaluate the IAPA.	✓	✓
• Rubric development. Develop and use rubrics intended for the subject matter.	✓	✓

As shown in Table 3, there are several suggestions in improving the IAPA's implementation in the new normal. These include the need to: (1) conduct a series of training sessions and seminars on designing IAPA in module form; (2) present IAPA's benefits and importance to students and teachers; (3) assign a person who will monitor IAPA's implementation; (4) include IAPA planning, meetings, and actual implementation in the academic calendar; (5) contextualize and consider the difficulty level of the task when designing IAPA; (6) benchmark and collaborate with different stakeholders in using IAPA; (7) provide clear guidelines on the use of IAPA; (8) consider the school leader's motivation for teachers; (9) document and evaluate the IAPA; and (10) develop and use rubrics intended for the subject matter.

Discussion

Management of IAPA's Implementation

The effective management of IAPA's implementation in the SHS before and during COVID-19 as perceived by the school leaders and teachers indicates consistency with the learner-centered intention of the K to 12 programs. As set in Republic Act No. 10533 or known as Enhanced Basic Education Act in 2013, the curriculum shall be learner-centered, inclusive, developmentally relevant, and appropriate (Republic of the Philippines, 2013). Likewise, the claim of the teachers and school leaders that the policies of the IAPA are well observed particularly the need for the integration of technology in the learning process during the COVID-19 period conforms as well with the vision of equipping the K to 12 graduates with the 21st century skills on information, media, and technology (DepEd, 2019).

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

The identified strengths of the IAPA's implementation before and during COVID-19 include the promotion of the holistic development of the student, which supports the aim of the K to 12 programs. IAPA likewise serves as a vehicle in the development of students' 21st century skills such as critical thinking, creativity, communication, and collaboration, which the K to 12 program also targets. As Gonzalez-Carrasco (2016) explained, interdisciplinary works contribute to the holistic development of students. IAPA also promotes mastery and meaningful learning. It shows connections between different disciplines by allowing students to connect, collaborate, and perform different tasks that promote deeper and integrated learning. It allows integration of two or more subjects by allowing educators from different disciplines to work together (Barnes, 2015; Frodeman, 2013). This result conforms with the DepEd's policy that assessments should be holistic and authentic in capturing the attainment of the most essential learning competencies to have a positive impact on learning (DepEd, 2020e). IAPA also promotes less workload thus saving time. It lessens the workload of students by merging the performance tasks of two or more disciplines into one. It also lessens the workload of teachers in checking and grading outputs. This is contrary to some studies describing performance tasks as time-consuming, exhausting, and stressful to both students and teachers (Altun & Kelecioğlu, 2018; Şahin & Boztunç Öztürk, 2018).

The role of school leaders is vital in the use of an IAPA, and even more needed in the time of the new normal in which instructional and assessment modalities include distance learning or blended learning. The weaknesses of the IAPA's implementation before and during COVID-19 include its susceptibility to technical difficulties that impact the efficiency of its implementation. For example, when students, teachers, and school leaders use at home only their mobile data to connect, oftentimes they encounter poor signals making it hard for them to communicate and collaborate with others to meet and plan their IAPA's implementation. This technical problem worsens when planning for the IAPA implementation is long. As one respondent claimed, "the first challenge during this time of COVID-19 is communication since students and teachers communicate only online". Another respondent reported that "The students are too burdened in most of their subjects due to the performance tasks that require video presentations".

Technology integration during the pandemic significantly aids in ensuring that education will continue, even if children are learning from home and most teachers and school leaders follow the work-from-home arrangement. However, the online learning platform's limitations impact the efficiency of IAPA implementation. Moreover, technical difficulties are associated with limited means of verifying whether the students are the ones performing their tasks, particularly the creation of video presentations as their performance task outputs. Indeed, Kamalludeen (2020) is right in saying that adjustments are needed in the educational sector in migrating to the new normal, particularly the shift of responsibility in the teaching, learning, and assessment.

The IAPA is also susceptible to difficulty in communication and collaboration among teachers due to poor planning and scheduling or busy schedule, with no specific time allotted for meetings and planning with partner subject teachers within their official school time. As one respondent reported, "It is difficult to find a common time to discuss the IAPA among ourselves since most of the time, we can only accommodate discussions after class time". Şahin and Boztunç Öztürk (2018) found in their study that in the use of performance tasks in IAPA, lack of communication is a common issue. Al Salami et al. (2017) suggested, school leaders should provide opportunities for the close collaboration among teachers in identifying and addressing their concerns and needs. To successfully integrate disciplines, teachers need to collaborate and communicate with their colleagues.

The IAPA is also susceptible to inconsistency of implementation due to lack of official guidelines, inconsistent monitoring, and poor scheduling. The IAPA is used prior to and during COVID-19, despite of its inconsistent implementation. In particular, for the new normal education setting, factors linked to no official guidelines, inconsistent monitoring, and poor scheduling were found in the interview responses, which have contributed to the inconsistency of implementation. Due to the health crisis, some schools have not yet implemented it since teachers and school leaders have more pressing responsibilities to deal with. However, it is suggested for teachers to use IAPA to assist students in reducing their workload. School leaders play a crucial role in ensuring an enabling and supportive teaching and learning environment, especially during the new normal wherein, school leaders are expected to lead and empower people (DepEd, 2020c), and manage the implementation of a curriculum (DepEd, 2019). In addition, supervisors have to support curriculum management and implementation and foster a culture of continuous improvement (DepEd, 2020d). Hence, their roles in creating an enabling and supportive environment for effective teaching and learning, especially in public schools, are important in addressing the identified inconsistency in its implementation.

Suggestions for Improving the IAPA's Implementation in Both Face-to-Face and Online Learning Setup

Since teachers and school leaders are still adjusting to the changes brought about by the new normal and are still working on the implementation of distance learning modality, the IAPA is still not strictly and consistently implemented. The suggestions for improving IAPA's implementation in the new normal covering both face-to-face and online learning modalities by providing a series of training sessions and seminars in designing IAPA assessments in

modular form is necessary. A series of training sessions and seminars on the use and importance of the IAPA should be offered to encourage teachers and school leaders to use it, to become more aware of it, and to aid them in creating relevant and appropriate interdisciplinary tasks. Warren (2016) claimed 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 in the Philippines, they have this Learning Action Cell (LAC) as a form of professional development for teachers to share the latest updates in teaching as well as their best practices. This also allows teachers and school leaders to observe regular meetings and professional development engagements. On the other hand, private schools observe professional sharing as part of their official monthly meetings. These practices following the national adoption and implementation of the Philippine professional standards for school heads (DepEd, 2020c) and supervisors (DepEd, 2020d) cover the role of school leaders and supervisors in implementing professional development initiatives to enhance strengths and address performance gaps among teachers and to ensure people and team effectiveness. Moreover, teachers need to be fully involved in community linkages and professional development (DepEd, 2017), which also supports the suggestion of conducting trainings on IAPA.

The suggested improvement in IAPA by presenting its benefits and importance to students and teachers should also be implemented. The purpose, advantages, and significance of IAPA should be explained to both students and teachers to raise their awareness of its benefits and motivate teachers to use it consistently. Păvăloiu et al. (2015) said that the interdisciplinary approach helps learners integrate concepts to various disciplines to advance students' capacity to understand issues, propose solutions, and solve problems.

The suggested improvement in IAPA by assigning a person who will monitor its implementation should be considered as well. To ensure strict and proper implementation of the IAPA, it is necessary to assign a person who will monitor its use. Proper communication, coordination of issues, and consistent implementation will all be guaranteed if there is an accountable person who takes the initiative in its implementation. As Maringa (2016) suggested, school heads can employ monitoring strategies such as doing rounds in school corridors, getting students' feedback, and coordinating with teachers to monitor and evaluate the teaching-learning processes. These strategies are also applicable even in online or distance learning setup. Instead of having rounds in school corridors, school leaders may join or visit their official learning management system or online learning platforms to monitor the use of the IAPA and to get feedback on its implementation.

The suggested inclusion of IAPA planning, meetings, and actual implementation in the academic calendar is a good strategy to implement. This can assist teachers in effectively planning the potential integration and creation of a well-designed IAPA. Additionally, it can aid the creation of comprehensive and well-written modules and instructional materials for blended or distance learning, which may already include the IAPA. Tucker et al. (2016) mentioned that planning is crucial in the success of the IAPA's implementation.

The suggested contextualization of IAPA is necessary but the difficulty level of the task should be considered when designing it. Contextualization of the IAPA requires teachers to consider the availability of resources that students may have in both face-to-face and distance learning setups.

The suggested benchmarking and collaborating with different stakeholders in using IAPA should be considered in improving its implementation. IAPA should be incorporated into the school's official program for teachers' development and should include benchmark initiatives to see the best practices of other institutions in using IAPA and to adopt or contextualize applicable practices. The suggestion of Anig-ig (2018) in ensuring the continuous professional growth among teachers through regular faculty development programs supports the suggestion of benchmarking and collaboration with different stakeholders.

The suggested improvement in IAPA by providing clear guidelines on its use should be considered as well. Even before COVID-19, the schools that took part in this study were already using IAPA. However, most of them lack even basic policies or standardized guidelines. As one respondent claimed, "Right now, IAPA is not yet totally structured. It is not yet a concrete school program, but we are doing it already. Unfortunately, we are not provided with specific flow, procedure nor process on how to smoothly implement it." Most of the teachers from the participating schools only receive verbal instructions during meetings on how to carry out IAPA. Because of this, it is challenging for the teachers to implement it consistently or to initiate the planning on their own. This statement agrees with the report of another respondent who said that:

"It is good not only in our school but also in other schools to: (1) have a structured IAPA program; (2) follow a smooth and effective IAPA implementation; and (3) ensure the quality of instruction and performance-based assessments that are given to the students".

The absence of a clear policy on integrated curricula that also includes the policy on assessment of learning impacts the effectiveness of the program (Holmbukt, 2018). One of the responsibilities of school leaders is planning and policy development, which is essential to the success of any program or curriculum. School leaders should observe policy planning, implementation, review, monitoring, and evaluation of the school or curriculum program (DepEd, 2020c).

The suggested consideration of school leaders' motivation for teachers should be considered in using IAPA. The school leaders' presence and guidance are vital to the success of IAPA's implementation and should be apparent to the teachers. School heads play a crucial role in ensuring an enabling and supportive environment for effective teaching and learning to happen (DepEd, 2020c).

The suggested documentation and evaluation of the IAPA is a good strategy to implement in enhancing its practice. Teachers can use the documented outputs and evaluation results in creating and enhancing the crafted IAPA. Mason (2019) contends that documented approaches and outcomes impact the use of IAPA. This study considers the benefits that portfolios could provide in using IAPA. DepEd (2020e) also supports the use of portfolios as one of the best approaches in collecting and recording the evidence of learning since they allow self-reflections, self-evaluation of performance tasks, and self-selection of best learning outputs. Balagtas (2020) revealed that portfolio enables the collection of multiple evidences of learning covering both the actual processes and the product of learning. Also, portfolios should be used for teachers' professional development and preparation since they provide a thorough method for documenting learning processes and outcomes and can be used in integrating ICT skills and in assessing learning (Balagtas & Ubina, 2018). Digital portfolios can be utilized by both public and private participating schools in a blended learning setup when doing IAPA.

The suggested development and usage of rubrics intended for subject matter in using IAPA should also be implemented. To objectively grade students' outputs following the performance standards of a particular subject, the creation of rubrics is necessary. The learners should have access to clear directions and appropriate scoring tools when preparing for a performance task (DepEd, 2020e).

The role of school leaders in managing and guiding the teachers is imperative to the IAPA's success, whether in a face-to-face or online learning setup. However, without the support and cooperation of teachers, the efforts of the school leaders to continuously improve the quality of education will put to waste. As Decena (2013) asserted, 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.

Conclusion

This study that aims 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 provides evidence of IAPA's effectiveness and proposed improvements in its implementation in the new normal. IAPA is an effective approach in assessing students as it promotes students' mastery of their lesson and their holistic development. IAPA is likewise manageable for teachers especially when they plan this collaboratively to be interdisciplinary and multidisciplinary. However, it has its weaknesses as well, which is due mostly to its complexity in its management that necessitates clear policy and guidelines when implemented in the new normal education setting. As IAPA is susceptible to technical difficulties that may impact the efficiency of its implementation, it is imperative to improve its planning and scheduling to yield better results whether implemented in face-to-face or in online learning modalities. The school leaders, together with the teachers and other stakeholders, should work together to continuously improve the practices in using IAPA and its implementation since the cooperation of every stakeholder is a factor in the success of an academic or curriculum program.

Recommendations

The following recommendations are based on the study's findings. It is recommended that IAPA be made an academic or curriculum program for its successful implementation. Clear policies, guidelines, and/or procedures on IAPA should be developed for its consistent and effective application across subject areas and grade levels. IAPA must be frequently assessed and evaluated to understand how well it has been implemented and how well it has benefited the students. Additionally, it is suggested for teachers and school heads to undergo intensive training in designing IAPA in modular form for easy use and reference and for them to allot time for its planning and implementation. More studies should be conducted to investigate the applicability and illustrations of IAPA in different grade levels and institutions to further support the improvement of its implementation. Future studies should further investigate use of IAPA in blended and flexible learning modalities to contribute to the body of literature that supports its use regardless of time and modality.

Limitations

The limitations of this study include: (1) respondents' limited participation during the gathering of interview data due to their busy schedules and considering the recent shift in the education setup; (2) difficulty in accessing the target schools due to the limitations of the work-from-home setup of the teachers and school leaders; and (3) the inappropriate use of the results to generalize the management of the implementation of IAPA in all levels of the K to 12 program since the study only involved senior high school teachers and school heads in public and private schools.

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Conflict of interest

The researchers declare that they have no conflict of interest regarding this study.

Authorship Contribution Statement

Naquita: Concept and design, data acquisition, data analysis/ interpretation, drafting manuscript, critical revision of manuscript. Balagtas: Editing/ reviewing, revision of manuscript, supervision.

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