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## Effects of Crafted Integrated Performance Task in Science in the Academic Performance of Grade 7 Students of Old Boso-Boso National High School

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### Abstract

**Aim:** This study determined the effects of crafted integrated performance task in the academic performance of Grade 7 students of Old Boso-Boso National High School.

**Methodology:** The study used quasi-experimental design to determine the effect of integrated performance task in the academic achievement of grade 7 students of Old Boso-Boso National High School, in the City Schools Division of Antipolo. This study utilized purposive sampling method.

**Results:** The major challenges encountered by the grade 7 students that affect the completion rate of the performance assessment are overlapping activities, time constraints, and financial problems. The study reveals that 44 or 16.7% of grade 7 students are a group of students who did not meet the expected requirements for performance assessment before the implementation of the intervention. After the implementation of the intervention, there were 39 or 15.5% of the same group of students who did not meet the expected requirements. With a computed z value of 5.43 is greater than the critical z value of 2.33 which falls in the rejection region, the statistical decision is to reject the null hypothesis. In regard to this, there is a significant difference between the completion rate of the grade 7 students of Old Boso-Boso National High School in their performance assessment before and after the implementation of the intervention.

**Conclusion:** Most of the grade 7 students are greatly affected by the overlapping activities in the first quarter of academic year 2022 – 2023. After the implementation of the intervention, most of the identified students who failed the subject and STAR decreased by 50%. The implementation of Integrated Performance Task was effective and evident because of the increase in the completion rate in the performance assessment.

**Keywords:** *Completion Rate, Integrated Performance Task, Performance Assessment*

### INTRODUCTION

Science is one of the major subject areas that students are required to take. Based on the curriculum guide, science education aims to develop scientific literacy among learners that will prepare them to be informed and participative citizens who are able to make judgments and decisions regarding applications of scientific knowledge that may have social, health, or environmental impacts. Learning science may give students access to a wealth of information and knowledge that will help them gain a general understanding of how and why things function the way they do.

Assessing the student's learning is the major important duty for every teacher. Giving written works, performance tasks, and quarterly examination covering certain learning competencies helps the teacher summarize student's understanding, progress, and level of achievements in specific learning areas or subjects. Science in the K to 12 curriculum follows the idea of spiral progression, an approach that will let the learners expose themselves to a broad and wide variety of science concepts from basic to complex. The curriculum for Junior High School contains components such as Earth science, Physics, Chemistry, and Biology. Each grade level caters for different components every quarter of the academic year.



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Performance task is one of the components in giving grades to every student. According to Hilliard (2015), performance-based assessments are complex, authentic, process/ product- oriented, open-ended, and time-bound and share the key characteristic of accurate measurement of one or more specific course standards or competencies. Integration of different subject areas in performance task is one of the least practices done by most of the teacher because it requires a lot of time to craft and look for the possible similarities or interconnectedness of the competencies.

The simultaneous merging of several academic disciplines and abilities to acquire a thorough grasp of a subject or activity is referred to as integrated performance. This method emphasizes the linkages between different fields of study to bridge the gap between academic knowledge and practical application.

In the first quarter of the school year 2022 – 2023, it has been recorded that grade 7 level has the highest number of students who failed in the science subject and the highest number of STAR among the grade level of junior high school. The Learners Outcome Assessment (LOA) reveals that among the different components of assessment, the performance task has the least mean percentage score. Students were not able to comply with all the performance tasks due to lack of time and overloaded activities.

For the past three consecutive years, Science has been one of the subject areas with an increasing number of Student at Risk of failing the subject and the main contributor for retention rate. According to DepEd Order No. 8, s. 2015, learners who got a grade lower than 75% are considered failed as they did not meet the expectations. On the other hand, learners who got a grade ranging from 75% to 79% are considered Student at Risk.

This urges the researcher to come up with crafting of integrated performance task that will link the science competencies to other subject discipline which aims to lessen and address the loaded performance and lessen the number of students at risk.

The researcher monitored the result of Learners Outcome Assessment (LOA) for the past two consecutive quarters of school year 2022 – 2023, and it was found out that performance tasks among the components for grading has the lowest mean percentage score (MPS). It prompted the researcher to act on the declining MPS of the said components. Thus, integrated performance tasks were crafted.

After determining the need for action, the researcher took an appropriate procedure to address the present problem. A preliminary interview with the clientele of the study was conducted to determine the voice of the customer. The researcher then calls for a meeting with the parents/ guardians of the clientele for an interview. The data collected was carefully analyzed. It was revealed that the root causes of failing to comply with the requirements are individualized and overloaded performance tasks, and time constraints. The identified main cause was further analyzed which led to the crafting of good strategy to address the problem.

Glisan, et al. (2007), the study aims to measure the post- secondary students' progress on achieving the standards for foreign language learning in the 21st century. The study illustrates how integrated performance assessment assesses learners' language performance. It reveals that integrated performance assessment connects teaching, learning, and assessment effectively than the traditional testing format.

Zapata (2016), the integrated performance assessment was utilized in all grade levels in a private institution in Southern California. It resulted to a positive opinion of the student's experiences after the implementation.

Hauck and Troyan (2013), the purpose of this research was to define the discursive characteristics of effective integrated performance assessment feedback. The data was gathered based on the feedback presented by the teacher and the student. The study achieves the goal of determining the characteristic of effective feedback that will serve as guidelines for teachers in incorporating IPA in the classroom.

Integrated performance task is an intervention program to lessen the number of grade 7 students who failed to comply with the given task. The study was conducted at Old Boso-Boso National High School for the academic year 2022 – 2023. The crafted performance is in the form of activities and was anchored to GRASPS Method which means Goal, Role, Audience, Situation, Performance and Standards. The crafted performance task also consists of the most essential learning competencies or MELCs from different subject discipline and competencies result from the unpacking of broad competencies that are interconnected to each other.

Smith and Ranchhod (2012) analyzed the impact of educational intervention in the microeconomics course for both first- and second year of the implementation of the said course. The paper reveals that the educational intervention done in the first year of implementation had a positive impact on the academic performance. The intervention was also introduced in the second period and shows an improved academic performance as well.



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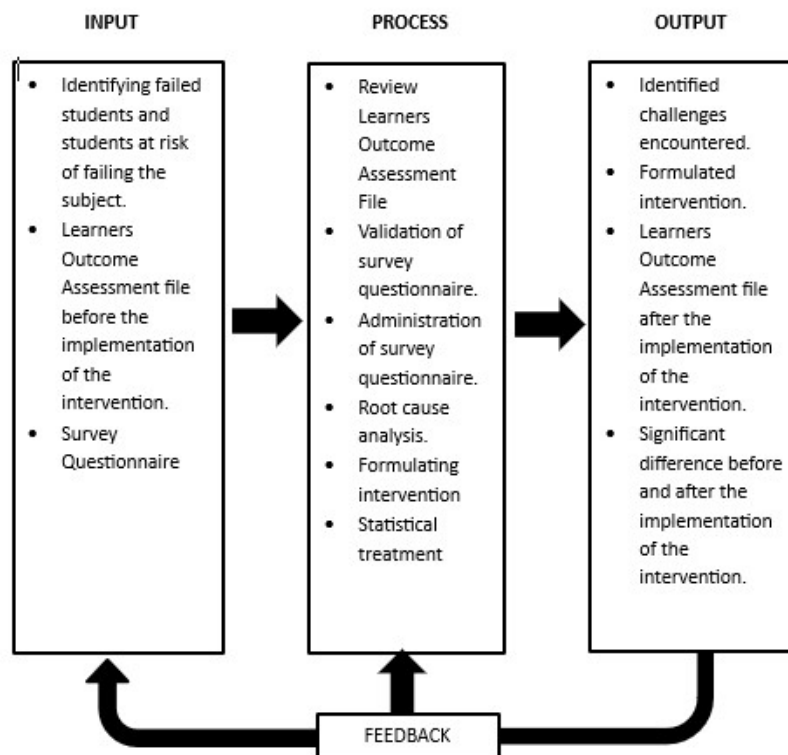
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Suhandoko and Hsu (2020) also utilized a quasi-experimental approach. The study reveals that undergraduate students who received the intervention had a greater academic performance than the controlled group. The study also shows a significant difference between the pre-test and post-test of the two groups. Furthermore, the intervention had the great impact in the experimental group.

The researcher conducted a meeting with the grade 7 teachers to plan and craft integrated performance tasks to be given in the 3rd quarter of the present school year. The crafted integrated performance tasks were then evaluated by the respective Master Teachers of the said school. After careful evaluation, the researcher conducted an orientation for students, parents, and guardians about the crafted activity. The parents' shared responsibility in monitoring the progress of the students is a big help in the successful completion of this study. The sample crafted performance task can be seen in the latter part of the paper.



**Figure 1: Conceptual Framework of the study**

The first frame is the input which includes the identifying the failed students and students at risk of failing the subject and will serve as the respondents of the study. The learners outcome assessment file before the implementation of the intervention which serve as the tool for data gathering. And lastly, the survey questionnaire. The Second frame is the process the review and analysis of the learners outcome assessment file, validation and administration of the survey questionnaire, root cause analysis, formulating intervention based on the identified root causes, and the statistical treatment. The last frame is the output which includes identified challenges encountered by the respondents, the formulated intervention, the learners outcome assessment file after the implementation of the intervention, and result of the statistical treatment to test the significant differences before and after the implementation of the intervention. Feedback of the respondents after the implementation was also gathered.



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### Research Questions

This study aimed to determine the effect of integrated performance task in science in the academic performance of grade 7 students of Old Boso-Boso National High School. Specifically, it sought to answer the following research questions:

1. What are the challenges encountered by the grade 7 students that affects the submission rate of their performance task?
2. What is the status of the performance assessment of grade 7 students before and after the implementation of intervention?
3. Is there a significant difference in the submission rate of performance task before and after the implementation of intervention for first and third quarter of academic year 2022- 2023?

### Hypothesis

Given the stated research problem, the following hypotheses were tested on 0.02 level of significance: Hypothesis 1: There is a significant difference in the submission rate of performance assessment before and after the implementation of intervention for first and third quarter of academic year 2022 – 2023.

Hypothesis 2: There is no significant difference in the submission rate of performance assessment before and after the implementation of intervention for first and third quarter of academic year 2022 – 2023.

### METHODS

#### Research Design

This study used quasi-experimental design to determine the effects of crafted integrated performance task in science in the academic performance of Grade 7 students of Old Boso-Boso National High School in the City Schools Division of Antipolo. Thomas (2020). Quasi-Experimental design is similar to true experimental design because it aims to establish a cause-and-effect relationship between an independent and dependent variable. However, in the quasi-experimental design there is no randomized selection of participants for the treatment.

#### Population and Sampling

The participants of the study were the grade 7 students of Old Boso-Boso National High School, in the City Schools Division of Antipolo School Year 2022 - 2023. In the first quarter of the present school year, there were 263 grade 7 students who officially enrolled in the said school.

#### Instrument

The instruments used in this study were the Learners Outcome Assessment (LOA) and Interview Form. The Learners Outcome Assessment are files adopted by the Division of Antipolo which determined the Mean percentage score of the different criteria in grading. The Interview form used in this study was validated by the respective Master Teachers of Old Boso-Boso National High School.

#### Data Collection

The data were gathered, read and analyzed following the objective of the study and in adherence to all protocols in the conduct of research.

#### Treatment of Data

The gathered data were analyzed using the frequency, percentage, and z-test. The percentage was used to describe the quarterly grades of grade 7 students ranging from 74% and below, 75% to 79%, and 80% and above.

Z-test was used to determine the significant differences between the completion rate before and after the implementation of the crafted intervention. Chen (2022), z-test is a statistical treatment used to determine the significant difference between the two means.

#### Ethical Considerations

The researcher ensured that all research protocols involving ethics in research were complied with for the protection of all people and institutions involved in the conduct of the study.



## RESULTS and DISCUSSION

This study produced the following results with corresponding discussion and interpretation.

### Problem 1. Challenges Encountered by the Grade 7 Students Affecting the Submission Rate of Performance Task

**Table 1: Challenges Encountered by the grade 7 students Affecting the Submission Rate of the Performance Task**

Determinants Affecting the Submission Rate	Frequency	Percentage	Rank
Overlapping Activities	76	51	1
Time Constraint	43	29	2
Financial Problem	29	20	3
Total	148	100	

Table 1 shows the three major challenges encountered by the grade 7 students that affect the submission rate of the performance task. It reveals that overlapping activities is the most encountered challenges as perceived by the grade 7 students with 51%, time constraints with 29%, and the least was financial problem with 20%. The data implies the need for integrated performance tasks.

Upon the interview done on the student respondents, it was found out that the major factors affecting the submission rate of the students is the overlapping activities. Each subject taken by the student respondents requires them to submit individual performance tasks which leads to failure in submission of the said activity.

### Problem 2. Status of the performance assessment of grade 7 students before and after the implementation of intervention

**Table 2: Number of Students per Grade Category in the Performance Assessment**

Grade Category	Before Implementation		After Implementation	
	No.	%	No.	%
74% and below	44	16.7	39	15.5
75 – 79%	104	39.5	19	7.6
<b>Total No. of Students</b>	<b>148</b>	<b>56.2</b>	<b>58</b>	<b>23.1</b>

The table above reveals that 44 or 16.7% of grade 7 students are a group of students who did not meet the expected requirements for performance assessment before the implementation of the intervention. After the implementation of the intervention, there were 39 or 15.5% of the same group of students who did not meet the expected requirements. It shows that more than half of the identified students before the implementation were able to comply with their performance task. The data further shows that the number of identified STAR before the implementation decreased to almost 18%. Furthermore, out of 148 student respondents, 60.8% or 90 students successfully comply with the requirements.

### Problem 3: Significant difference in the completion rate of performance task before and after the implementation of intervention for first and third quarter of academic year 2022-2023

**Table 3: Comparison of the Completion Rate of Performance Assessment Before and After the Implementation of the Intervention**

DATA	NO. OF GRADE 7	MEAN	S.D.	Z <sub>Computed</sub> VALUE	Z <sub>Critical</sub> VALUE	DECISION	INT.
Before Implementation	144	75.5	2.29	5.43	2.33	Reject the Hypothesis (Ho)	Significant
After Implementation	58	73.6	2.24				



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The presented table above shows that there is a significant difference between the completion rate of the grade 7 students of Old Boso-Boso National High School in their performance assessment before and after the implementation of the intervention. And since the computed z value of 5.43 is greater than the critical z value of 2.33 which falls in the rejection region, then the statistical decision is to reject the null hypothesis.

The results imply that there is not enough evidence at 2% level of significance to support the claim that there is no significant difference between the completion rate of the grade 7 student before and after the implementation of the intervention.

Fajardo M., (2022) mentioned in her article that integrated performance task is beneficial to the teachers and to a learner as well. The author describes integrated performance tasks as a form of academic ease, a practical way to save time and efforts for both teachers and learners, and an innovation and collaboration. In regard to this, the implementation of crafted integrated performance tasks yields to a positive result.

## Conclusions

The major challenges encountered by the grade 7 students that affects the completion rate of the performance assessment were overlapping activities, time constraints, and financial problem. Most of the grade 7 students are greatly affected by the overlapping activities in the before the implementation of the intervention for academic year 2022 – 2023. After the implementation of the intervention, most of the identified students who failed the subject and STAR was decrease by 50%. The result shows that implementation of Integrated Performance Task was effective and evident because of the increase in the completion rate in the performance assessment.

## Recommendations

Based on the findings and conclusions of this study, the following are hereby recommended:

The implemented Intervention was proven effective to increase the completion rate of performance assessment. This can also be done to succeeding grading period. The integrated performance task was evaluated by the respective Master Teachers. The said performance may be subjected to evaluation by the different Education Program Supervisors of City Schools Division of Antipolo. Moreover, the produced activities have a possible chance to modify based on timely and relevant issues. Lastly, for future researchers, they may also look for other learning competencies that can be used to craft an integrated performance task aside from the activities used in this study.

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