



### RESEARCH REPORT AS TO UTILIZATION

Title:

**DEVELOPMENT AND VALIDATION OF SUPPLEMENTARY ACTIVITY IN A SELECTED TOPIC IN SCIENCE FOR GRADE 5 SPECIAL SCIENCE EDUCATION CLASS**

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Abstract:

The primary objective of this research was to develop a supplementary activity for specific lessons in Science 5. The development of the supplementary activity focused initially on one certain topic which was based on the least mastered skill in Science. A checklist was administered to the Science Teachers which enabled them to identify the least mastered skill. Then, the researcher developed supplementary activity to address low mastery of Grade 5 learners. Further, this research considered the Grade 5 Special Science Education Class (SSEC) as future recipients of the researcher-made supplementary activity.

The validation of supplementary activities for Grade 5 was also conducted for further enhancement of the material. The school head, master teachers, and several teachers in Taytay Elementary School served as the respondents of the study. There were 10 respondents who were purposively selected to serve as validators. They were given enough time to scrutinize and give suggestions on the researcher-made supplementary activity in Science for Grade 5 SSEC. An adapted validation tool was administered to the respondents to gauge their perception on the material in terms of organization, clarity, comprehensiveness, and appropriateness.

Findings indicated that the researcher-made supplementary activity in Science 5 for Grade 5 Special Science Education Class attained grand mean of 4.34 with verbal interpretation of "Very Much Acceptable".

Thus, the researcher-made material could be utilized in Grade 5 SSEC learners. Another study would be conducted to assess the effect of the material to the performance of the learners. This research highlights learner-centered and supplementary activities in Science for Grade 5 high performing learners.

### Keywords

*Science, supplementary activities, instructional materials*

### Introduction of the Research

Science and technology contribute a very important role in an individual's daily life. Thus the subject is very significant for learners to understand and appreciate. At an early age, learners should develop a deep understanding on the foundation lessons to face the challenges of more advanced and complex field of higher studies. Children should start acquiring the characteristics of a 21<sup>st</sup> century learners. It involves competencies such as collaboration, digital literacy, critical thinking, and problem-solving to help learners succeed in today's world.

The use of technology has become an advantage for the delivery of topics or lessons in all subjects; thus has led learners towards attainment of higher academic achievements. In consonance to this, there have been a lot of endeavors to provide avenues for the enhancement of the learners' academic achievement. Thus, the researcher made the supplementary activity in Science for the betterment of learning and experience of the Grade 5 Special Science Education Class (SSEC) in the school.

Furthermore, the researcher considered Grade 5 SSEC learners. As the teacher-adviser of the class, they were the immediate priority and concern. Taytay Elementary School, being the central elementary school in Taytay I has been catering Special Science Classes for exemplary learners. They were given longer time allotment for certain subjects especially in Science. Thus, this research intended to intensify learning and experience of Grade 5 SSEC learners in Science.

Thus, the researcher-made supplementary activity in Science highlighted varied tasks that showcased hands-on activities, using realia materials, paper-and-pen reflection.

### **Literature Review**

There were varied learning theories that emphasized the characteristics of an effective and efficient classroom wherein the learners are actively involved, the environment is democratic, the activities are interactive and child centered, the teacher facilitates learning in which the students are encouraged to be responsible and autonomous. The theory of constructivism was anchored in this research. Quillan (2012) indicated the enhancement of student academic performance could be manifested through the utilization of diverse activities that exemplified actions and experiments especially in subjects like Science and Mathematics.

Further, Ruyon (2012) also emphasized that learners with greater experience through hands-on learning activities acquired higher performance. It enabled the learners to retain the knowledge acquired from the experience.

Gaard (2014) highlighted that individuals learned by using experience as a tool or resource to achieve a specific learning goal, to develop higher-order thinking, and to apply research skills. There was an increasing trend toward the use of enhancement activities to increase learners' critical thinking and problem solving skills.

Roces (2015) found out the impact of learning activities on both the affective and cognitive domains. Teacher-student interaction and student-student interaction were enhanced and problem solving skills increased through supplementary activities conducted.

Francisco (2013) in her study found out that after the exposure of the group of pupils on the researcher-made developed material in Science, the learners' achievement increased. Their scores were more consistent than those who were not exposed to the developed material. Results revealed that the use of the new material was effective and increased the achievement of the learners.

### **Research Questions**

The research entitled "Development and Validation of Supplementary Activity in a Selected Topic in Science for Grade 5 Special Science Education Class SY 2018-2019" aimed to develop a supplementary activity for learning and experience of Grade 5 SSEC learners in Science. The proponent believed that it would serve as avenue towards better and higher academic performance and lifelong learning.

The researcher also answered the following questions:

1. What is the profile of respondents in terms of:
  - a. position
2. What is the evaluation of the respondents with respect to the Supplementary Activity in a Selected Topic in Science for Grade 5 Special Science Education Class in terms of:
  - a. organization;
  - b. clarity;
  - c. comprehensiveness; and
  - d. appropriateness?

### **Scope and Limitation**

The study focused on the development and validation of supplementary activity in a Selected Topic in Science for Grade 5 Special Science Education Class. It aimed to provide enhancement activities in Science for intensified learning and experience of the learners in Science.

There were 10 respondents who served as critics and validators of the researcher-made supplementary activity in Science namely, 1 school head, 2 master teachers, and 7 key teachers. The respondents were purposively selected to give comments and suggestions regarding the improvement of the material.

The study was conducted during School Year 2018-2019 in Taytay Elementary School.

The study utilized a validation tool which was administered to the respondents to gauge their assessment on the researcher-made material aligned with the research topic. The validation tool focused on the organization, clarity, comprehensiveness, and appropriateness of the supplementary activity. Moreover, the researcher considered initially a certain topic in Science which was the result of an initial survey to Science teachers regarding their perception of the lessons that needed further lesson delivery improvement.

The study had inherent limitations due to the supplementary activity which focused initially on a specified topic, the validation tool which might not cover all the necessary aspects, and the validators which might not be enough to validate the researcher-made material.

### Research Methodology

The research utilized descriptive method of research. This type of research is a fact-finder that leads to useful generalizations. Descriptive method of research finds its great utility in identifying existing circumstances. (Singh, 2007) It has been effectively applied in settings such as school and classroom wherein significant factors or variables can be identified, classified and discovered. Descriptive method, as utilized in the study, depicted an analysis of the current scenario in terms of the perception and evaluation of the respondents or validators on the development of researcher-made supplementary activity in Science 5 for Special Science Education Class (SSEC).

The researcher employed 10 respondents who were purposively selected to validate the researcher-made material in Science. The respondents who served as validators were composed of the school head, 2 master teachers, and 7 key teachers. They were considered field experts to give comments and suggestions for the betterment of the material.

The researcher administered a validation tool adapted from Torre (2010) and Janela (2011) to the 10 respondents or validators. They were also given a copy of the researcher-made supplementary activity in Science 5 for Grade 5 SSEC. They were provided enough time to critic the material, give input, comments and suggestions. Afterwards, the material and tool were retrieved from the respondents afterwards. The researcher considered all the given points of improvement.

The validation tool utilized 5-point Likert Scale to identify the extent of acceptability of the researcher-made material in Science 5.

- 4.20-5.00 - Very Much Acceptable
- 3.40-4.19 - Acceptable
- 2.60-3.39 - Moderately Acceptable
- 1.80-2.59 - Slightly Acceptable
- 1.00-1 .79 - Not Acceptable

### Results and Discussions

The following were the results obtained in the course of the study:

**Table 1**  
**Profile of the Respondents in terms of their Position**

Position	f	%
School Head	1	10%
Master Teachers	2	20%
Key Teachers	7	70%
<b>Total</b>	<b>10</b>	<b>100%</b>

Results indicated that there were 10 respondents who were considered in the study. 7 or 70% of the respondents were key teachers and 1 or 10% of the respondents was the school head. They served as validators of the researcher-made material.

**Table 2**  
**Perception of the Respondents on the Supplementary Activity in a Selected Topic in Science for Grade 5 Special Science Education Class in terms of Organization**

Indicator	Mean	Verbal Interpretation
1. The overview is well-organized to introduce the content of the learning materials.	4.60	Very Much Acceptable
2. The objectives expressed the complete knowledge and skills to be developed.	4.40	Very Much Acceptable
3. The information in the learning content is complete and well organized.	4.40	Very Much Acceptable
4. Concepts are logically arranged.	4.30	Very Much Acceptable
5. Visual aids in each activity are presented neatly and orderly.	4.30	Very Much Acceptable
<b>Overall Mean</b>	<b>4.40</b>	<b>Very Much Acceptable</b>

Item 1 attained the highest mean of 4.60 with verbal interpretation of “very much acceptable” indicating that “The overview is well-organized to introduce the content of the learning materials.” while items 4 and 5 attained the lowest mean of 4.30 with verbal interpretation of “very much acceptable” indicating “Concepts are logically arranged.” and “Visual aids in each activity are presented neatly and orderly.” respectively. Findings revealed that the researcher-made material needed to be improved with respect to order and logic. Use of materials should also be considered.

**Table 3**  
**Perception of the Respondents on the Supplementary Activity in a Selected Topic in Science for Grade 5 Special Science Education Class in terms of Clarity**

Indicator	Mean	Verbal Interpretation
1. The overview gives the pupils a clear introduction about the lessons to be learned.	4.60	Very Much Acceptable
2. The objectives are clearly stated.	4.40	Very Much Acceptable
3. The learning contents and activities are stated in simple and clear language.	4.10	Acceptable
4. Questions are clearly given.	4.40	Very Much Acceptable
5. Visual aids in each activity are clearly illustrated.	3.80	Acceptable
<b>Overall Mean</b>	<b>4.26</b>	<b>Very Much Acceptable</b>

Item 1 attained the highest mean of 4.60 with verbal interpretation of “very much acceptable” indicating that “The overview gives the pupils a clear introduction about the lessons to be learned.” while item 5 attained the lowest mean of 3.80 with verbal interpretation of “acceptable” indicating “Visual aids in each activity are clearly illustrated.” Findings revealed that the researcher-made material should consider the visual aids needed in the supplementary activity.

**Table 4**  
**Perception of the Respondents on the Supplementary Activity in a Selected Topic in Science for Grade 5 Special Science Education Class in terms of Comprehensiveness**

Indicator	Mean	Verbal Interpretation
1. The activities in the preparation phase are smoothly accomplished.	4.50	Very Much Acceptable

2. The objectives are expressed in the language easily to understand.	4.20	Very Much Acceptable
3. The directions in each activity understood by the pupils.	4.30	Very Much Acceptable
4. The learning contents can be easily grasped by the pupils.	4.40	Very Much Acceptable
5. The questions are answered with ease.	4.40	Very Much Acceptable
<b>Overall Mean</b>	<b>4.36</b>	<b>Very Much Acceptable</b>

Item 1 attained the highest mean of 4.50 with verbal interpretation of “very much acceptable” indicating that “The activities in the preparation phase are smoothly accomplished.” while item 2 attained the lowest mean of 4.20 with verbal interpretation of “ very much acceptable” indicating “The objectives are expressed in the language easily to understand.” Findings revealed that the congruency of supplementary activities was evident; yet choice of words should be considered to fully enhance the material.

**Table 5**  
**Perception of the Respondents on the Supplementary Activity in a Selected Topic in Science for Grade 5 Special Science Education Class in terms of Appropriateness**

Indicator	Mean	Verbal Interpretation
1. The learning activities in preparatory phase are suited to the level of the pupils.	4.30	Very Much Acceptable
2. The selections are suited to the level of the pupils.	4.30	Very Much Acceptable
3. The questions asked used were of higher order thinking levels.	4.20	Very Much Acceptable
4. The activities are suitable in achieving learning objectives.	4.30	Very Much Acceptable
5. The materials are appropriate to the activities as planned by Science teacher.	4.50	Very Much Acceptable
<b>Overall Mean</b>	<b>4.32</b>	<b>Very Much Acceptable</b>

Item 5 attained the highest mean of 4.50 with verbal interpretation of “very much acceptable” indicating that “The materials are appropriate to the activities as planned by Science teacher.” while item 3 attained the lowest mean of 4.20 with verbal interpretation of “very much acceptable” indicating “The questions asked used were of higher order thinking levels.” Findings revealed that the key concepts were manifested in the materials needed in the conduct of supplementary activities; however, higher thinking order skills should be evident.

**Table 6**  
**Composite Table on Perception of the Respondents on the Supplementary Activity in a Selected Topic in Science for Grade 5 Special Science Education Class**

Indicator	Overall Mean	Verbal Interpretation
1. Organization	4.40	Very Much Acceptable
2. Clarity	4.26	Very Much Acceptable
3. Comprehensiveness	4.36	Very Much Acceptable
4. Appropriateness	4.32	Very Much Acceptable

<b>Grand Mean</b>	<b>4.34</b>	<b>Very Much Acceptable</b>
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The perception of the respondents on the researcher-made supplementary activity in Science 5 for Special Science Class attained a grand mean of 4.34 with verbal interpretation of "very much acceptable". Thus, the material can be utilized in Grade 5 SSEC.

### Conclusions

Findings indicated that the researcher-made supplementary activity in Science 5 for Grade 5 Special Science Education Class attained grand mean of 4.34 with verbal interpretation of "Very Much Acceptable".

Thus, the researcher-made material could be utilized in Grade 5 SSEC learners. Another study would be conducted to assess the effect of the material to the performance of the learners. This research highlights learner-centered and supplementary activities in Science for Grade 5 high performing learners.

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