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## **DEVELOPMENT OF INNOVATIVE INSTRUCTIONAL MATERIALS FOR GRADE ONE MATHEMATICS**

**FLORDELIZA M. ETRATA<sup>1</sup>**

*St. Francis de Assisi Montessori School*

**DR. ERNIE V. ESTRELLA<sup>2</sup>**

*Akle Elementary School, San Ildefonso, Bulacan*

### **Abstract**

This study focused on the development of innovative instructional materials for Grade I Mathematics through inculcation of patriotism and nationalism.

Specifically, the learners would be helped if such instructional materials that they need to have are very appropriate and available to them.

The innovative instructional materials were evaluated by the teachers of Akle Elementary School based on the following criteria: content, format, presentation and organization and accuracy and up-to-datedness of information.

The descriptive-normative method of research was employed in this study and was utilized. The researcher made and validated questionnaire as the main instrument for gathering data. Mean and standard deviation were computed in determining the validity of the instructional materials.

The respondents of the study were the fourteen (14) teachers who are members of the quality assurance team of Akle Elementary School.

Results showed that the teachers-evaluators believed that the content, format, presentation and organization and accuracy and up-to-datedness of information of the development of innovative instructional materials for Grade I Mathematics through inculcation of patriotism and nationalism are *acceptable*.

Based on the findings of the study, the topics and the development of innovative instructional materials for Grade I Mathematics through inculcation of patriotism and nationalism shown are based on the K - 12 curriculum guide in DepEd in Grade I Mathematics and available resources like mathematics books, internet, references and recommendation of teaching mathematics.

In addition, the researcher came up with the following recommendations: first is the development of innovative instructional materials that must be related to the lesson so that learners' attention is caught in the beginning and till the last minute of the discussion. They showed interest and participated in the class; second, the instructional materials must have meaningful connection to the prior knowledge. There must be a linkage between motivation and the lesson proper. Later in the discussion, learners can sieve the right answer that leads to essential understanding; third, the instructional materials must be varied and appropriate to the lesson that would be discussed on that day; fourth, provide more references that can help improve the materials. Always look for reference that gives the trend in teaching Mathematics; and fifth, the instructional materials must be more attractive. Most learners are visual. They understand better if there are more visual aids that are colorful and attractive.

## Introduction

Innovative instructional materials are primarily medium for the delivery of subject content. The teacher reiterates and builds on the content and explains to the learners about it. Curriculum may be described by the content of the textbook, and relatedly teacher's job is to teach what is in the textbook. Textbooks serve as the primary instructional. Instructional materials and therefore must be creative, interactive and interesting to catch the attention of the learners.

In teaching Mathematics, especially in Grade I, teachers should present the instructional materials in Mathematics in a way that appealed to the learners. In fact, for some people, their levels of Mathematics anxiety are so high that they become nervous even simply reading aloud mathematical equations in class.

Education should become a source of fun for them rather than causing fear and boredom. It is an important part of their growth and helps them become good citizens.

The researcher needs innovative instructional materials for Mathematics Grade I to help the learner understand the lesson easily and at the same time enjoyed answering the exercises in Mathematics and avoiding the anxiety to them.

Learners are helped if such materials that they need are always available and ubiquitous. Nowadays, the teacher is a facilitator, and learners are the real artists. They need instructional materials which may be applicable for such activities. There must be accurate plans, devices, interactions, objectives and mostly improvements in each effort that they contribute to their studies. In having instructional materials whenever they need them, learners can look back or turn to different topics that they missed due to unexpected circumstances which are unavoidable. These things are the guides that lead them to accumulate information or to enhance knowledge in very simple ways.

Discussions, lectures, activities, seatwork, and more comprehensive features are some of the necessary contents in using the instructional materials that showed on how they are essential, helpful, and useful

in every day lesson of the learners in Mathematics. A teacher must interpret pupils' written work, analyze their reasoning, and respond to the different methods they might use in solving a problem. Teaching requires the ability to see the mathematical possibilities in a task, sizing it up and adapting it for a specific group of pupils.

On the other hand, According to Article XIV: Education, Science and Technology, Arts, Culture, and Sports of the Constitution of 1987 Sec.3 No. 2, school shall inculcate patriotism and nationalism, foster love of humanity, respect human rights, appreciation of the role of national heroes in the historical development of the country. Teach the rights and duties of citizenship, strengthen ethical and spiritual values, develop moral character and creative thinking, broaden scientific and technological knowledge and promote vocational efficiency.

In addition, The Constitutions, Article 2, Section 17: The state shall give priority to education, science and technology, arts, culture and sports to poster patriotism and nationalism, accelerate social progress, and promote total human liberation and development. That is the reason why educators anchor what they teach in postering patriotism and nationalism in every subject area just to make the learners aware of the importance of being independent.

As cited in Law Phil the Republic Act No. 9850: An act declaring arnis as the national art and sport of the Philippines. Section 1: It is the policy of state to inculcate patriotism and nationalism of the role of national heroes and symbols in the historical development of the country. Furthermore, the State must be given to education, science and technology, arts, and sports to foster patriotism and nationalism, increase social progress, and promote total human liberation and development.

Hence, this is no longer practiced or even taught in their Physical Education classes. It must be an eye opener to the Department of Education that it must be added in the curriculum.

One of the low performance subjects that the learners manifested before, and up to present, is Mathematics. Most of the learners have difficulty to understand Mathematics subjects. Even simple reading aloud mathematical problem, the learners become nervous or having anxiety. These learners show dismay once they see exercises and activities in the book. These different facial expressions of the learners are even noticed by the teacher.

The study proposed an innovative instructional material for Mathematics Grade I that helped the learners to understand the lesson in Mathematics in an easy way that provide for the development of higher cognitive skills such of critical thinking , in query, problems solving etc. through innovative instructional material which efficient tool in teaching the learners.

The learners demonstrate comprehension and appreciation of key concept and skills involving numbers and number sense (whole numbers up to 100, ordinal numbers up to 10th , money up to Php100, addition and subtraction of whole numbers, and fraction  $\frac{1}{2}$  and  $\frac{1}{4}$  ) geometry (2and 3- of length, mass, and capacity) ; and statistics and probability (tables, pictographs, and products) as applied – using appropriate technology – in critical thinking, problem solving, reasoning, communicating , making connections, representations and decision in real life.

For so many years, Mathematics is one of the difficult subjects that the learners encounter during their studies. Through innovative instructional materials it would easier for both learners and teacher to make purposeful education.

Innovative instructional materials for Mathematics Grade I benefited the learners in understanding Mathematics in an easy way.

The goal of education is not just making a learner literate but adds critical thinking, knowledgeability and self sufficiency. When there is an initiative to change, there is hope for progress in any field. Creativity can be developed and innovation benefits both learners and teachers. Teachers become creative in doing materials that help the learning to understand easily the lessons.

Learners understand the lesson in an easy way using innovative instructional materials. The teacher used innovative instructional to simplify the contents of the material. It helped the teacher to represent in a more meaningful way that which would make them more motivated to pay more attention to the lesson.

Quality instruction is what the teachers always want to achieve every time they execute the lesson. An innovative instructional material is considered the most possible and a better solution to some aspects of the problem. Innovative instructional materials have been used as supplement for teaching method as well as a very efficient tool for instructors or teachers to explain and demonstrate the particular subject and to make this possible the creation of new instructional materials are needed.

## **Statement of the Problem**

The general problem of the study is: How may innovative instructional materials for Grade I Mathematics with emphasis on the inculcation of patriotism and nationalism be conceptualized, developed, implemented and evaluated?

Specifically, this study sought answers to the following problems:

1. What procedures must be followed in developing the innovative instructional materials for Grade I Mathematics?
2. What are the learning contents that should be included related to the inculcation of patriotism and nationalism in the development of innovative instructional materials for Grade I Mathematics?
3. How may innovative instructional materials for Grade I Mathematics be evaluated in terms of:
  - 3.1 content,
  - 3.2 format,
  - 3.3 presentation and organization, and
  - 3.4 accuracy and up-to-datedness?
4. How does DepEd provide support for such initiative?
5. What recommendations may be put forward to improve instructional materials for Grade I Mathematics?

## Methods

This study employed the use of the descriptive method of research. According to Travers (2008), the descriptive method of research characterizes the nature of the situation existing during the study and explored the causes or explanations for the particular phenomenon. Gay (2006) holds that this method showed what existed or what was in which the contents may be used for gathering accurate. This kind of research method involved the gathering of facts to test hypotheses or to answer questions about the present status of the subjects of the study so that the data were effectively used in evaluating the program. This method meets the objective of this study which was to enhance innovative instructional for Grade I Mathematics in Akle Elementary School.

The researcher's procedures in the developing the instructional materials entitled "PROJECT SOLVE" followed the ADDIE Models. The instructional design observed the five steps 1. Analyze, 2. Design, 3. Develop, 4. Implement and 5. Evaluate.

In developing the learning goal, the researcher's goal was to develop an instructional materials in Grade I Mathematics with inculcation of patriotism and nationalism. At the young age, the learner gain knowledge about the patriotism and nationalism but using the subject of Mathematics.

The next step was specifying the learning objectives. In this step, the researcher asked some knowledgeable person and searched the internet to have a creative, colorful, attractive layout design that was suited to the instructional materials given to Grade I learners. The detailed and content of the instructional materials were determined in this step.

After it, the actual creation of the content and materials based on the design was next. With the utilization of internets, the researcher gathered all pictures and other materials related to patriotism and nationalism that was needed to make an instructional material in Grade I Mathematics I with inculcation of patriotism and nationalism. Based on the content, the researcher used the K- 12 Curriculum Guide in Grade I Mathematics and the different Mathematics books in Grade I consist of the collection of topics then arranged the topics in order start from simple to complex topics that they were presented.

The plan was put into action. After the topics came up with patriotism and nationalism, the next was the implementation. It was to print the instructional materials and made it become a big book.

Lastly, The fourteen (14) panel teachers of Akle Elementary School evaluated the instructional materials. There were four (4) set of four (4) criteria in which the learning areas can be measured. They examined the instructional materials.

The study utilized the research method in developing innovative instructional materials for Grade I Mathematics. The developments of innovative instructional materials for Grade I Mathematics consisted of collection of topics from the K – 12 Curriculum Guide in Grade I Mathematics. The transformations of the development of innovative instructional materials for Grade I Mathematics to ones in which the instructional materials were building blocks that were crucial in process. The focus was on the procedure and process involved in Grade I Mathematics with emphasis on the inculcation of patriotism and nationalism development and evaluation of the instructional materials. It also focused on how the particular topics were arranged in order that they were presented. The activities were easy and simple. The development of innovative instructional materials possessed ideas that led the learners to achieve more in using the materials and desired outcome.

There were a set of four (4) criteria in which the learning areas can be measured: the content or the body of concepts in the development of innovative instructional materials, format, the presentation and organization, and accuracy and up-to-datedness of the of innovative instructional materials helped to retain their general characteristics.

The results of the teachers' evaluation to the instructional materials by tabulating the statistical means. These were the results to the perceived significance and validity of the development of innovative instructional materials on the subject matter and on the instructions.

The study showed the various factors that affect the development of innovative instructional materials for Mathematics Grade I at a given point in time using documentary analysis, locally constructed questionnaire as well as technique.

## Population and Sample of the Study

The researcher used fourteen (14) panel teachers as the respondents who evaluated the development of innovative instructional materials for Grade I Mathematics for the accomplishment of this study. The summary of the population and distribution of the respondents are shown in table 1.

Table 1 shows the population and sample of this study.

### Table

#### *Distribution of Respondents*

School	Panel Teachers	Percentage
Akle Elementary School	14	100%

The respondents who evaluated the development of innovative instructional materials were the fourteen (14) panel teachers at Akle Elementary School. The completion and evaluation of the development of innovative instructional materials in Grade I Mathematics were done at least two to three weeks. They evaluated according to the four criteria: content, format, presentation and organization, and accuracy and up-to-datedness.

## Research Instrument

The researcher prepared instructional materials consisting of different topics of exercises found in K – 12 Curriculum Guide in Grade I Mathematics, several books in Grade 1 Mathematics, internet resources and other references. The researcher used documentary analysis as a researcher's technique in obtaining the data requirements needed in the study on concepts patterned on the format.

After reading and studying the samples of rating instruments from related studies, the researcher prepared the rating instruments. The researchers consulted her adviser about how to construct the questionnaire, and the internet. The researcher submitted to her adviser for necessary improvement

after which it was finalized. The format of the questionnaire was based on the CIP or the Continuous Improvement Project.

For validation process, the teachers were given the questionnaires to assess the development of innovative instructional material for Grade I Mathematics; also they served as evaluators. The questionnaire was used to evaluate the content validity of the innovative instructional material for Grade I Mathematics which constituted the following criteria: (1) content; (2) format; (3) presentation and organization; and (4) accuracy and up-to-datedness.

## **Part I. Procedures in the Development of the Innovative Instructional Materials**

Development of the innovative instructional materials in Grade I Mathematics related to the inculcation of patriotism and nationalism, the researcher seeks the advise of her adviser in the development of innovative instructional materials writing, the same with her critic. Instructional materials that are existing in various sources like internet and university libraries are browsed for the comparison to come up with the design. The research and development process were used in the development of innovative instructional materials, such as the planning stage, teachers need high – quality instructional materials in order to plan effective instruction. When choosing instructional materials, teachers needed to keep in mind the qualities used to define quality instruction. Materials should be well-organized and development stage easy to use to allow more time for differentiation, aligned to the standard identified by the school, diverse, including resources for learners who struggle and opportunities for learners to be challenged, after discovery of what needs in the instructional materials and to learn, development can take place, identify effective teaching materials, determine the best sequence in which to present them, and select a mode of delivery. Various modes of instructional delivery include and the evaluation stage, the evaluation tool should assume that a set of standards and a curriculum program or framework informed the work of evaluators in appraising the effectiveness of instructional materials. Evaluation of Mathematics instructional materials was a formidable task. A set of standards and a curriculum guide the school expectations for Mathematics education and served as an important reference for the evaluation.

## **Part II. Learning Contents in the Development of the Innovative Instructional Materials**

In the Development of the innovative instructional materials in Grade I Mathematics related to the inculcation of patriotism and nationalism, the topics were identified from the K-12 Curriculum Guide in DepEd in Grade I Mathematics. Mathematics is one subject that pervades life at any age and in any circumstance. Thus, its value goes beyond the classroom and the school. Mathematics as a school subject, therefore, must be learned comprehensively and with much depth.

The content in the development of innovative instructional materials the topics included in the PROJECT SOLVE were based on the K-12 Curriculum Guide, Mathematics books in Grade I and internet. The inculcation patriotism and nationalism in the instructional materials were also based on the internet like the Philippines President and heroes.

The twin goals of mathematics in the basic education levels, K-12, are Critical thinking and Problem Solving. Mathematical problem solving is finding a way around a difficulty, around an obstacle, and finding a solution to a problem that is unknown. These two goals were to be achieved with organized and rigorous curriculum content, a well-defined set of high-level skills and processes, desirable values and attitudes, and appropriate tools, taking into account the different contexts of Filipino learners. After a series of consultation with her adviser and critic the topics were included in the development of innovative instructional materials, mathematics books, instructional materials in Mathematics were also utilized to compare the design and, also by giving instruction to each lesson which can interact to the learners of the subject. In having the some comments, suggestion for the development of innovative instructional materials for Grade I Mathematics which were given from the researcher's adviser and critic, the researcher then complied immediately with some innovative improvements. The researcher gathered all these inputs and came up with the development of innovative instructional materials for Grade I Mathematics.

### **Part III. Evaluation of the Development of the Innovative Instructional Materials**

**Teachers' Evaluation of the Development of the Innovative Instructional Materials.** The development of innovative instructional materials for Grade I Mathematics were validated by fourteen (14) teachers as quality assurance team from Akle Elementary School, Akle San Ildefonso, Bulacan respondents.

They used the evaluation instrument to determine the validity of the development of innovative instructional materials for Grade I Mathematics as to the content; format; presentation and organization; and accuracy up-to-datedness. The researcher used the weighted mean average of each item in the evaluation instrument. The following tables showed the result of the descriptive measures of the teachers evaluation of the innovative instructional materials for Grade I Mathematics in terms of content; format, presentation and organization, and accuracy up-to-datedness.

The result and interpretation of each exercise were presented on tables with corresponding frequency of every item in each criterion. Also, on tables showing the summary of ratings obtained from evaluation made by the teachers were given, the over-all descriptive measures of the evaluation in the development of the innovative instructional materials. After giving the result of each item, the researcher gave her interpretation to make its items clear and reliable. Each item was interpreted from highest to lowest rate. Using the instructional materials evaluation scale which has the following interpretation, the researcher based raw scores under the very satisfactory, satisfactory, poor, and not satisfactory.

The development of the innovative instructional materials for Grade I Mathematics motivated the pupils to involve themselves in the different exercises because of the design which included in each part of the lesson. Also, the researcher believed that learning takes place if pupils were provided by a situation in which each of the pupils was involved in the actual learning process. The teachers innovated teaching devices to improve the academic performance of the learners.

The development of innovative instructional materials was truly indispensable, most likely to those learners who hoped that they are going to learn new things in the Mathematics through the method and the materials that they needed in the pace of their studies toward success. These made the instructional

materials more interesting to work with likewise appealing to the pupils related factors in terms of attainment of objectives.

Presented in the table 2 are the results of the teachers' evaluation on the development of the innovative instructional materials for Grade 1 Mathematics in terms of content.

**Table 2**

*Frequency Distribution and Descriptive Measures of the Development of Innovative Instructional Materials in terms of Content*

Items	Frequency				Mean	Verbal Interpretation
	4	3	2	1		
1.Content is suitable for the student's level of development.	13	1	0	0	3.92	Very Satisfactory
2.Materials contribute to the achievement of specific objectives of the subject area and grade/year level for which it is intended.	12	2	0	0	3.86	Very Satisfactory
3.Materials provide for the development of higher cognitive skills such as critical thinking, learning by doing, inquiry, problem solving, etc.	12	2	0	0	3.86	Very Satisfactory
4.Materials are free of ideological, cultural, religious, racial, gender biases and prejudices.	11	3	0	0	3.78	Very Satisfactory
5.Materials enhance the development of desirable values and traits such as:						
5.1Pride of being a Filipino	12	2	0	0	3.86	Very Satisfactory
5.2Scientific attitude and reasoning	12	2	0	0	3.86	Very Satisfactory
Items	Frequency				Mean	Verbal Interpretation
	4	3	2	1		
5.3 Desire of excellence	12	2	0	0	3.86	Very Satisfactory
5.4 Love	12	2	0	0	3.86	Very Satisfactory
5.5 Helpfulness/teamwork/Cooperation	12	2	0	0	3.86	Very Satisfactory
5.6 Unity	12	2	0	0	3.86	Very Satisfactory
5.7 Desire to learn new things	13	1	0	0	3.92	Very Satisfactory
5.8 Honestly and trustworthiness	12	2	0	0	3.86	Very Satisfactory
5.9 Ability to know right from wrong	12	2	0	0	3.86	Very Satisfactory
5.10 Respect	12	2	0	0	3.86	Very Satisfactory
5.11 Critical and creative thinking	12	2	0	0	3.86	Very Satisfactory
5.12 Productive work	12	2	0	0	3.86	Very Satisfactory
6. Materials have the potential to arouse interest to arouse the interest of the target	12	2	0	0	3.86	Very Satisfactory
7. Adequate warning/cautionary notes and provided in topics and activities where safety health are of concern.	11	3	0	0	3.78	Very Satisfactory
<b>Total Mean</b>					<b>3.85</b>	<b>Very Satisfactory</b>

As shown from the table 2, the content is suitable for the student's level of development and desire to learn new things that obtained the highest mean value of 3.92, interpreted as very satisfactory. Materials contributed to the achievement of specific objectives of the subject area and grade/year level for which was it was intended interpreted as very satisfactory obtained 3.86. Materials provide for the development of higher cognitive skills such as critical thinking, learning by doing, inquiry, problem solving, etc. interpreted also as very satisfactory mean of 3.86. Materials have the potential to arouse interest of the target interpreted as very satisfactory obtained mean of 3.86. The item with the lowest mean value of 3.78 is that the materials were free from ideological, cultural, religious, racial, gender

biases and prejudices and adequate warning/cautionary notes and provided in topics and activities where safety health are of concern and adequate warning/cautionary notes and provided in topics and activities where safety health were of concern. interpret as very satisfactory.

Based on the table, the Grade I pupils had a better understanding of the lesson because of the content that was suited for them. Content pertains to the essential lessons and concepts contained in the materials, which provide the learners the necessary skills in learning each part of the lessons. The appropriateness of the material's contents, its ability to develop the users to become critical thinkers, its ability to motivate learners to take the role the in the teaching learning process, thus promoting positive values were vital contents of every teaching tool.

Presented in the table 3 are the results of the teachers' evaluation on the development of the innovative instructional materials for Grade 1 Mathematics in terms of format.

### **Table 3**

*Frequency Distribution and Descriptive Measures of the Development of Innovative Instructional Materials in terms of Format*

Items	Frequency				Mean	Verbal Interpretation
	4	3	2	1		
<b>1. Prints</b>						
1.1 Size of letters is appropriate to the intended user.	7	7	0	0	3.50	Very Satisfactory
1.2 Spaces between letters and words facilitate learning.	8	6	0	0	3.52	Very Satisfactory
1.3 Font is easy to read	10	4	0	0	3.72	Very Satisfactory
1.4 Printing is of good quality (i.e., no broken letters, even density, correct alignment, properly placed screen registration).	11	3	0	0	3.79	Very Satisfactory
<b>2. Illustrations</b>						
2.1 Simple and easily recognizable	12	2	0	0	3.86	Very Satisfactory
2.2 Clarity and supplement the text	10	4	0	0	3.72	Very Satisfactory
2.3 Properly labeled or captioned (if applicable)	11	3	0	0	3.79	Very Satisfactory
2.4 Realistic / appropriate colors.	10	3	1	0	3.64	Very Satisfactory
2.5 Attractive and appealing	10	3	1	0	3.64	Very Satisfactory
2.6 Culturally relevant	11	3	0	0	3.79	Very Satisfactory
<b>3. Design and layout</b>						
3.1 Attractive and pleasing to look at	13	1	0	0	3.92	Very Satisfactory
3.2 Simple (i.e., does not distract the attention of the reader)	13	1	0	0	3.92	Very Satisfactory
3.3 Adequate illustration in relation to text	11	3	0	0	3.79	Very Satisfactory
3.4 Harmonious blending of elements (e.g., illustrations and text.)	11	2	1	0	3.71	Very Satisfactory
<b>4. Paper and binding</b>						
4.1 Paper contributes to easy reading	12	2	0	0	3.86	Very Satisfactory
4.2 Durable binding to withstand frequent use	11	3	0	0	3.79	Very Satisfactory
<b>5. Size and Weight of Resource</b>						
5.1 Easy to handle	12	2	0	0	3.86	Very Satisfactory
5.2 Relatively light	12	2	0	0	3.86	Very Satisfactory
				<b>Total Mean</b>	<b>3.75</b>	<b>Very Satisfactory</b>

The format shown a simple and easily recognizable, paper contributed to easy reading, easy to handle and relatively light having the highest mean 3.86 it means that the pupils found it easy to read the instructional material interpret as very satisfactory. The item with the lowest mean of 3.50 is the size of letters was appropriate to the intended user interpret as very satisfactory.

Presented in the table 4 are the results of the teachers' evaluation on the development of the innovative instructional materials for Grade 1 Mathematics in terms of presentation and organization.

Items	Frequency				Mean	Verbal Interpretation
	4	3	2	1		
1. Presentation is engaging, interesting, and understandable.	12	2	0	0	3.86	Very satisfactory
2. There is logical and smooth flow of ideas.	12	2	0	0	3.86	Very satisfactory
3. Vocabulary level is adapted to target reader's likely experiences and level of understanding.	12	2	0	0	3.86	Very satisfactory
4. Length of sentences is suited to the comprehension level of the target reader.	12	2	0	0	3.86	Very satisfactory
5. Sentences and paragraph structures are varied and interesting to the target reader.	13	1	0	0	3.92	Very Satisfactory
				<b>Total Mean</b>	<b>3.87</b>	<b>Very Satisfactory</b>

**Table 4**

*Frequency Distribution and Descriptive Measures of the Development of Innovative Instructional Materials in terms of Presentation and Organization*

Items	Frequency				Mean	Verbal Interpretation
	4	3	2	1		
1. Conceptual errors.	12	2	0	0	3.86	Very satisfactory
2. Factual errors.	13	1	0	0	3.92	Very satisfactory
3. Grammatical errors.	13	1	0	0	3.92	Very satisfactory
4. Computational errors.	13	1	0	0	3.92	Very satisfactory

In terms of presentation and organization, the respondents perceived that the presentation was engaging, interesting, there was logical and smooth flow of ideas, vocabulary level was adapted to target reader's likely experiences and level of understanding and understandable and length of sentences was suited to the comprehension level of the target reader had significant attained its presentation and organization with a weighted mean of 3.92 as the highest mean while the sentences and paragraph structures were varied and interesting to the target reader obtained a lowest weighted mean of 3.86.

The respondents gave a *very satisfactory* rating with a mean value of 3.87 to all the criteria used in the presentation and organization.

Presented in the table 5 are the results of the teachers' evaluation on the development of the innovative instructional materials for Grade 1 Mathematics in terms of accuracy and up-to-datedness.

**Table 5**

*Frequency Distribution and Descriptive Measures of the Development of Innovative Instructional Materials in terms of Accuracy and Up-to-datedness*

Items	Frequency				Mean	Verbal Interpretation
	4	3	2	1		
5. Typographical errors (e.g., inappropriate or unclear illustrations, missing labels, wrong captions, etc.)	13	1	0	0	3.92	Very Satisfactory
<b>Total Mean</b>					<b>3.90</b>	<b>Very Satisfactory</b>

Table 5 reflects the frequency and descriptive measures of development of innovative instructional material in terms of accuracy and up-to-datedness which an factual errors, grammatical errors and computational errors with a weighted mean of 3.92 as the highest mean while typographical errors (e.g., inappropriate or unclear illustrations, missing labels, wrong captions, etc. the conceptual errors obtained the lowest mean of 3.86.

The respondents gave a very satisfactory rating with a mean value of 3.85 to all the criteria used in the presentation and organization.

**Table 6**

*Summary Table of the Evaluation of the Development Innovative Instructional Material*

Items	Mean	Interpretation
1.Content	3.85	Very Satisfactory
2.Format	3.75	Very Satisfactory
3.Presentation and Organization	3.87	Very Satisfactory
4.Accuracy and Up-to-datedness	3.90	Very Satisfactory
<b>Grand Mean</b>	<b>3.84</b>	<b>Very Satisfactory</b>

Table 6 presents the summary of the result after the evaluation of innovative instructional materials in terms of content, format, presentation and organization and accuracy and up-to-datedness. It can be seen from the table that from among the four criteria, the accuracy and up-to-datedness ranked the highest in the mean rating of 3.90, interpreted as very satisfactory. This result only proved the accuracy and up-to-datedness were presented no conceptual errors, factual errors, grammatical errors, computational errors and no typographical errors (e.g., inappropriate or unclear illustrations, missing labels, wrong captions, etc. This is followed next by presentation and organization with an average mean 3.87, interpreted as very satisfactory, with the content an average mean value of 3.85 interpreted as very satisfactory, and lastly the format with an average mean value of 3.75, also interpreted as very satisfactory. Based on the grand mean of the development of innovative instructional material which is 3.84, interpreted as very satisfactory. This is highly favorable rating proved that the development of innovative instructional material on the whole were acceptable, thus, they can utilized as teaching tool in Grade I Mathematics.

Finally, the teacher-evaluators were unanimous in their perception that the developments of innovative instructional materials are very valid and useful to all pupils of Mathematics Grade I.

The results of the evaluation as shown, present consistent results in all criteria of evaluation. Thus, the validity of the developments of innovative instructional materials was recognized and perceived positively by the evaluators. Grade I Mathematics.

DepEd supported such imitative through training and workshop for the teachers. It provided more references that can help improve the materials.

The recommendation to the development of innovative instructional must be related to the lesson so that learners' attention is caught in the beginning and till the last minute of the discussion. They showed interest and participate in the class. The instructional materials must be more attractive. Most learners are visual. They understand better if there are more visual aids that are colorful and attractive. Provide more references that can help improve the materials and always look for reference that gives the trend in teaching Mathematics.

## Conclusion

Based on the findings of the study, the following conclusions are drawn:

1. The procedure of development of innovative instructional materials for Grade I Mathematics inculcation of patriotism and nationalism was relevant and clearly obtained. The development of

innovative instructional materials for Grade I Mathematics inculcation of patriotism and nationalism were very satisfactory and effective in a way that learners were hooked with the lesson.

2. The learning contents were developed through innovative instructional material. The concept and principles necessary in understanding Mathematics I were plausible and accurate. The lessons were relevant and in accordance with the existing curriculum the K-12 curriculum guide.

3. The development of innovative instructional materials was evaluated by the teachers in terms of content, format, presentation and organization and accuracy and up-to-datedness.

The result of the evaluation conducted were ranked as follow: The content, the mean value of 3.85 interpreted as very satisfactory, this proved that the contents of the materials were relevant to attain the specific objectives set for each lesson.

For Format, it was simple, easily recognizable, attractive and culturally relevant. It had a smooth flow of thought and there was a relationship of the lesson. The instructional materials were evaluated as very satisfactory and had a good rating by the respondents.

For Presentation and Organization, it had recorded an average mean rating of 3.87 interpreted as very satisfactory. This implied that the materials were able to provide necessary lesson and activities needed in the teaching – learning process.

For Accuracy and Up-to-datedness of Information, it had an average mean rating of 3.90 interpreted as very satisfactory. This implied that the innovative instructional materials were able to provide necessary things in studying Mathematics.

4. The development of innovative instructional were generally rated very satisfactory by the teacher-evaluators.

## Recommendations

Based on the results of the study, it is therefore recommended that:

1. The development of innovative instructional materials must be related to the lesson so that learners' attention is caught in the beginning and till the last minute of the discussion. They showed interest and participated in the class.
2. The instructional materials must have meaningful connection to the prior knowledge. There must be a linkage between the motivation and the lesson proper. Later in the discussion, learners can sieve the right answer that leads to essential understanding.
3. The instructional materials must be varied and appropriate to the lesson that would be discussed on that day.
4. Provide more references that can help improve the materials. Always look for reference that gives the trend in teaching Mathematics.
5. The instructional materials must be more attractive. Most learners are visual. They understand better if there are more visual aids that are colorful and attractive.

6. The instructional materials that the researcher used in this study need to be utilized in the Math Department especially the inculcation of patriotism and nationalism. At the same time, the learners began to be acquainted with the Filipinos heroes.

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