

**APPROVAL SHEET**

This thesis entitled "**DEVELOPMENT AND VALIDATION OF STRATEGIC INTERVENTION MODULES (SIM's) IN TEACHING ELEMENTARY SCIENCE 6**" prepared and submitted by **RESSIL L. LOREN-SOPOSO** in partial fulfillment of the requirements for the degree **MASTER OF ARTS IN EDUCATION** with specialization in **SCIENCE EDUCATION** had been examined and is recommended for acceptance and approval for **ORAL EXAMINATION**.

**MARILOU B. GALARSE, Ph. D**

Adviser

-----

**APPROVED** in partial fulfillment of the requirements for the degree of **Master of Arts in Education** with Specialization in **Science Education** by the Oral Examination Committee.

**FABIAN C. PONTIVEROS, JR., MASE, MAEd**

Member

**AIDA V. PEGUIT, MAEd**

Member

**ADELYNE M. COSTELO-ABREA, Ph.D**

Chair

-----

**ACCEPTED** in partial fulfillment of the requirements for the degree of **Master of Arts in Education** with Specialization in **Science Education**.

**ZENAIDA PLAZA, MAEd**

Coordinator, Graduate Studies

**CESARIO C. GALANIDA, MAEd**

Head, Department of Sciences

\_\_\_\_\_  
Date

### **ACKNOWLEDGEMENT**

This paper would have not been accomplished without the encouragement, inspiration, generosity, and kindness of friends, superiors and relatives. It is for this reason that the researcher wishes to acknowledge these God-given gifts.

Dr. Marilou B. Galarse, her adviser, for her patience guidance and valuable pieces of advice;

Dr. Adelyne M. Costelo-Abrea, chair of the panel of the oral examiners and Executive Director of PNU-AC; Prof. Fabian C. Pontiveros, co-chair; Prof. Aida V. Peguit, member of the panel, for sharing their insights and expertise for the improvement of the modules;

Prof. Rennie C. Saranza, who availed herself as secretary during her oral defense;

Mdm. Teofila C. Cabatuan, Schools Division Superintendent (DepEd Surigao del Sur), for allowing her to conduct her study in their division;

Mdm. Elviza S. Urbiztondo, Division Science Supervisor (Elementary) and the rest of the evaluators, for their honest appraisal polished the rough parts of this paper;

Her friends; Lovet, Myra, Lendy, Mam Alma, Mam Bon and Mam Bet, for their inspiring company which made her service in LCES joyful and worth keeping;

Her parents and siblings, for their prayers and unwavering support;

Her inspirations Keith and Ed, for their unconditional love and understanding; and

All those who, in one way or another, contributed in the accomplishment of this paper and above all to **Jehovah God**, for His incomparable love which can never be equaled by any wisdom and wealth that can be gained from this world.

**RLL**

## **DEDICATION**

*This work is humbly dedicated to*

*Jehovah God*

*and to*

*Mama and Papa,*

*My inspirations*

*Keith Isaiah & Ed*

*To my best friends Lovet, Myra, Mam Alma,*

*Mam Bon, Mam Bet and Te Lendy*

*RLJ*

## ABSTRACT

Title : DEVELOPMENT AND VALIDATION OF  
STRATEGIC INTERVENTION MODULES (SIM's)  
IN TEACHING ELEMENTARY SCIENCE 6

Researcher : Ressil L. Loren

Degree : Master of Arts in Education

Specialization : Science education

Adviser : Dr. Marilou B. Galarse

Oral Examiners :

Chair : Dr. Adelyne C. Abrea

Member : Prof. Fabian C. Pontiveros

Member : Prof. Aida V. Peguit

Date :

Key Concepts : Development  
Strategic  
Intervention Modules  
Validation

### **The Problem**

This study developed and evaluated Strategic Intervention Modules (SIMs) in elementary science for Grade Six pupils of Lianga Central Elementary School (LCES).

Specifically, it attempted to answer the following questions:

1. What strategic intervention materials can be developed to master the least-learned skills in Science 6?
2. How valid are the materials as perceived by experts?
3. Is there a significant difference on the ratings given by the pedagogy and utility experts and content experts?

## **Methodology**

The study is on the development of strategic intervention modules as support material to master the National Achievement Test (NAT) least learned competencies in Elementary Science 6.

The study underwent three phases; 1) The planning phase; 2) The development phase; and 3) The validation phase.

In the planning phase, the NAT result of the Grade Six pupils of Lianga Central Elementary School (LCES) for School Year 2010-2011 in Elementary Science was determined. This was made to identify the unmastered competencies by the Grade Six pupils. The NAT Mean Percentage Rating (MPR) of correct responses was used as the basis for the construction of the intervention modules. As determined, all the Science competencies that cover the NAT belong to the percentage rating below 50%. The data showed that all the NAT Science competencies were not mastered by the Grade Six pupils of LCES.

The results were the basis in selecting and drafting the topics and activities that are included in the module.

The development phase is the actual making of the intervention modules which include the determination of the objectives specified in the BEC, the selection of

activities and adapting the format, theories, and the curriculum model of instruction.

The first drafts of the SIMs underwent informal validation. They were presented to the adviser and colleagues in order to determine the strong and weak points of the developed SIMs. Comments and suggestions were considered for better improvement. There were five (5) modules developed which were adapted from the Renner's Curriculum Model of Instruction (CMI) and Olayta-Dy' Strategic Intervention Theory (SIT) which were patterned after the Curriculum Development Theory (CDT) of John Dewey.

In the validation phase, the SIMs were validated through formal validation of the three (3) public elementary science master teachers who were the pedagogy and utility validators and three (3) public secondary science master teachers who served as the content validators.

The final drafts were done after the teacher-experts had validated the materials. Their suggestions, comments, and recommendations were considered in writing the final draft.

A researcher-made instrument adapted from Labardo (2001) and Galarse (2007) was used to gather the data of evaluation of the developed modules.

### **Findings**

The analysis of the data obtained from the evaluation of the developed Strategic Intervention Module (SIM) revealed the following findings:

1. The development of the intervention modules was based on the eight (8) identified least mastered competencies based on the National Achievement Test (NAT) in Elementary Science 6. There were five (5) SIMs developed that were based on the Curriculum Development Theory of John Dewey, Curriculum Model of Instruction by Renner, and Strategic Intervention Theory of Olayta-Dy.
2. The pedagogy and utility experts rated the developed SIMs "outstanding" with an overall mean rating of 4.59. This showed that the three experts viewed the modules effective materials to enhance the mastery of the Elementary Science competencies that cover the NAT.
3. The content experts rated the developed SIMS "very satisfactory" with an overall mean rating of 4.03.



This result implied that the content experts viewed the content of the modules valid as teacher support materials to master the competencies in Elementary Science 6.

4. There are significant differences on selected items of the four modules but are minimal and do not affect the summary on the multivariate analysis of the ratings given by the two (2) groups of evaluators.
5. There is no significant difference on the overall mean ratings given by the two groups of validators in the five developed modules since the computed P value were all above the level of significant values which is 0.05. The pedagogy and utility experts rated higher than the content experts. This difference could be attributed to the content experts' standard of evaluation.

### **Conclusion**

On the basis of the findings, the following conclusions were drawn:

1. that the developed Strategic Intervention Modules (SIMs) could be useful and beneficial for the mastery of the competencies in the National Achievement Tests (NAT);

2. that the five (5) modules' activities were based on the Curriculum Development Theory of John Dewey, Curriculum Model of Instruction by Renner and Strategic Intervention Theory of Olayta-Dy; and
3. that there is no significant difference on the overall ratings given by the pedagogy and utility experts and content experts.

**Recommendations:**

On the ground of the findings and conclusions of this study, the following are hereby recommended:

1. The elementary science six teachers are free to use and modify the module based on the needs of the pupils;
2. The modules' activities that were rated "satisfactory" by the content validators should be improved;
3. The developed modules may be field tested to grade six pupil to assess its effectiveness;
4. The Elementary teacher should develop more strategic intervention modules for other subject areas to address the least mastered skills in other subjects; and

5. A similar study may be conducted covering a bigger number of respondents in another venue.

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