

# Effectiveness of Strategic Intervention Material (Ang Pananalapi Ni Peni) in Elevating the Performance Level of Araling Panlipunan 9th Grade

Karen Mae B. Calautit

Lupigue Integrated School, City of Ilagan

DOI: <https://dx.doi.org/10.47772/IJRISS.2024.803290S>

Received: 03 September 2024; Accepted: 07 September 2024; Published: 02 October 2024

## ABSTRACT

This action research evaluates the effectiveness of the Strategic Intervention Material (SIM) titled “Ang Pananalapi ni Peni” in improving Grade 9 students’ understanding of monetary policy in Araling Panlipunan. Conducted at Lupigue Integrated School in January 2023, the study included all Grade 9 Artemis learners using universal sampling. A one-group pre-test-post-test design was employed to rigorously assess the impact of the SIM on student learning outcomes. The data collection instrument comprised a competency-based test administered before the intervention and repeated after the implementation of the SIM. To enhance the reliability of the findings, the researcher cross-referenced the test results with class records. This approach ensured a comprehensive evaluation of the students’ progress and provided additional validation for the test scores.

Data analysis involved a detailed comparison of pre-test and post-test scores, which revealed a significant improvement in student performance following the use of the SIM. The results suggest that the SIM effectively enhances learners’ comprehension of monetary policy, demonstrating its potential as a valuable educational tool.

Based on these findings, the study recommends integrating the SIM into the regular Araling Panlipunan curriculum. Further research is suggested to evaluate the effectiveness of the SIM across different subjects and diverse student groups. Additionally, the research highlights the importance of employing targeted intervention materials to address specific learning gaps. This approach ensures that students gain a deeper understanding of complex topics, such as monetary policy, thereby improving their overall academic performance.

## CONTEXT AND RATIONALE

One of the goals of the Department of Education is that no student will be left behind through education. This makes ensuring that every student has an equal chance to succeed, help increase their academic performance and personally develop acquired expertise. The competency-based strategic intervention resources are therefore a solution to the students’ extremely low performance in terms of acquiring their least mastered skills. As stated in the mission of the Department of Education, it is the right of every Filipino to have a quality education (Department of Education, 2013). Thus, the K to 12 Basic Education Curriculum was implemented in the education system of our country (Republic Act No. 10533, 2013). It has a lot of goals that will enable learners to become a productive and responsible citizen equipped with the knowledge and skills needed in this rapidly changing and increasingly globalized environment.

Trainings and workshops are provided as specified in DepEd Memorandum No.117 Section 2005. The training program sought to improve instructors' test analysis and interpretation skills, as well as to prepare them to create various intervention materials for remediation and enrichment of learning.

Department Order 08 s. was also issued by the Department of Education (DepEd). 2015, as well as the Classroom Assessment Policy Guidelines It reads as follows: "There must be sufficient and appropriate instructional interventions to ensure that learners are prepared for summative exams," and "There must be sufficient and appropriate instructional interventions to guarantee that learners are ready before summative tests."

A student who earns a grade of less than 75 in any subject in any quarter will be intervened by remediation and extra lessons from that student's subject teacher "the necessity to intervene to prevent academic underachievement among students. As a result, no learners will be left behind as suitable. Individual requirements are met through instructions and interventions.

Effective teaching-learning promotes positive solution of educational standard. Educationists all over the world have worked out numerous accepted models in teaching and learning of Economics. Yet there are still problems of poor performance of students in teaching of Economics in the classroom specifically in monetary policy "patakarang pananalapi". There are certain factors the teachers perceive as the constraints for the effective performance of students in Economics among secondary schools' students.

According to a study, Filipino students have difficulty in studies for the following reasons: they have not mastered the concepts needed, they do not understand the problem, and the content related to some items is not formally taken up in the curriculum [1]. This means that students have not mastered the concepts and lack conceptual grasp of the previously covered topics.

For these reasons, the researcher decided on making and developing SIM in Araling Panlipunan 9 entitled "Ang Pananalapi ni PENI" and implemented them to Araling Panlipunan 9 students that will enhance learning and remedy on the least mastered skills of the students, thus attain growth in the level of performance.

Moreover, the preparation of teacher-made Strategic Intervention Material is believed to be an effective and efficient tool in strategic teaching that serves as an aid for the teachers in carrying out objectives on least learned competencies. It also motivates and stir up the attention and interest of the learners in an easy and fun way. And since the material is locally made, it brings into consideration the capacities and abilities of the student-clientele, use locally known materials and culture, and makes learning experience more personal (Laccay, 2016).

Thus, this SIM is believed to improve the mastery of the learners on monetary policy "patakarang pananalapi".

### **Innovation, Intervention and Strategy**

This action research evaluates the effectiveness of the Strategic Intervention Material (SIM) "Ang Pananalapi ni Peni" in enhancing mastery of "Patakarang Pananalapi" among Grade 9 Section Artemis learners at Lupigue Integrated School. The 27-page SIM includes a Guide Card, Activity Card, Assessment Card, Enrichment Card, Answer Card, and Reference Card, each with three activities.

The SIM's design is informed by literature supporting SIMs' effectiveness in addressing learning gaps. White (2018) notes that SIMs improve learning outcomes by targeting specific areas. Santos and Reyes (2020) found that SIMs enhance performance through engaging and relevant content, a principle reflected in

the SIM's developmentally appropriate and interactive features. Aligned with Vygotsky's (1978) socio-cultural theory, the SIM promotes higher-order thinking and critical analysis through contextual learning. Additionally, it adheres to Banks' (2006) guidelines by being free from biases, ensuring inclusivity and equity. Mayer (2009) supports the use of culturally relevant illustrations to aid comprehension, which is incorporated into the SIM's design.

Before distribution, the SIM was evaluated by the school's Quality Assurance Team and the division, following best practices outlined by Hattie (2009) for ensuring educational standards and effectiveness. In summary, this study assesses the impact of the SIM on improving Grade 9 students' understanding of monetary policy. The research draws on established practices and literature to enhance student outcomes in Araling Panlipunan.

## RESEARCH QUESTION

This action research will try to find out the effectiveness of the SIM, "Ang Pananalapi ni Peni" in increasing the performance level of the 35 Grade 9 Artemis students in Araling Panlipunan of Lupigue Integrated School in the specified competency. Specifically, it aims to answer the following research questions:

1. What is the level of students' academic performance on the topic monetary policies (Patakarang Pananalapi) on the control group before and after the utilization of SIM?
2. How does the utilization of the SIM affect the students' understanding and retention of key concepts related to monetary policies (Patakarang Pananalapi) compared to the control group?
3. What is the effect size of the SIM in mastering the students' competencies on "Patakarang Pananalapi"?

### Hypothesis:

There is a significant mean difference in the academic performance of Grade 9 Section Artemis learners at Lupigue Integrated School on the topic of monetary policies (Patakarang Pananalapi) between the control group and the group that utilized the Strategic Intervention Material (SIM) entitled "Ang Pananalapi ni Peni" before and after the intervention.

## RESEARCH METHODOLOGY

### a. Participants and/or Other Source of Data

This study focuses on Grade 9 learners from Section Artemis at Lupigue Integrated School who showed low mastery of "Patakarang Pananalapi" in Araling Panlipunan during the third quarter of 2021-2022. Participants were selected using purposive sampling to target those struggling with the topic. This approach aims to evaluate how the Strategic Intervention Material (SIM) impacts their understanding and performance in "Patakarang Pananalapi."

This selection process ensures that the research findings will be directly applicable to the learners who are most in need of intervention, thereby enhancing the study's overall impact and relevance.

### b. Data Gathering Method

This action research utilizes a one-group pre-test and post-test design to assess the effectiveness of the Strategic Intervention Material (SIM) on Grade 9 learners at Lupigue Integrated School. In this design, all participants—Grade 9 learners from Section Artemis—are subjected to the same intervention and

assessment processes.

The research design involves administering a pre-test to evaluate the students' understanding and mastery of the competencies related to "Patakarang Pananalapi" before the introduction of the SIM. Following the intervention, which includes the utilization of the SIM in their lessons, a post-test is conducted to measure any changes in their academic performance. The study employed a pre-test and post-test design to evaluate the Strategic Intervention Material (SIM) on students' mastery of "Patakarang Pananalapi." The pre-test assessed initial understanding, while the post-test measured changes post-intervention. Both tests, consisting of parallel multiple-choice questions, evaluated the same concepts, providing a reliable measure of the SIM's effectiveness. The data gathered was stored in Microsoft Excel and was treated and analyzed with the use of appropriate statistical tools.

### c. Data Analysis Plan

This study utilized pre-test and post-test mean scores of Grade 9 learners, analyzed using descriptive and inferential statistics. A paired sample t-test determined the significant difference between these scores, while eta squared assessed the effect size within groups, interpreted according to Cohen's guidelines. Data analysis was conducted in Microsoft Excel. The following statistical tools was used for the interpretation of needed data:

**Mean Percentage Score.** This is utilized to determine the performance of the learners in the specified competency.

**Independent and Paired Sample t-test.** This is used to identify the significant difference between pre and posttest mean score of the respondents.

**Eta Squared.** It is utilized to interpret the effect size or magnitude of difference within group using Cohen's guidelines as:

Cohen's	Effect Size
0.20	Small effect
0.50	Moderate effect
0.80 and above	Large effect

## RESULTS AND DISCUSSION

The results chapter or section reports what this study discovered simply and objectively, without speculating on why this study discovered these results. The discussion interprets the meaning of the results, contextualizes them, and explains why they are important. Results and conversation are integrated in this research.

### 1. What is the pre-test and post-test mean score of the respondents on patakarang pananalapi before and after the SIM was utilized?

Table 1. Pre-Test and Post-Test Mean Score of Grade 9 Learners on patakarang pananalapi.

Test	Mean	Standard Deviation
Pre-Test	10.83	2.21
Post-Test	16.94	1.99

Table 1 shows the mean score of the respondents before and after the implementation of the intervention.

It shows that the mean score of the respondents before the implementation of the intervention is lower which is **10.83**. On the other side, mean score of the respondents after the implementation of the intervention became higher which is **16.94**.

**2. What are the mean percentage scores of the 35 Grade 9 learners on “Patakarang Pananalapi” for the pre-test and post-test after utilizing the SIM?**

Test Type	Mean Percentage core
<b>Pre-test</b>	<b>84.7%</b>
<b>Post-Test</b>	<b>54%</b>

Table 2 shows that the mean percentage score of the respondents before the implementation of the intervention is lower. On the other side, mean score of the respondents after the implementation of the intervention became higher. Thus, the intervention also attains the criterion reference set by the Department of Education which is 75%. Furthermore, it signifies that the intervention used was effective in improving the mastery of the students in “patakarang pananalapi”.

**1. Is there a significant difference on the scores before and after the utilization of the SIM?**

Table 2

Level of Significance	P. Value	Remarks
<b>.05</b>	<b>0. 000</b>	<b>Significant</b>

<b>t-test: Paired two sample for Means</b>		
	<i>Pre-Test Score</i>	<i>Post Test Score</i>
Mean	10.82857143	16.94285714
Variance	4.91092437	3.996638655
Observations	35	35
Pearson Correlation	0.050834525	
Hypothesized Mean Difference	0	
df	34	
t Stat	-12.43849735	
P(T<=t) one-tail	1.65533E-14	
t Critical one-tail	1.690924255	
P(T<=t) two-tail	3.31066E-14	
T Critical two-tail	2.032244509	

Table 2 presents the results of the test of Significant Difference in the score of the students before and after the implementation of the SIM using the paired t-test in the Microsoft excel. The result reveals that the P. Value which is **0. 000** is lower than **0.05** level of significance, therefore, there is a significant difference in the result of pre-test and posttest before and after the implementation of the Strategic Intervention Material (SIM) “*Ang Pananalapi ni Peni*”.

## 2. What is the effect size of the SIM in mastering the students' competencies on "patakarang pananalapi"?

Table 3 Effect size or magnitude of the SIM

Effect Size	Remarks
2.90	Large effect

Table 3 reveals the effect size of the intervention in mastering the students' competencies on "patakarang pananalapi".

Cohen's *d* revealed an effect size of 2.90, indicating a large impact of the Strategic Intervention Material (SIM) on improving students' understanding of "Patakarang Pananalapi." This result aligns with research by White (2018) and Santos and Reyes (2020), which showed that SIMs effectively enhance student learning outcomes and academic performance.

The large effect size observed in this study is also supported by Cohen's (1988) guidelines, which suggest that an effect size of 2.90 represents a highly impactful intervention. This finding aligns with the results of other studies that have demonstrated the effectiveness of well-designed learning materials in enhancing student performance. For instance, research by Hattie (2009) emphasizes the importance of high-effect-size interventions in educational settings, which corroborates the substantial impact of the SIM observed in this study.

The results indicate that the SIM effectively improved students' mastery of "Patakarang Pananalapi." The significant effect size highlights the importance of using strategic, interactive materials to enhance student outcomes.

## FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

The findings of this action research are as follows:

1. The mean score increased from 10.83 before the intervention to 16.94 after.
2. The *p*-value of 0.000 is below the 0.05 significance level.
3. The SIM had a substantial effect size of 2.90 in improving student competencies.

Based from the findings, the following are the conclusions.

1. The posttest mean score is higher than the pretest mean score, indicating that the Strategic Intervention Material effectively improved learners' mastery of "patakarang pananalapi."
2. There is a significant difference in the mastery of the learners on "patakarang pananalapi" before and after the implementation of the intervention SIM.
3. The intervention has large effect size in mastering the students' competencies in "patakarang pananalapi".

From the aforementioned findings and conclusions, the following recommendations are suggested:

1. Use SIMs to improve mastery of least understood competencies in Araling Panlipunan.
2. Teachers should receive in-service training on crafting SIMs to better understand their use and provide quality learning interventions.
3. Researchers in the field of education are encouraged to conduct the same study.

## REFERENCES

1. Anderson, C. W., Sheldon, T. H., & DuBay, J. (1990). The effect of instruction on college nonmajors' conceptions of photosynthesis and respiration. *Journal of Research in Science Teaching*, 27(8), 761-776. <https://doi.org/10.1002/tea.3660270808>
2. Aranda, Y. A., Diaz, R. A., Sombilon, M., & Gicana, C. A. F. (2019). Integrating strategic intervention materials (SIM) in science to low achieving learners. Noste Online. <http://nosteonline.org/wp-content/uploads/2019/06/Printing-IntegratingSIM.pdf>
3. Aranes, F. Q., Espinosa, A. A., & Salvejo, E. I. (2014). Strategic intervention material-based instruction learning approach and students' performance in chemistry. *International Journal of Learning, Teaching and Educational Research*, 2(1), 91-123. <https://doi.org/10.26803/ijlter.2.1.5>
4. Barredo, K. J. D. A. (2014). Development on the academic performance in science using strategic intervention material. SlideShare. <https://www.slideshare.net/kbarredo/action-research-for-strategic-interventionmaterials>
5. Bunagan, F. (2012). Science intervention material. SlideShare. <http://www.slideshare.net/felix-bunagan/strategic-intervention-material>
6. Cordova, R. C., Medina, J. G. D., Ramos, T. R., & Alejo, A. R. (2019). Effectiveness of competency-based strategic intervention materials in English. *Journal of Science Teachers and Educators*, 2(1). <https://www.dlsu.edu.ph/wp-content/uploads/pdf/conferences/research-congress-proceedings/2019/II-II-019.pdf>
7. Cubillas, T. E. (2018). Development and validation of strategic intervention materials (SIMs) in teaching elementary English 4 – Content validation. *International Journal of Development Research*. <https://www.journalijdr.com/development-and-validation-strategic-interventionmaterials-sims-teaching-elementary-english-4>
8. Cubillas, T. E. (n.d.). Usability validation of strategic intervention materials (SIMs) in teaching elementary English.
9. Dacunoz, L. P. N. (2015). Personality styles, stress-coping mechanisms and academic performance of grade nine students in science. Manuscript submitted for publication.
10. Dacunoz, L. P. N. (2015). Perspective of secondary teachers in the utilization of science strategic intervention material (SIM) in increasing learning proficiency of students in science education. Unpublished manuscript.
11. Dumigsi, M. P., & Cabrella, J. B. (2019). Effectiveness of strategic intervention material in mathematics as remediation for grade 9 students in solving problems involving quadratic functions. *Asian Journal of Education and Social Studies*, 3(2), 18-31. <http://myjms.mohe.gov.my/index.php/ijares>
12. Dy, J. O. (2007). Strategic intervention materials (SIM) in teaching science IV (physics). Retrieved August 20, 2014, from <http://jhody.hubpages.com/hub/TEACHING-PHYSICS-THROUGH-STRATEGICINTERVENTION-MATERIALS-SIM>
13. Dy, L. (2011). Teaching mathematics through strategic intervention materials (SIM). Retrieved from <http://jhody.hubpages.com/hub/>
14. Garcia, A. D. (2018). Strategic intervention materials: Its usage and importance. DepEd Bataan Publications. [http://www.depedbataan.com/resources/4/strategic\\_intervention\\_materials\\_its\\_usage\\_and\\_importance.pdf](http://www.depedbataan.com/resources/4/strategic_intervention_materials_its_usage_and_importance.pdf)
15. Gultiano, A. P. (2012). Effects of strategic intervention material (SIM) in the academic achievements in chemistry of public high school students. Retrieved from <http://www.slideshare.net/neoyen/strategic-intervention-material>
16. Herrera, F. T., & Sorian, A. T. (2016). The efficacy of the strategic intervention materials (SIM) to the achievement in physics of a selected group of public-school students in Las Nieves, Agusan Del Norte. *Annals of Studies in Science and Humanities*, 2(2). <http://journal.carsu.edu.ph/index.php/assh/article/view/84>

17. Javier-Villareal, S. (2013). The effectiveness of intervention materials in improving learners' competence in grade 7 students in biology. [https://www.academia.edu/12894496/The\\_Effectiveness\\_of\\_Intervention\\_Materials\\_in\\_Improving\\_Learners\\_Competence\\_in\\_Grade\\_7\\_Students\\_in\\_Biology](https://www.academia.edu/12894496/The_Effectiveness_of_Intervention_Materials_in_Improving_Learners_Competence_in_Grade_7_Students_in_Biology)
18. Lumogdang, E. D. (2015). The effects of strategic intervention material in commercial cooking to students' academic performance in technology and livelihood education. An action research. Korunadal National Comprehensive High School.
19. McLeod, S. A. (2019, July 11). Bruner – learning theory in education. Simply Psychology. <https://www.simplypsychology.org/bruner.html>
20. Pasion, R. B. (2019). The efficacy of strategic intervention materials (SIMs) in teaching social studies among third-year high school students. *SMCC Higher Education Research Journal*, 6(January 2019). <https://sherj.smccnasipit.edu.ph/articles/Vol6/Rodellio.pdf>
21. Salviejo, E. I., Aranes, F. Q., & Espinosa, A. A. (2014). Strategic intervention material-based instruction, learning approach and students' performance in chemistry. *International Journal of Learning, Teaching and Educational Research*, 2(1), 91-123. <https://doi.org/10.26803/ijlter.2.1.5>
22. Togonon, I. (2011). Development and evaluation of project-based SIM (PB\_SIM) in teaching high school chemistry (Master's thesis). Technological University of the Philippines.
23. Villonez, G. L. (2018). Use of SIM (strategic intervention material) as a strategy and the academic achievement of grade 7 students on selected topics in Earth Science. *PUPIL: International Journal of Teaching, Education and Learning*, 2(3).