

**The Effect of RIMAP (Remedial Intervention Material in Teaching Araling Panlipunan) in the Academic Performance of Grade Six Pupils in Silang West Elementary School**

An Action Research Presented to  
The Division of Cavite Province

By:

**RUCHELLA P. CALOYLOY**

**JULIE S. TOLENTINO**

2021

**The Effect of RIMAP (Remedial Intervention Material in Teaching Araling Panlipunan) in the Academic Performance of Grade Six Pupils in Silang West Elementary School**

Ruchella P. Caloyloy and Julie S. Tolentino  
Department of Education-Cavite Province

**ABSTRACT**

This action research aimed to improve the academic performance of grade six pupils in Araling Panlipunan. The researchers randomly selected fifty (50) grade six pupils from the identified academically challenged struggling pupils in the subject. Twenty-five (25) pupils are in the experimental group and the rest of the 25 pupils under the control group. The researcher conducted a pre-test before giving the strategic intervention material and a post-test after the experimental group used it. Analysis revealed the weighted mean of 9.16 of the experimental group was higher than the mean of the control group which is 3.72 in the pretest. Posttest mean of the experimental group increased and became 12.28 which is greater than the 4.6 mean of the control group. The mean gain of the experimental group is very high compared to the mean of the control group. The t-ratio is 1.71 which means that there is a significant difference between the mean of the control and experimental group. The twenty-five (25) grade six pupils used the RIMAP for three months. Engages the learners' interest in the topic discussed and gives an overview of the lesson they will learn and lead towards the performance of the tasks. It builds learning skills and mentions the concrete outcome or product pupils are expected to demonstrate. This remedial intervention material guarantee alignment of activities that are short and simple and easy to understand. These only imply that students' academic performance who used RIMAP improved their academic performance.

**Keywords:** *Remedial Intervention Material, Academic Performance, Pupils Poor Academic Performance*

## **ACKNOWLEDGEMENT**

The researchers like to express their gratitude to all those who gave them the possibility to complete this research.

First and foremost, the researchers would like to thank God Almighty for being faithful and abounding in grace for providing knowledge and wisdom in making decisions throughout the study. With the help of God, the researchers made tangible decisions regarding the research.

The researchers would like to express their sincere gratitude to their husbands, children, colleagues for continuous financial provision, support, love and understanding. The parents of the students who motivated their child to pursue excellence in their study.

The researchers would like to acknowledge their advisor Dr. Mercelita Salazar for the continuous support in their research for her patience, motivation and immense knowledge. Her guidance helped the researchers to finish their study.

This research would not have been possible without the help, support, guidance and patience of Elenita V. Umipon who showed unsurpassed knowledge throughout the study.

Lastly, the researchers would like to thank Silang West ES Family for their love, support and for their encouraging words.

## **CONTEXT AND RATIONALE**

### **Introduction**

One of the problems that the grade 6 teachers and learners faced in the teaching learning process in Silang West Elementary School was the pupil's difficulty in dealing with the subject Araling Panlipunan resulting to pupil's poor performance record in the test last school year (2019 - 2020). Araling Panlipunan subject got the lowest Mean Percentage Score (MPS) among 8 subjects in Grade Six.

There was fifty (50) identified Grade VI pupils who got the lowest mean percentage score and in need of special attention to improve their academic performance in the subject. Root cause analysis was done to determine the reasons of their struggles in dealing with the subject which directed the researcher to what kind of intervention to be utilized in eradicating the said problem. Concerned teachers was informed and advised to perform necessary action with regard to the planning of appropriate intervention program. Then proper dissemination of information to the concerned parents and pupils was conducted.

In this premise, the researchers felt the need to conduct action research to remedy the existing problem in low academic performance of Grade VI pupils in Araling Panlipunan. Thus, "RIMAP (Remedial Intervention Material in Araling Panlipunan)" an intervention material to improve the poor academic performance in the subject pupils was materialized.

The support instructional material was use by the identified Grade VI who are struggling learners in Araling Panlipunan wherein these pupils used RIMAP (Remedial Intervention Material in Araling Panlipunan)". Participants in the program used the materials for ten weeks under the supervision of Grade VI teachers.

The project was solely focused in testing the effectiveness of the strategic intervention material in Araling Panlipunan for the Second Grading Period.

### **Review of Related Literature**

The researchers had explored some literature to expand the perspective related in the action research.

According to the K-12 Araling Panlipunan Curriculum "Ang mithiin ng "Edukasyon para sa Lahat 2015" (Education for All 2015) and the K-12 Philippine Basic Education Curriculum Framework, their aim is to have the skills needed in the 21st century to cultivate a "functionally literate and developed Filipino." Basic education also aims at long-term learning after formal schooling (lifelong learning). The strategy for achieving these general goals is in accordance with several learning theories that are constructivism, collaborative learning, and experiential and contextual learning".

In this 21st century, Araling Panlipunan teachers should utilize different teaching strategies to achieve knowledge to be imparted to all the learners. In connection with the DepEd Order No. 8, s. 2015 "Policy Guidelines on Classroom Assessment for the K to 12 Basic Education Program" the learner shall undertake formative and summative assessment, if the RFG of the learner is below 75, the pupil shall be reassessed immediately by the subject teacher to determine the least

mastered competencies or learning gaps. The results of the reassessment shall serve as basis for planning and designing an immediate instructional intervention to ensure the transition of that learner to the next grade level or semester. Thus, it is for these reasons that the researcher engages on developing intervention materials in Araling Panlipunan for Grade 6 that will enhance learning, remediate the least learned competencies, and help improve their chances of academic performance.

Implementing guidelines for the conduct remedial classes for learners with learning gaps or subject area/s deficiency in DO 13, s. 2018, the schools should provide opportunities for remediation through tutorial or coaching of learners with learning gaps or subject area deficiency. Through any form of organized instructional interventions given to a learner during summer class to address his or her learning gaps or subject area deficiency. The remedial can be made in a form of tutorial, mentoring, coaching, or other ways of delivering the organized learning experiences and ensure that the standard practices in offering classes and affirms the Department's commitment that all learners will complete basic quality education and learners from Grades 4 to 12 with special educational needs (LSEs) will be allowed to attend classes to catch-up with their learning deficiencies.

The use of Contextualized Strategic Intervention Materials (CSIMs) for the third quarter least mastered Grade 9 Mathematics competencies prove to help the students gained new experiences and developed into independent learners, learned effectively, and found the topics easy to understand, became more interested in learning Math topics, appreciated problem solving, and enjoyed and felt comfortable in learning Math topics using the CSIM. Students' conceptual understanding improved and were significantly different ( $p < 0.05$ ) for the formative and summative assessments (Adonis 2020).

Study of Pasion (2019) found out that SIMs enhance students' interest as well as the student's retention of the lesson which manifested in the high examination scores of the students in the fourth grading period. The result of the effective technique by the teacher employs significant difference in the students' performance in the pretest and posttest. The SIMs are considered instrumental in upgrading students' retention of the content of the subject as well as in sustaining their interest to learn and integrate the lessons.

Use of SIM (Strategic Intervention Material) employed in teaching the lesson improve the academic performance of 120 participants as subjects of the study. Mean and t- tests were used as tools in the analysis of data and result of the study revealed that there was a significant difference in the pretest and posttest mean scores of the experimental and control group in the topic eclipse. In which the experimental group achieved a better mean gain score than the control group and it points out that the use of strategic intervention material (SIM) in the experimental group significantly improved the performance of the students (Villonez, 2018).

## **ACTION RESEARCH QUESTIONS**

This action research will seek the following questions:

1. What is the pre-test result of the Grade VI pupils in Araling Panlipunan prior to using the RIMAP of the control and experimental group?
2. What is their post test result after employing RIMAP?

3. Is there significant difference in the pre-test and post-test result of the experimental group?
4. Is there significant difference in the test result of the controlled and experimental group?
5. How can RIMAP be operated to inspire pupils' learning in Araling Panlipunan?

### **PROPOSED INNOVATION, INTERVENTION AND STRATEGY**

The Strategic Intervention Material (SIM) RIMAP - Remedial Intervention Material in Araling Panlipunan (RIMAP) is a self-made material by the researchers and validated by the Grade VI teacher of SWES. The support instructional Material (SIM) – Remedial Intervention Material in Araling Panlipunan (RIMAP) used in teaching Araling Panlipunan in Grade Six for second quarter to improve the learners' academic performance in Araling Panlipunan. The identified experimental pupils used the SIM-RIMAP while the control group used the module issued by the Department of Education for modular.

The material was conceptualized and designed to provide the pupils who needed support to improve their performance in Araling Panlipunan. Both teachers and learners benefit from these learning kit. This teaching-learning kit is devised containing context with vivid illustrations, activities and concept map which can motivate and stir up the attention and interests of the pupils.

SIM-RIMAP (Remedial Intervention Material in Araling Panlipunan)" gave opportunity to explore various ideas and concepts that could enrich the skills and understanding of the subject.

These intervention materials consist of five parts such as the Guide Card, Activity Card, Assessment Card, Enrichment Card and the Reference Card. The Guide Card engages the learners' interest on the topic to be discussed and gives an overview of the lesson they will be learning and lead towards the performance of the tasks. It builds prior learning skills and mentions the concrete outcome or product pupils are expected to demonstrate. The Activity Card translates the focus skills in at least three activities. These activities are competency-oriented and could be done individual. The purpose of the activities is to provide enough practice for the learner so that they can perform the skill excellently. The Assessment Card provides exercises, drills, activities that allow pupils to improve their learning skills. The results of the assessment identify the knowledge/skills that they learned that may need to enhance or develop moreover. Assessment Card also helps the learner measure his/her level of mastery of the content. upon completion of the tasks or activities. The Enrichment Card strengthens learning by providing additional exercises for enhancement and improvement. It also provides opportunities for the pupils to apply in real life situations. Finally, the Reference Card provides a list of the resources that the learners should read further to enhance their knowledge and skills.

This support instructional materials guarantee alignment of activities which are short and simple and easy to understand.

In addition, the designs of the strategic intervention materials are attractive and eye-catching that is why a lot of teachers are encouraged to use them in the teaching-

learning process. The SIM RIMAP (Remedial Intervention Material in Araling Panlipunan)". The love for our pupils and dedication for work is our inspiration to explore other disciplines.

On the other hand, identified fifty pupils was given pre-test in Araling Panlipunan prior and post-test after the implementation of the program.

The result was evaluated.

## **ACTION RESEARCH METHODS**

In this action research, descriptive method of research following a case study format which is descriptive research design was used (Aggarwal & Ranganathan, 2019). It was utilized in this research because the academic performance progress of grade six pupils under this study was monitored.

### **a. Participants and/or Other Sources of Data and Information**

This action research used purposive sampling. Out of 189 grade six pupils, fifty (50) were identified as academically challenged which need to undergo intervention program like RIMAP to improve their academic performance in Araling Panlipunan. Twenty-five (25) pupils was under the experimental group and the rest of the 25 pupils was under the controlled group. All data gathered was collated and interpreted using the statistical tools.

### **b. Data Gathering Method**

All data gathered was collated and interpreted using the statistical tools.

Both the experimental and control group was given the same set of questions in pretest and post-test. The grade from the second grading period in Araling Panlipunan was used as the basis of the academic performance of Grade VI pupils. Score in the pre-test and post-test of two groups of Grade VI students served as the basis in determining whether this Strategic Intervention Materials was effective and improved their performance level.

### **c. Data Analysis Plan**

The data was collated and interpreted using the following statistical tool.

a. t test – to test the significant difference, t test was used to determine if there is a significant difference between the mean of two groups.

b. Percentage – the value in % “out of every 100”

c. Weighted mean – the average mean of the n value

## DISCUSSION OF RESULT AND REFLECTION

The following problems were answered in this action research.

1. What is the pre-test result of the Grade VI pupils in Araling Panlipunan prior to using the RIMAP of the control and experimental group?

**Table 1**  
**Pre – Test Score Prior to RIMAP**

CONTROL GROUP		EXPERIMENTAL GROUP	
Name of Student	Pre - Test Score	Name of Student	Pre - Test Score
Vincent Pusing	8	Bianca Emeireine Tequillo	8
Aubrey Felicano	8	Billy Zeth Belena	6
Bryden Panizares	6	Carl Jaden Regala	6
David Albert Labastida	0	Erick John De Pedro	0
Dennise Ann Samillano	2	Cassandra Deita	12
EJ Oliva	2	Dannilyn Bautista	4
Carla Robiano	8	John Kirk Hilario	7
Ella Marie Ame	1	John Lloyd Costales	10
Elaiza Jean Quiatchon	3	Justine Guillermo	10
Fae Nicole Diomangay	4	Justine Talisay	12
Jellin Caila Palyago	1	Johndy Jade Blanco	13
John Kenneth Labastida	0	Leinard Realon	14
Ezekiel Julian Espiritu	1	Mark Anthony Balayon	14
John Leroy Lopez	8	Maria Laviña Supan	6
Kean James Fernandez	5	Mary Cris De Alagdon	15
Julian Kyle Clarito	6	Matthew Dado	5
Kenneth Fat	4	Merry Ann Vicente	9
Ma. Lyn Bueno	0	Mikas Gebriel Tabuyan	12
Liam Kenzo Abarrondo	4	Prince Brian De Pedro	13
Patricia Mae Baleña	5	Princess Shamela Gerodiaz	15
Rialyn Abong	4	Red John Sales	5
Santina Sabio	4	Rhiannah Elica Tequillo	7
Shaira Retuero	2	Rome Reign Elijah Verano	3
Shiela Mae Cariaga	0	Ashley Beatrice Jornales	15
Terrence Pillecer	7	Zundance Destura	8
MEAN	3.72	MEAN	9.6

Table 1 shows the pre – test scores of grade six pupils prior to RIMAP. The pre – test weighted mean of 9.16 of the experimental group was higher than the mean of control group which is 3.72.



2. What is their post test result after employing RIMAP?

**Table 2**

**Post – Test Score After to RIMAP**

<b>CONTROL GROUP</b>		<b>EXPERIMENTAL GROUP</b>	
<b>Name of Student</b>	<b>Post - Test Score</b>	<b>Name of Student</b>	<b>Post - Test Score</b>
Vincent Pusing	8	Bianca Emeireine Tequillo	11
Aubrey Felicano	8	Billy Zeth Belena	13
Bryden Panizares	1	Carl Jaden Regala	11
David Albert Labastida	5	Erick John De Pedro	10
Dennise Ann Samillano	3	Cassandra Deita	12
EJ Oliva	2	Dannilyn Bautista	6
Carla Robiano	8	John Kirk Hilario	14
Ella Marie Ame	2	John Lloyd Costales	10
Elaiza Jean Quiatchon	8	Justine Guillermo	10
Fae Nicole Diomangay	4	Justine Talisay	11
Jellin Caila Palyago	2	Johndy Jade Blanco	14
John Kenneth Labastida	1	Leinard Realon	13
Ezekiel Julian Espiritu	5	Mark Anthony Balayon	14
John Leroy Lopez	8	Maria Laviña Supan	14
Kean James Fernandez	7	Mary Cris De Alagdon	15
Julian Kyle Clarito	7	Matthew Dado	14
Kenneth Fat	4	Merry Ann Vicente	10
Ma. Lyn Bueno	2	Mikas Gebriel Tabuyan	12
Liam Kenzo Abarrondo	3	Prince Brian De Pedro	13
Patricia Mae Baleña	6	Princess Shamela Gerodiaz	15
Rialyn Abong	3	Red John Sales	11
Santina Sabio	4	Rhiannah Elica Tequillo	11
Shaira Retuero	2	Rome Reign Elijah Verano	15
Shiela Mae Cariaga	7	Ashley Beatrice Jornales	15
Terrence Pillecer	5	Zundance Destura	13
MEAN	4.6	MEAN	12.28

Table 1 shows the post – test scores of grade six pupils prior to RIMAP. The pre – test weighted mean of 12.28 of the experimental group was higher than the mean of control group which is 4.6.

3. Is there significant difference in the pre-test and post-test result of the experimental group?

**Table 3**  
Pre – Test and Post – Test Result

Score Bracket	Control Group				Experimental Group			
	Pretest		Posttest		Pretest		Posttest	
	f	%	f	%	f	%	f	%
<b>15 – 12</b>	0	0	0	0	10	40	15	60
<b>11 – 7</b>	5	20	8	32	7	28	9	36
<b>Below 7</b>	20	80	17	68	8	32	1	4
<b>Total</b>	25	100	25	100	25	100	25	100%
<b>Mean</b>	3.72		4.6		9.16		12.28	
<b>SD</b>	2.78		2.45		4.23		2.19	
<b>MPS</b>	24.8		30.67		61.07		81.87	

The table shows that the weighted mean of 9.16 of the experimental group was higher than the mean of control group which is 3.72 during the pretest while during posttest the mean of experimental group increases and became 12.28 which are greater than the mean of control group which is 4.6. The mean gain of the experimental group is very high compared to the mean of control group.

4. Is there significant difference in the test result of the controlled and experimental group?

**Table 4**  
t-test for Significant Differences

	<i>With RIMAP</i>	<i>No RIMAP</i>
Mean	12.28	4.6
Variance	4.793333	6.083333
Observations	25	25
Pearson Correlation	0.314818	
Hypothesized Mean Difference	0	
df	24	
t Stat	14.04356	
P(T<=t) one-tail	2.26E-13	
t Critical one-tail	1.710882	
P(T<=t) two-tail	4.52E-13	
t Critical two-tail	2.063899	

Based on the table presented above the t-ratio is 1.71 which means that there is a significant difference between the mean of control and experimental group.

5. How can RIMAP be operated to inspire pupils' learning in Araling Panlipunan?

Strategic Intervention Materials – RIMAP improved the academic performance of grade six pupils in Araling Panlipunan. It engages the learners' interest on the topic to be discussed and gives an overview of the lesson they will be learning and lead towards the performance of the tasks. It builds learning skills and mentions the concrete outcome or product pupils are expected to demonstrate. The results of the assessment identify the knowledge/skills that they learned that may need to enhance or develop moreover. Also helps the learner measure his/her level of mastery of the content upon completion of the tasks or activities. This support instructional materials guarantee alignment of activities which are short and simple and easy to understand.

**Impact of RIMAP in the Academic Performance of the Pupils**

The aim of this paper is to determine the impact of the RIMAP in improving the academic performance of grade six pupils in the subject Araling Panlipunan of the school for a period of three months from January 2021 to March 2021. The following graph below shows the difference between the pre – test and post - test result of the pupils before and after the program. The table below presents the drastic change happened after the period of implementation.

Table 5.a

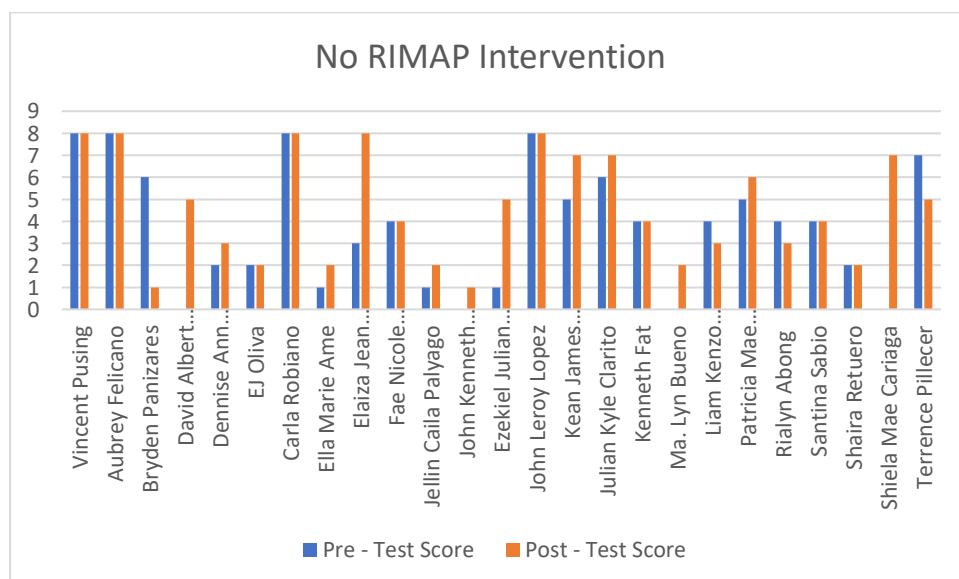


Table 5.b.

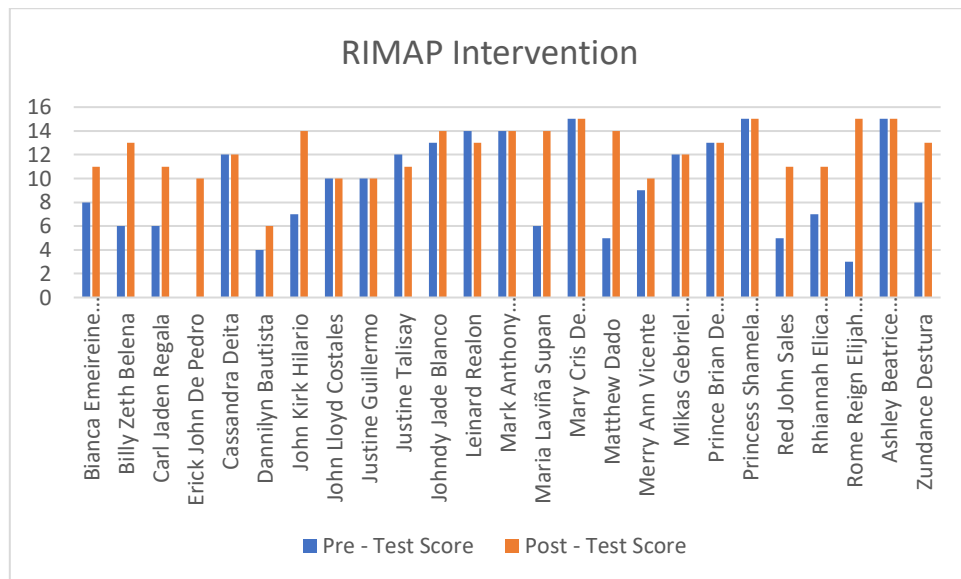


Table 5.a Score of Students with NO RIMAP and 5.b Score of Students with RIMAP show the pre – test and post – test scores of in graph of the students. The graph shows that SIM-RIMAP has contributed a great impact in improving the academic performance of grade six pupils. The strategic intervention materials have produced learners able to comprehend the topic in Araling Panlipunan. There is a significant increase contributed by the strategic intervention material in the pupils. The score of pupils who used SIM – RIMAP increases in post-test than pupils who did not.

### Conclusion

Based on the findings, the following conclusions were drawn:

1. The 25 Grade Six pupils included in the action research could increase their academic performance in Araling Panlipunan after the RIMAP.
2. The academic performance of the 25 Grade six pupils under RIMAP was improved, thus, the said intervention program was effective and could help learners who had difficulty in dealing with the subject Araling Panlipunan.
3. Therefore, the strategic intervention materials that used is an effective way of improving students’ academic performance in Araling Panlipunan.

## **Recommendations**

Based on the findings and conclusion, the following recommendations are presented;

1. Students should spend time to explore any strategic intervention materials in Araling Panlipunan especially those that will enhance their comprehension skill.

2. Teachers should use other strategies and activities that will develop their pupil's academic performance particularly their higher comprehension/understanding skill. They should also choose the strategies and good books most appropriate for achieving their own remediation teaching objectives.

3. Strategic Intervention Material RIMAP can help a lot in improving the academic performance of grade six pupils in the subject Araling Panlipunan. Thus, the researchers recommend the following sample of materials to the researchers who wish to replicate the program.

For future researchers, it is recommended to introduce other strategic intervention material and strategies such as utilization of technology, peer teaching using fun and interactive materials.

## ACTION PLAN

### Action Research Work Plan and Timelines

ACTIVITIES	SEPT	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.
Topic Conceptualization							
Formulation of Research Questions and Introduction							
Searching Literature Review							
Thinking Appropriate Methodology							
Collection of Data							
Interpretation, Describing of Data							
Finalization of Research Proposal							

### Plans for Dissemination and Utilization

DISSEMINATION ACTIVITIES	APRIL	MAY	JUNE	JULY	AUG.	SEPT.
Finalization of Research Final Copy						
Formulation of Research study for recommendation.						
Submitting the Research study validation in the SDRC and Curriculum Implementation Division						
Presentation to Different Research Conference and Fora						
Distribution of the results in the said institution.						
Utilization of the Research for future use						

## REFERENCES

- Adonis, A. B., (2020). Contextualized Strategic Intervention Materials in Grade 9 Mathematics. *PEOPLE: International Journal of Social Sciences*, 5(3), 850-868. <https://doi.org/10.20319/pijss.2020.53.850868>
- Aggarwal, R., & Ranganathan, P. (2019). Study designs: Part 2 - Descriptive studies. *Perspectives in clinical research*, 10(1), 34–36. [https://doi.org/10.4103/picr.PICR\\_154\\_18](https://doi.org/10.4103/picr.PICR_154_18)
- Asejo, Denver Joy C., (2019). Effectiveness of Audio-Visual Presentation on the Performance of Grade 6 Learning in Araling Panlipunan. *San Carlos College Research Journal*, 2019(1) Retrieved on November 5, 2020 from <https://sancarloscollege.edu.ph/wp-content/others/research%20no%207.pdf>
- Balubayan, Christopher D., Students Attention Problem and the Interactive Instructional Resources in Araling Panlipunan Subject. Retrieved on November 5, 2020 from [https://www.academia.edu/33780211/FINAL\\_action\\_reaserach\\_AP](https://www.academia.edu/33780211/FINAL_action_reaserach_AP)
- Dacunos, Leo Peter N., (2016). Perspective of Secondary Teachers in the Utilization of Science Strategic Intervention Material (SIM) in Increasing Learning Proficiency of Students in Science Education. *AsTEN Journal of Teacher Education*, 1(2), 1 -12. Retrieved on November 4, 2020 from <http://po.pnuresearchportal.org/ejournal/index.php/asten/article/view/293>
- DepEd. (2020). Official Statement Department of Education. Retrieved on November 6, 2020 from <https://www.deped.gov.ph/2020/05/06/official-statement-2>
- DOH. (2020). Department of Health Philippines. Retrieved on November 6, 2020 from <http://www.doh.gov.ph/2019-nCoV>
- Lavrakas, P. J. (2008). *Encyclopedia of survey research methods* (Vols. 1-0). Thousand Oaks, CA: Sage Publications, Inc. doi: 10.4135/9781412963947
- Magsambol, Bonz. (2020). DepEd's modular learning. Retrieved on November 9, 2020 from <https://www.rappler.com/newsbreak/iq/things-to-know-deped-modular-learninghttps://www.rappler.com/newsbreak/iq/things-to-know-deped-modular-learning>

- Mark, M. M. & Reichardt, C. S. (2009). Quasi-experimentation. In L. Bickman & D. J. Rog The SAGE handbook of applied social research methods (pp. 182-213). Thousand Oaks, CA: SAGE Publications, Inc. doi: 10.4135/9781483348858.n6
- Pasion, Rodelio., (2019). The Efficacy of Strategic Intervention Materials (SIMS) in Teaching Social Studies Among Third Year High School Students. SMCC Higher Education Research Journal. 6. 10.18868/sherj6j.06.010119.11.
- Puspitasari, Kristanti. (2012). The Effects Of Learning Strategy Intervention And Study Time Management Intervention On Students' Self-Regulated Learning, Achievement, And Course Completion In A Distance Education Learning Environment. 10.13140/RG.2.1.2047.4640.
- Tadayon Nabavi, Razieh. (2010). Research Method Design.
- Tria, Jose. (2020). The COVID-19 Pandemic through the Lens of Education in the Philippines: The New Normal. International Journal of Pedagogical Development and Lifelong Learning. 1. ep2001. 10.30935/ijpdll/8311.
- Villareal, Shiela J., (2013). The Effectiveness of Intervention Materials in Improving Learners' Competence in Grade 7 Students in Biology. Retrieved on November 4, 2020 from [academia.edu/12894496/The\\_Effectiveness\\_of\\_Intervention\\_Materials\\_in\\_Improving\\_Learners\\_Competence\\_in\\_Grade\\_7\\_Students\\_in\\_Biology](https://academia.edu/12894496/The_Effectiveness_of_Intervention_Materials_in_Improving_Learners_Competence_in_Grade_7_Students_in_Biology)
- Villonez, G L., (2018). Use of SIM (Strategic Intervention Material) as Strategy and the Academic Achievement of Grade 7 Students on Selected Topic in Earth Science. PUPIL: International Journal of Teaching, Education and Learning, 2(3), 78 88. Retrieved on November 4, 2020 from <http://grdspublishing.org/>
- Wheeler S. (2012) Distance Learning. In: Seel N.M. (eds) Encyclopedia of the Sciences of Learning. Springer, Boston, MA. [https://doi.org/10.1007/978-1-4419-1428-6\\_432](https://doi.org/10.1007/978-1-4419-1428-6_432)
- Worldometer. (2020). Coronavirus Update (Live): 4,254,131 Cases and 287,257 Deaths from COVID-19 Virus Pandemic - Worldometer. Retrieved on November 7, 2020 from <https://www.worldometers.info/coronavirus/>