Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 6 (2026)

Pisa-Type Assessment In Developing Critical Thinking Skills In Araling Panlipunan 7 In Bauan National And Vocational Integrated High School Sy 2025-2026

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Publication Date: May 23, 2026 DOI: **10.5281/zenodo.20353983**

Abstract

Despite national mandates to promote higher-order thinking, Filipino students lag in international assessments like PISA, indicating a critical gap in analytical and evaluative capacities. This study addressed the urgent need to enhance assessment practices in Araling Panlipunan (Social Studies) to foster critical thinking, foundational for active citizenship and lifelong learning. The primary aim was to design and implement a PISA-type assessment to systematically examine its effectiveness in developing students' critical thinking skills (analysis, evaluation, and problem-solving) and to develop enhanced learning activities.

A descriptive quantitative, pre-test–posttest design was employed with 30 Grade 7 students. Data were collected using a validated 30-item PISA-type multiple-choice test and a survey. The intervention integrated PISA-type tasks into instruction. A paired sample t-test determined the statistical difference between pre-test and post-test scores.

The result reveled that students perceived the PISA-type assessments as highly engaging and relevant (Strongly Agree composite means: 3.67 for real-life scenarios, 3.71 for information processing). Pre test results showed 57% of students were "Proficient Critical Thinkers." Post-test results showed a significant gain, with 60% advancing to "Advanced Critical Thinkers." The t-test confirmed a statistically significant difference ($t=19.3346$, $p=0.00001$), leading to the rejection of the null hypothesis. Challenges encountered were the need for more time to analyze and answer (WM: 3.74) and difficulty applying prior knowledge (WM: 3.71).

The study conclusively demonstrates that PISA-type assessments significantly enhanced critical thinking skills. The results affirm that integrating performance-based and problem-solving activities is superior to memorization for improving higher-order thinking, as students were able to analyze information, use evidence, and make logical decisions. Overall, PISA-type assessments successfully connected Araling Panlipunan concepts to real-life situations, making learning more meaningful and applicable.

Keyword: *PISA-type Assessment, Critical Thinking Skills, Araling Panlipunan Instruction.*

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
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Introduction

In the 21st century, education must go beyond memorization and focus on developing higher-order thinking skills such as analysis, evaluation, and problem-solving. However, Filipino students continue to perform below international standards in assessments like PISA, indicating gaps in critical thinking. While global and national frameworks promote competency-based and contextualized learning, classroom practices often remain focused on recall-based assessment.

This study investigates the effectiveness of PISA-type assessments in enhancing the critical thinking skills of Grade 7 learners in Araling Panlipunan. Specifically, it sought to answer the following questions:

1. How may the distinct features of PISA-type assessments be characterized in terms of:
   1.1. real-life or context-based problem scenarios;
   1.2. information processing and interpretation tasks;
   1.3. evidence-based reasoning and decision-making; and
   1.4. application of knowledge
2. What are the students' levels of critical thinking skills—specifically in analysis, evaluation, and problem-solving—based on the results of the pre-test and post-test?
3. Is there a significant difference between the students' pre-test and posttest results in the PISA-type test in terms of their critical thinking skills?
4. What challenges do Grade 7 students encounter in responding to PISA-type assessment tasks in Araling Panlipunan?
5. Based on the findings of the study, what specific and enhanced learning activities may be designed to further strengthen students' critical thinking skills through PISA-type assessments?

Methodology

Research Design

This study utilized a quantitative quasi-experimental pretest-posttest design to evaluate the effectiveness of PISA-type assessments in enhancing the critical thinking skills of Grade 7 learners in Araling Panlipunan. The absence of random assignment was addressed through structured implementation of PISA-type tasks and pre/post comparisons of student performance.

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Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
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Participants

Participants were 30 Grade 7 students from Bauan National and Vocational Integrated High School. A purposive sampling technique was used, selecting learners who were officially enrolled in Araling Panlipunan during the study period..

Research Instrument

A validated 30-item PISA-type multiple-choice test and a Likert-scale survey questionnaire were used. The instruments measured:

- Critical thinking skills (analysis, evaluation, and problem-solving)
- Engagement with PISA-type tasks
- Perceptions of real-life relevance and information processing
- Learning challenges encountered during assessment tasks

Both quantitative (Likert-scale and test scores) and descriptive responses were collected.

Data Collection Procedure

Pretest data were collected before the implementation of PISA-type assessment tasks. During instruction, learners were exposed to contextualized and problem-based activities integrated into Araling Panlipunan lessons. After the intervention, a posttest and survey questionnaire were administered to measure changes in critical thinking skills and student perceptions.

Data Analysis

Descriptive statistics (frequency, percentage, and weighted mean) were used to summarize students' performance and perceptions. A paired-sample t-test was conducted to determine the significant difference between pretest and posttest scores at a 0.05 level of significance.

Results

Distinct Features of PISA-Type Assessment

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Table 1

Real-life or context-based problem scenarios

Item	Weighted Mean	Verbal Interpretation	Rank
Real-life or context-based problem scenarios			
I find that the tasks in the PISA-type assessment relate to real-life situations that I can personally connect with.	3.53	Strongly Agree	5
I find it interesting to solve problems that resemble real or everyday situations.	3.58	Strongly Agree	4
I find the context-based questions engaging and meaningful.	3.77	Strongly Agree	2
I find that the scenarios in the tasks reflect real issues faced by people or communities.	3.82	Strongly Agree	1
I find that the real-life contexts make learning Araling Panlipunan more relevant and practical.	3.65	Strongly Agree	3
Composite Mean	**3.67**	**Strongly Agree**	

Table 1 presents the distinct features of PISA-type assessments in terms of real-life or context-based problem scenarios. The overall weighted mean of 3.67 indicates that the respondents strongly agree.

The highest weighted mean of 3.82 shows that respondents perceive the scenarios in the tasks as reflective of real issues faced by people or communities. This is followed by a weighted mean of 3.77, indicating that context-based questions are considered engaging and meaningful.

Moreover, a weighted mean of 3.65 suggests that real-life contexts make learning Araling Panlipunan more relevant and practical. A weighted mean of 3.58 indicates that respondents find it interesting to solve problems that resemble real or everyday situations. Lastly, with a weighted mean of 3.53, respondents agree that the tasks in the PISA-type assessment relate to real-life situations that they can personally connect with.

Overall, the strong agreement among respondents indicates that PISA-type assessments effectively connect classroom learning to real-life contexts, making Araling Panlipunan more engaging, relevant, and practical for learners.

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Table 2
Information processing and interpretation tasks

Item	Weighted Mean	Verbal Interpretation	Rank
Information processing and interpretation tasks			
I find that the tasks require me to analyze and organize information before answering.	3.70	Strongly Agree	3
I find that I need to interpret charts, graphs, or tables as part of the assessment tasks.	3.76	Strongly Agree	2
I find that the information processing tasks emphasize critical thinking rather than memorization, which makes them engaging and meaningful.	3.88	Strongly Agree	1
I find that I must identify important details and discard irrelevant information when solving a task.	3.55	Strongly Agree	5
I find that I have to use multiple sources or pieces of evidence to arrive at an accurate conclusion.	3.64	Strongly Agree	4
Composite Mean	**3.71**	**Strongly Agree**	

Table 2 presents the distinct features of PISA-type assessments in terms of information processing and interpretation tasks. The overall weighted mean of 3.71 indicates that the respondents strongly agree.

The highest weighted mean of 3.88 shows that respondents perceive information processing tasks as emphasizing critical thinking rather than memorization, making them engaging and meaningful. This is followed by a weighted mean of 3.76, indicating that respondents need to interpret charts, graphs, or tables as part of the assessment tasks.

Moreover, a weighted mean of 3.70 suggests that the tasks require respondents to analyze and organize information before answering. A weighted mean of 3.64 indicates that respondents use multiple sources or pieces of evidence to arrive at accurate conclusions. Lastly, with a weighted mean of 3.55, respondents agree that they must identify important details and discard irrelevant information when solving tasks.

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Volume 2 Issue 6 (2026)

Overall, the strong agreement among respondents indicates that PISA-type assessments effectively develop students' critical thinking, analytical skills, and ability to process and interpret information, making them essential for real-life problem-solving.

Table 3
Evidence-based reasoning and decision-making

Item	Weighted Mean	Verbal Interpretation	Rank
Evidence-based reasoning and decision-making			
I find that I can draw conclusions supported by the information provided in the problem scenario.	3.37	Agree	5
I find that logical reasoning is emphasized when making decisions in tasks.	3.45	Agree	4
I find that these reasoning and decision-making tasks are more meaningful than memorization-based questions.	3.68	Strongly Agree	1
I find that I need to support my answers with clear and relevant evidence from the given materials.	3.62	Strongly Agree	2
I find that reviewing the evidence provided helps me reflect on the accuracy of my decisions.	3.54	Strongly Agree	3
Composite Mean	**3.53**	**Strongly Agree**	

The highest weighted mean of 3.68 shows that respondents perceive reasoning and decision-making tasks as more meaningful than memorization-based questions. This is followed by a weighted mean of 3.62, indicating that respondents need to support their answers with clear and relevant evidence from the given materials.

Moreover, a weighted mean of 3.54 suggests that reviewing evidence helps respondents reflect on the accuracy of their decisions. A weighted mean of 3.45 indicates that logical reasoning is emphasized when making decisions in the tasks. Lastly, with a weighted mean of 3.37, respondents agree that they can draw conclusions supported by the information provided in the problem scenarios.

Overall, the strong agreement among respondents indicates that PISA-type assessments effectively develop evidence-based reasoning and decision-making skills by encouraging learners to justify answers, reflect on their thinking, and base conclusions on available evidence.

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Table 4
Application of knowledge

Item	Weighted Mean	Verbal Interpretation	Rank
Application of knowledge			
I find that the test helps me apply what I learned in Araling Panlipunan to new or unfamiliar situations.	3.83	Strongly Agree	1
I find that the tasks show clear connections between classroom concepts and real-world issues.	3.66	Strongly Agree	3
I find that I can transfer what I learned in class to solve other similar or related tasks.	3.50	Strongly Agree	5
I find that I can apply my understanding of historical, social, or cultural topics to current events.	3.79	Strongly Agree	2
I find that I become more confident in using my knowledge beyond classroom lessons or textbook examples.	3.54	Strongly Agree	4
Composite Mean	**3.66**	**Strongly Agree**	

The highest weighted mean of 3.83 shows that respondents find that the test helps them apply what they learned in Araling Panlipunan to new or unfamiliar situations. This is followed by a weighted mean of 3.79, indicating that respondents can apply their understanding of historical, social, or cultural topics to current events.

Moreover, a weighted mean of 3.66 suggests that respondents see clear connections between classroom concepts and real-world issues. A weighted mean of 3.54 indicates that respondents become more confident in using their knowledge beyond classroom lessons or textbook examples. Lastly, with a weighted mean of 3.50, respondents agree that they can transfer what they learned in class to solve other similar or related tasks.

Overall, the strong agreement among respondents indicates that PISA-type assessments effectively promote the application and transfer of knowledge by engaging learners in real-world and meaningful problem-solving tasks.

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1. **Levels of Students' Critical Thinking Skills—Analysis, Evaluation, and Problem-Solving—as Indicated by Pre-Test and Post-Test**

Table 5

Levels of Students' Critical Thinking Skills—Analysis, Evaluation, and Problem-Solving as Indicated by Pre-Test

Score	Level	Frequency	Percentage	Rank
24 – 30	Advanced Critical Thinker	0	0	3.5
16 – 23	Proficient Critical Thinker	17	57	1
9 – 15	Developing Critical Thinkers	13	43	2
0 – 8	Emerging Critical Thinker	0	0	3.5
	TOTAL	**30**	**100**	

The data reveal that a majority of the students (57%) were classified as *Proficient Critical Thinkers*, with scores ranging from 16 to 23. Meanwhile, 43% of the students were identified as *Developing Critical Thinkers*, with scores between 9 and 15. Notably, no students were categorized as *Advanced Critical Thinkers* (24–30) or *Emerging Critical Thinkers* (0–8).

This distribution indicates that most students demonstrate moderate levels of critical thinking skills, showing reasoning and evaluative abilities but still requiring further development to reach advanced proficiency. The absence of students in both the highest and lowest categories suggests that learners are relatively clustered in the middle level, reflecting a need for more targeted instruction to enhance higher-order thinking skills.

Overall, the pre-test results show that students possess basic competence in critical thinking, particularly in analysis and evaluation, but have not yet reached mastery in independently analyzing complex information, evaluating multiple perspectives, and generating well-reasoned conclusions. This highlights the need for instructional strategies that further develop students' critical thinking, problem-solving, and decision-making skills.

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Table 6

Levels of Students' Critical Thinking Skills—Analysis, Evaluation, and Problem-Solving—as Indicated by Post-test Results

Score	Level	Frequency	Percentage	Rank
24 – 30	Advanced Critical Thinker	18	60	1
16 – 23	Proficient Critical Thinker	12	40	2
9 – 15	Developing Critical Thinkers	0	0	3.5
0 – 8	Emerging Critical Thinker	0	0	3.5
	TOTAL	30	100	

The data reveal a significant improvement in students' performance compared to the pre-test. A majority of the students (60%) were classified as *Advanced Critical Thinkers*, with scores ranging from 24 to 30, while the remaining 40% were identified as *Proficient Critical Thinkers*, with scores between 16 and 23.

Notably, no students were classified as *Developing* or *Emerging Critical Thinkers*, indicating that all participants demonstrated mastery of higher-order thinking skills after the intervention. This upward shift in performance suggests that the instructional strategies and assessment approaches implemented were effective in enhancing students' analytical, evaluative, and problem-solving skills.

Overall, the post-test results show a substantial improvement in students' critical thinking skills, with all learners reaching either proficient or advanced levels. This indicates that the intervention successfully strengthened their ability to analyze information, evaluate arguments, and solve problems effectively, reflecting a marked development in higher-order thinking skills.

Table 7

Significant Difference Between the Students' Pre-Test and Post-test Results

Indicators	t-values	p-values	Decision on H_0	Verbal Interpretation
Grade VII	19.3346	0.00001	Reject	Significant

The table shows the significant difference between the students' pre-test and posttest results in the PISA-type test in terms of their critical thinking skills. The computed *t*-values are 19.3346. They obtained the exact corresponding *p*-values of 0.00001, which are lower than the five percent or 0.05 level of significance. This result is to reject the null hypothesis. Therefore, there is a significant difference between the pre- test and post-test results in the PISA-Type test in terms of the critical thinking skills of the respondents.

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Table 8
Challenges Encountered by Grade 7 Learners in Responding To PISA-Type Assessment Tasks in Araling Panlipunan

Item	Weighted Mean	Verbal Interpretation	Rank
I find that the reading passages or problem situations are too long to understand.	3.54	Strongly Agree	5
I find that I have difficulty relating the given situation to what I learned in class.	3.46	Agree	9
I find that it is difficult to understand some words or terms used in the test.	3.41	Agree	10
I find that I get confused when interpreting graphs, maps, or tables.	3.51	Strongly Agree	7
I find that I struggle to identify what the question is really asking.	3.50	Strongly Agree	8
I find that it is challenging to choose the best answer when the options look similar.	3.61	Strongly Agree	6
I find that I have a hard time locating evidence from the given material to support my answer.	3.67	Strongly Agree	3
I find that I feel anxious or pressured while answering the PISA-type questions.	3.63	Strongly Agree	4
I find that it is hard to apply my prior knowledge to unfamiliar or new situations.	3.71	Strongly Agree	2
I find that I need more time to analyze and answer each question carefully.	3.74	Strongly Agree	1
Composite Mean	**3.58**	**Strongly Agree**	

It presents a composite weighted mean of 3.58, indicating that the respondents strongly agree.

Furthermore, the table shows the three highest weighted means of 3.74, 3.71, and 3.67, which imply that respondents need more time to analyze and answer each question carefully, find it difficult to apply prior knowledge to unfamiliar or new situations, and have difficulty locating evidence from the given material to support their answers.

On the other hand, the three lowest weighted means of 3.41, 3.46, and 3.50 indicate that respondents agree they find it difficult to understand some words or terms used in the test, have difficulty relating the given situation to what they learned in class, and struggle to identify what the question is really asking.

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Overall, the results indicate that students experience challenges in answering PISA-type assessment tasks, particularly in analyzing complex questions, applying prior knowledge to new situations, and using evidence to support their answers. These difficulties suggest the need for further development of students' higher-order thinking skills and comprehension abilities to better handle context-based and analytical tasks.

Discussion

The findings indicate that PISA-type assessments effectively enhance students' critical thinking skills by promoting real-world application, reasoning, and problem-solving. This supports existing studies emphasizing the value of contextualized and inquiry-based learning.
The results suggest that integrating performance-based and problem-solving tasks is more effective than traditional memorization. However, challenges such as time constraints and difficulty in applying knowledge highlight the need for guided practice and scaffolding.

Conclusion

This study demonstrates that PISA-type assessments significantly improve the critical thinking skills of Grade 7 learners in Araling Panlipunan. By connecting learning to real-life situations, students develop stronger analytical and decision-making abilities.

It is recommended that teachers integrate PISA-type tasks in instruction and that future studies explore their application across different subjects and larger groups of learners.

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