

A descriptive analysis of the academic performance based on the pre-test and post-test results and the language preference of Grade 10 students in Araling Panlipunan

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Abstract

This study described the academic performance of Grade 10 students in Araling Panlipunan based on their pre-test and post-test results and identified their preferred language of instruction. Using a descriptive quantitative research design, the study involved 28 Grade 10 students from a public national high school in Tacloban City, Philippines. A validated researcher-made 30-item pre-test and post-test and a 5-point Likert-scale questionnaire on language preference were utilized to collect the data regarding on the language preference of Grade 10 students in learning *Araling Panlipunan* concepts. In analyzing the gathered data, descriptive statistics and a paired-samples *t*-test were employed to using a Jamovi statistical tool. The findings showed that the students obtained a mean pre-test score of 24.70 (82.38%), which increased to a mean post-test score of 27.50 (91.55%). The paired-samples *t*-test revealed a statistically significant improvement in students' performance ($t = -3.70$, $p < .001$), indicating that classroom instruction contributed positively to academic performance of the Grade 10 students. In other hand, the survey results further showed that the respondents generally preferred Filipino as the language of instruction, with all students identifying Filipino as the language that best helped them understand *Araling Panlipunan* concepts. The study concludes that effective classroom instruction enhances students' academic performance and that the use of Filipino as the primary language of instruction supports better conceptual understanding in *Araling Panlipunan*. The findings provide evidence that may guide teachers in selecting appropriate instructional and language practices that promote meaningful learning.

Keywords: academic performance, Araling Panlipunan, language preference, Filipino, pre-test, post-test, Grade 10

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1. Introduction

The specific theme or discipline in the *Araling Panlipunan* subject offered in Grade 10 junior high school is *Kontemporaryong Isyu*; it primarily discusses the different contemporary issues such as significant and current events, problems, and concerns that affect people, particularly environmental issues. This enables students to have a deep understanding of contemporary issues like human rights, labor and migration, globalization, citizenship, gender issues, civic responsibility, and other environmental concerns (Department of Education, 2016). Through these competencies, students will be able to become active and responsible citizens who can address issues affecting their community and the whole society.

In this discipline, *Kontemporaryong Isyu*, the Grade 10 *Araling Panlipunan* curriculum aligns with several United Nations Sustainable Development Goals (SDGs), including SDG 4 (Quality Education), SDG 11 (Sustainable Cities and Communities), SDG 13 (Climate Action), and SDG 15 (Life on Land) (United Nations, 2015). The (SDG) 4: Quality Education highlights equitable and inclusive quality education for all students to attain lifelong opportunities by acquiring skills and knowledge needed to support sustainable development, such as education for sustainable lifestyles and environmental sustainability. In other hand, the (SDG) 11: Sustainable Cities and Communities focuses on fostering safe and disaster-resilient societies, and the (SDG) 13: Climate Action integrates climate measures into policies, improves education on climate change to boost awareness, and the disaster preparedness of the people. In addition, the (SDG) 15: Life on Land encourages restoring and promoting sustainable use of terrestrial ecosystems such as protecting biodiversity, stopping deforestation, etc. Integrating these Sustainable Development Goals with classroom instruction allows students to become environmentally literate and strengthen their sense of civic responsiveness in developmental initiatives (United Nation, n.d.).

Every lesson that will be tackled inside the classroom requires an assessment, as it will help the teacher to identify the prior knowledge of the students and their improvement throughout the learning process. In such, the “pre-test” and “post-test” educational assessments are commonly used. The pre-test also known as “baseline testing”, serves as the initial assessment conducted before the implementation of an intervention or instruction. It serves as a foundational benchmark that allows teachers or researchers to gain valuable insights into the initial state or condition of respondents or variables under study. On the other hand, the post-test involves assessment conducted after the intervention or instruction has been implemented. It measures the changes or outcomes resulting from the intervention compared to the baseline established during the pre-testing (Majka, 2024). The comparison between the pre-test and post-test scores will serve as strong evidence of the students’ academic progress and will be an indicator of the effectiveness of the instruction (Shivaraju et al., 2017). Through these assessments, the teachers were able to know which areas require reinforcement and will help to create an effective instructional strategy that will enhance the learning of the students.

Aside from academic performance, students’ language preference may influence how they effectively understand the classroom instruction. According to the study of Sardana et. al (2022), using a language that students know, helps amplify the learning process and makes it more effective. His study emphasizes that language and learning indicate strong links between language instruction and the interactive, participatory, or learner-centered nature. However, students often differ in their language preferences for learning, as language directly influences their ability to comprehend and construct meaning from the instructional content. Hence, identifying students’ language preferences and the language they perceive as most effective allows teachers to select appropriate instructional strategies. The Philippines adopts a multilingual educational context in which Filipino and English are used as official languages of instruction depending on the grade level and the subject area. UNESCO (2023) highlights that learning in a language that students understand will aid comprehension, improve

classroom participation, and boost academic performance. Additionally, identifying the students' preference in language of instruction promotes effective and meaningful learning experiences.

Considering that Grade 10 *Araling Panlipunan* deals with complex concepts in contemporary issues such as environmental issues, human rights, labor and migration, globalization, citizenship, gender issues, civic responsibility, and other environmental concerns (Department of Education, 2016), identifying their language preference becomes particularly significant for selecting an appropriate instructional strategy to improve academic performance and comprehension. Knowing students learning styles of language provides a good start for the design of effective instruction (Payaprom & Payprom (2019). In such, teachers should know and address the student's learning styles and language preference in order to motivate them to engage in the learning process. This will encourage and motivate students to participate in the teaching and learning process.

Existing literature has primarily focused either on students' academic performance through classroom assessment or on language policies used in education without exploring how students' language preference relates to their perceived understanding of Social Studies concepts. Despite that, there are limited studies that focus on describing the academic performance of the students utilizing the pre-test and post-test scores and also identifying their preferred language of instruction and their perceived language for better understanding *Araling Panlipunan* concepts, specifically in the context and discipline of *Kontemporaryung Isyu*. This gap highlights the need for a descriptive investigation that integrates assessment results with students' language preferences. The findings of this study are expected to provide empirical evidence that may assist *Araling Panlipunan* teachers in selecting appropriate instructional strategies and language practices that promote improved learning outcomes and conceptual understanding.

Statement of the Problem - This study seeks to answer the following questions:

- What is the academic performance of the Grade 10 students as reflected in their *Pre-test scores? Post-test scores?*
- What are the descriptive differences between the pre-test and post-test scores of Grade 10 students?
- Which language of instruction do Grade 10 students prefer in learning *Araling Panlipunan*?
- Which language do Grade 10 students perceive as helping them better understand concepts in *Araling Panlipunan*?

Theoretical Framework of the Study - This study is guided by the Constructivist Learning Theory by Jean Piaget. The theory emphasizes that individuals construct knowledge, which is also known as "schema" based on their past knowledge and experiences (Alhabib, n.d.). In this study, the pre-test measures the prior knowledge of the students, and the post-test determines the acquired knowledge after the classroom instruction. Hence, this theory proves that learners actively construct new knowledge by integrating new information with their existing ideas about the concepts. This study is also anchored on Cummins' Linguistic Interdependence Theory by Jim Cummins. The theory posits that proficiency in the first language positively affects learning the second language (Cummins, 1979). This theory emphasizes that students learn effectively when instruction is delivered utilizing their language of preference, which also supports learning the second language. Through their familiarity with the language, they are more likely to understand the lesson effectively and improve their academic performance.

2. Methodology

This chapter presents the research methods and procedures employed in the conduct of the study. It describes the research design, research locale, respondents of the study, research instruments, data gathering procedure and the ethical considerations. These components were carefully selected to ensure that the objectives of the study were systematically addressed and that the data collected were valid and reliable.

Research Design - This study utilized the descriptive quantitative research design that measures the status of a specific variable or topic. This is a non-experimental approach used to observe, record, and describe the characteristics of a phenomenon, situation or population (Creswell, 2018). This research design will allow students to describe academic performance based on their scores in pre-test and post-test and will also determine their language preference in learning *Araling Panlipunan*.

Research Locale - This study conducted in one of the public national high schools in Tacloban City, Leyte, Philippines. The school is selected as it meets the criteria relevant to the objective of this study. The name and any information about the school will not be disclosed in this study to uphold ethical considerations and to protect the institution's confidentiality.

Research Respondents - The respondents of this study are the Grade 10 students from the selected public national high school studying the subject *Araling Panlipunan* in a specific discipline of *Kontemporaryong Isyu*.

Research Instrument - This study utilized a researcher-made 30-item pre-test and post-test questionnaire which was validated and evaluated by an expert in Social Studies and educational measurement to ensure the content validity before its administration in the classroom. A researcher-made language preference questionnaire with a 5-point Likert scale is used to determine the language preference of the students in learning *Araling Panlipunan*. A Likert scale is a quantitative data collection tool used in surveys and research to assess individuals' attitudes, opinions, or perceptions (George, 2024).

Ethical Considerations - This study adheres to the ethical procedures to protect the rights, welfare, and dignity of all the respondents throughout the research process.

- Permission from the School Administration. Prior to the collection of data, the researcher will submit a request letter to the school principal to obtain an approval to conduct the pre-test, post-test, and a short survey.
- Informed Consent. The researcher will obtain written informed consent from the respondents before the assessment or the collection of data begins. The respondents will also be informed that they have the right to withdraw from the study at any time without penalty and that participation is voluntary.
- Confidentiality and Anonymity. The researcher will ensure that the identity of the institution and the students will remain confidential and will not be reflected in any reports and publications. All the collected data will be stored properly and accessed only by the researcher.

Data Gathering Procedure – The data collection started by obtaining approval from the school principal of the selected public national high school. Once approved, the researcher will inform the subject teacher about the purpose of the study and have an internal arrangement regarding the schedule of the data collection. Before the administration of the pre-test, post-test, and survey, the 30-item researcher-made questionnaire aligned with the current lesson of the students is validated by the experts. Once validated and finalized, the administration begins. The ethical procedures throughout the study were followed strictly to ensure the protection of the respondents and the school involved.

Data Analysis – This study used descriptive statistics in analyzing the data gathered from the pre-test, post-test, and survey questionnaire, specifically the mean, percentage, and mean. Descriptive statistics are appropriate for summarizing and presenting quantitative data simply and comprehensively without creating statistical inferences beyond the given data (Bandari, 2023). In analyzing the data, the Jamovi statistical tool was also utilized to assist in generating the descriptive statistics of the scores in the pre-test, post-test, and the overall mean of the survey responses of the students. In comparing the descriptive differences between the pre-test and post-test scores, a paired-samples *t*-test was utilized in the Jamovi statistical tool to ensure the accuracy of the results.

3. Results and discussions

3.1 Academic Performance of the Grade 10 Students Based on their Pre-test Scores

The pre-test results revealed that Grade 10 students had a relatively high level of prior knowledge about the *Araling Panlipunan* lesson. The students obtained a mean score of 24.7, which is approximately equivalent to 82.38%, while both the median and mode were 25, and the standard deviation of 3.67 indicates the variation in the students' performance, with scores ranging from 11 to 29. The relatively high mean score suggests that most students already possessed considerable background knowledge of the lesson before instructional intervention. However, the wide range of scores, particularly the minimum score of 11, clearly indicates that some students had lower levels of prior knowledge and needed additional instructional support to attain improvement. These findings support the study of Majka (2024), which concluded that pre-tests establish baseline information that enables teachers to measure students' prior knowledge and design appropriate instructional interventions. It also supports Piaget's Constructivist Theory by Jean Pean, which states that learners enter the classroom with existing cognitive structures that influence the acquisition of new knowledge (Alhabib, n.d).

3.2 Academic Performance of the Grade 10 Students Based on their Post-test Scores

The post-test results showed changes in academic performance after the delivery of the instructions. This suggests that students have already gained new knowledge regarding the lesson that was being discussed. The students obtained mean score of 27.5, which is equivalent to 91.55% and is substantially higher than the pre-test means. While the median is 28, and the mode is 29. However, the standard deviation is 2.12, which is smaller than the pre-test, which is 3.67. While the scores range from the minimum of 22 to a maximum of 30. This result implies that the objective of the instruction and the teaching intervention used helped improve the students' academic performance in *Araling Panlipunan*. These findings support the study of Shivaraju et al. (2017), it highlights that post-tests provide evidence of learning gained by the students after the implementation of the instructional intervention. Similarly, these results constantly support on Constructivist Learning Theory by Jean Piaget according to Alhabib, n.d. it noted that meaningful instruction enables students to reorganize and expand their existing knowledge structures.

3.3 Descriptive Differences between Pre-test and Post-test Scores of Grade 10 Students

The scores from pre-test and post-test showed an improvement in the academic performance of the Grade 10 students. Comparing the results between the pre-test and post-test, the mean gain score was 2.75 points, indicating that the students answered approximately three more items correctly after instruction than before instruction. The paired-samples t-test reveals a -3.70 and $p < .001$; this finding suggests that most of the students had improved and benefited from the delivered instruction. Although some of the students obtained slightly lower post-test scores, most of the students demonstrated positive learning improvements, as reflected by the positive mean gain score. These findings are supported by Shivaraju et al. (2017), which explains that gains between pre-test and post-test scores indicate successful instructional delivery and improved academic performance. These findings are also consistent with Constructivist Theory, which asserts that learning occurs as students actively construct understanding through classroom experiences (Alhabib, n.d.).

3.4 Preferred Language of Instruction in Learning Araling Panlipunan

The survey results revealed that the majority of the respondents preferred Filipino Language as the language of instruction in teaching and learning *Araling Panlipunan* concepts. Based on survey data, the weighted mean is 3.77, which is valued as "High"; the median is 3.75, which is likewise "High" based on the mean value (Anonymous, n.d.). In addition, the standard deviation is 0.476. Moreover, all of 28 students, equivalent to approximately 100%, selected Filipino as their preferred language of instruction. These results support the

Cummins Linguistic Interdependence Theory by James Cummins (1979), stated that meaningful conceptual understanding is developed through a familiar language, and students who receive instruction in their language of preference learn effectively and are more likely to acquire learning and academic improvements.

Table 1
Survey Questionnaire and the Number of Students Who Responded to Statement per Point/Indicator

Mga Tanong	5 Lubos na Sumasang- ayon	4 Sumasang- ayon	3 Hindi Tiyak/ Neutral	2 Hindi Sumasang- asyon	1 Lubos na Hindi Sumasang- ayon
Mas gusto kong gamitin ang Filipino bilang wikang panturo sa Araling Panlipunan.	11	12	5	0	0
Mas gusto kong gamitin ang English bilang wikang panturo sa Araling Panlipunan.	0	7	14	4	3
Mas gusto ko ang kombinasyon ng Filipino at English (bilingual approach) sa pagtuturo ng Araling Panlipunan.	9	9	9	1	0
Mas nauunawaan ko ang mga konsepto sa Araling Panlipunan kapag Filipino ang ginagamit ng guro.	13	10	4	1	0
Mas nauunawaan ko ang mga konsepto sa Araling Panlipunan kapag English ang ginagamit ng guro	2	8	10	6	2
Nakakatulong ang Filipino upang mas madaling maipaliwanag ang mahihirap na konsepto sa Araling Panlipunan.	12	11	5	0	0
Nakakatulong ang English upang mas maunawaan ko ang mga terminolohiya sa Araling Panlipunan.	1	9	13	2	3
Ang wikang mas gusto kong gamitin ay nakatutulong upang mapabuti ang aking pagkatuto sa Araling Panlipunan.	13	14	1	0	0
Kung isa lamang ang pipiliin mo, alin ang mas nais mong maging pangunahing wikang panturo sa Araling Panlipunan?					
Filipino and English (Filipino – 28; English – 0)					

Note. The number reflected on this table is the number of students who answered per indicator.

3.5 Language that Helps Grade 10 Students Better Understand Concepts in Araling Panlipunan

According to the responses of the survey (see Table 1), especially on the responses on the question number nine (9), it showed that students perceived language that helped them better understand concepts in *Araling Panlipunan* is the Filipino language. Obtaining a response of 28 out of 28 students, which is equivalent to a 100%. These findings are consistent with Social Constructivist Theory of Lev Vygotsky, which emphasizes that language is the primary medium through which learning, communication, and higher-order thinking develop (Alhabib, n.d.).

4. Conclusion

The findings of this study conclude that Grade 10 students exhibited improved academic performance after classroom instruction in *Araling Panlipunan*. Although the students entered the classroom with a relatively high level of prior knowledge, their post-test scores were significantly higher than their pre-test scores, indicating that the instructional process effectively enhanced their understanding of the lesson. The positive mean gain score and the statistically significant difference between the pre-test and post-test results further confirm the effectiveness of the instruction provided. The study likewise revealed that Filipino is the preferred language of instruction among the respondents. The students perceived that learning through Filipino enabled them to understand *Araling Panlipunan* concepts more effectively than English. This finding highlights the importance of using a language that is familiar to learners to facilitate comprehension, classroom participation, and meaningful learning. Overall, the study concludes that well-planned instruction combined with the appropriate language of instruction contributes to improved academic performance and better conceptual understanding among Grade 10 students in *Araling Panlipunan*.

Recommendations - This study suggests the following recommendations based on the findings:

- Teachers are encouraged to use Filipino as the primary language of instruction when teaching complex concepts in *Araling Panlipunan* while integrating English for technical terms when

appropriate to strengthen students' bilingual competence. Teachers should continue using pre-tests and post-tests to monitor students' learning progress and evaluate the effectiveness of classroom instruction.

- School administrators should support professional development programs that enhance teachers' assessment practices and promote effective language-based instructional strategies.
- The Department of Education and curriculum developers may consider strengthening the development of Filipino instructional materials that support learners' comprehension of *Araling Panlipunan* concepts.
- Future researchers may conduct similar studies involving larger samples, different schools, and additional variables such as academic achievement, motivation, and classroom engagement to further validate and expand the findings of this study.

AI Disclosure: We, the author of this study used an AI Tool specifically “ChatGPT, GPT-4 September 2025” solely for the purpose of idea generation and language editing. All outputs are reviewed, verified, and edited by the authors including fact-checking sources. No confidential or personally identifiable data were entered into AI tools. The authors take full responsibility for the content.

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