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Differentiated Assessment in Araling Panlipunan 10: Enhanced Learning Activities

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ABSTRACT

This research assessed the status of utilization of differentiated assessment in Araling Panlipunan in relation to students' academic performance in Media Once National High School - Toledo City Division for the school year 2021-2022. A single group pre-test post-test research design was utilized in the study with 60 respondents. A multiple intelligence test adapted from Armstrong (2004), which was based on Gardner's Theory of Multiple Intelligences, was administered to determine what type of assessment is suitable for the learner. A survey questionnaire was administered to assess the students' perceptions of differentiated assessment in Araling Panlipunan. The study showed an increase in students' academic performance in Araling Panlipunan as reflected in their pre-test and post-test examinations. Most of the respondents have a good performance towards the cited competencies in Araling Panlipunan as reflected in their pre-test scores. After being assessed based on their type of intelligence, the respondents performed very well in each competency. Thus, this study revealed a significant difference in the pre-test and post-test performances of the learners. The respondents have positive perceptions towards the use of differentiated assessments. It is hereby recommended that enhanced learning activity sheets employing differentiated assessment techniques be used in the classroom to improve the academic performance of the students.

KEYWORDS: *Teaching Social Studies, differentiated assessment, academic performance, multiple intelligence test, enhanced learning activity sheets, single-group pre-test post-test, Toledo City Division*

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1. INTRODUCTION

Learners differ significantly in many aspects, affecting their learning pace (Celik, 2019). Such diversities make teaching more challenging and complicated. These diverse learners need to assimilate information and construct meaning from the learned concepts. It is why teachers should consider the need to individualize learning to measure the students' abilities based on their type of intelligence (Ismajli & Morina, 2018). They are expected to include learners' diversity in their pedagogical choices and accommodate these differences where learners can express their beliefs, thoughts, and experiences based on the given topic (Du Plessis, 2018).

The concept of learners' diversity hampers the teaching-learning process. Innovation in teaching and teachers' creativity are essential responsibilities for teachers to meet the varying needs of the learners. Learners' differences in their academic abilities suffice the idea of this concept. For example, some students achieve poor grades while others perform well though the same teacher teaches them. Some students have low grades in Mathematics but perform well in a music class. Some love to work collaboratively, while others love to work independently. These ideas demand a teacher's task to be flexible when delivering the lesson for learners to learn effectively.

Despite the teachers' innovative teaching strategies, these do meet the needs of diverse students (Whipple, 2012). This idea paved the way to differentiate instruction to meet the learning objectives.

Differentiated instruction is widely used to individualize learning and accommodate students' differences. Such diversity posed challenges to teachers in reaching out to their students by employing differentiated instruction in the curriculum implementation.

According to Noman & Kaur (2014), despite implementing differentiated instruction in the classrooms, differentiation in the assessment process is somehow neglected. Since learners are diverse, they cannot be assessed similarly. The "one size fits all" approach in instruction that tended to learners as a homogenous group can no longer address the diverse needs of the students. Ideally, instruction and assessment should be tailored to meet individual students' needs.

This paved the way for the need to differentiate assessments. Achieving the desired learning outcomes relative to students' differences is the goal of differentiated assessments (Koshy, 2013). Students' diverse learning abilities demand varying methods of evaluation where authentic results could help the teachers address those learning gaps by adjusting their instructional practices in meeting the learning objectives. The goal of differentiated instruction cannot be achieved when the assessment being employed is carried out through a uniformity of tests that is solely based on the concept of the "one size fits all" approach (Noman & Kaur, 2014). Thus, there is a need to emphasize differentiated assessments to measure students' learning performance.

Several studies focused more on the effectiveness of differentiated instruction in applying multiple intelligences (Gomaa, 2014; Whipple, 2012; Celik, 2019). However, only a few studies are concerned with the assessment process that determines the effectiveness of its implementation on the perspectives of students and teachers in Araling Panlipunan subject. Besides being aware that assessments should correlate with instruction, less emphasis was given to the assessment. This is true for a teacher who is often driven to employ traditional or common assessments rather than designing varied assessment activities to accommodate the diversity of learners.

To address the identified gap in the effectiveness of differentiated assessments, the researcher investigated the effectiveness of differentiating assessment methods in improving students' academic performance in Araling Panlipunan, especially in modular distance learning. It will also evaluate the student's perceptions on using differentiated assessments to answer the specified problems.

Review of Related Literature and Studies

This study assumes that differentiated assessment could effectively improve students' academic performance, as stated in Howard Gardner's Multiple Intelligences theory. Instead of casting the students as the same, teachers need to employ differentiation in response to students' diversity (Majuddin et al., 2020). The theory of multiple intelligences supports this claim by Howard Gardner and the tenets of VAKT (visual-auditory-kinesthetic-tactile) learning styles theory introduced by Neil D. Fleming and DepEd Order No. 8, series of 2015.

Schools have often sought to help students achieve their full potential. According to Howard Gardner (1983), as cited by Derakhshan & Faribi (2015), humans have different abilities and talents. Gardner as the proponent of the Theory of Multiple Intelligences acknowledges that while not all students are verbally or mathematically gifted, they may have expertise in other areas, such as music, spatial relations, or interpersonal knowledge. Thus, educators need to adopt a flexible teaching philosophy in which students' uniqueness is recognized and given appropriate learning opportunities to showcase their abilities (Catrillon, 2017).

Differentiated assessment evaluates student performance based on their preferred individual learning styles. As each student has a unique learning preference, multiple ways are needed to demonstrate their learning. Such an assessment can be effective when used appropriately for students with different strengths and weaknesses, allowing all students to benefit from the assessment and achieve success (Risko & Walker-Dalhouse, 2010; Ali, 2015). Differentiated assessment has not been given much consideration in the classroom, while a significant leap in implementing differentiated instruction has been around for years. In accommodating the appropriate needs of the learners, meaningful learning will take place as students will have achieved successful mastery of the competency taught in the classroom (Kaur and Noman, 2014).

This study is also anchored to the tenets of the VAKT (visual-auditory-kinesthetic-tactile) learning styles model, which posits that students learn best when given opportunities to execute learning in different modalities. According to Yusop & Yasin (2019), the VAKT learning styles model, also known as the multisensory approach, is one of the many ways to increase students' readiness, interest, and focus, especially those with learning disabilities. Their study utilized a qualitative method with an experimental research design to determine the effectiveness of the multisensory approach in improving students'

performance with learning disabilities. This approach uses the senses (visual, auditory, kinesthetic, and tactile) in learning activities where students can demonstrate learning in different modalities. Such ideas support the claim that learners learn best when given opportunities to showcase their learnings using their preferred modality. This is supported by the study of Prasetyaningrum and Fardila (2018). The VAKT method integrated into the learning process has significantly improved the initial reading ability of students with mild disabilities during the intervention activities. Such intervention utilized learning materials presented visually, auditory, kinesthetic, and tactile. Using these senses will improve the perception process of the material; thus, students will be able to assimilate the information.

Assessment is one of the vital aspects of learning where students' learning outcomes and teaching effectiveness are being measured (Maba, 2017). It cannot be taken away from the learning process and is essential in monitoring students' learning (Noman & Kaur 2014). It is done not just to measure the learners' ability but also for the teachers to modify their teaching strategies to meet the individual needs of the learners.

Torreon and Sumayang (2021) focused on the outcomes of employing classroom activities based on the theory of multiple intelligence to students' academic performance. They found out that there is an increase in students' academic performance after employing instructional activities based on the principles of multiple intelligence. They concluded that schools should adopt this approach in using classroom activities to enhance students' academic performance. This idea supports the study of Kupchyk & Litvinchuk (2020), who stated that students prefer to learn in an environment designed to address their needs and enable them to perform better in school. A study conducted by Ozerem & Akkoyunlu (2015) pointed out that numerous factors affect why individual students have different learning processes. These include cognitive function, emotions, motivation, developmental characteristics, readiness, previous experiences, social environment, and community culture.

Employing varied options for learners to demonstrate learning is the essence of differentiated assessment. According to Reisdorfer (2020), when teachers use traditional assessment, it is a different activity that learners need to accomplish and distinct to the teaching and learning process. He argues that assessments should be a continuous process in teaching and learning. According to Ahvan and Pour (2016), traditional approaches in education pose struggles for teachers in finding ways to address the diverse needs of students. This approach to teaching is opposed to the principles of Gardner's Theory of Multiple Intelligences. He argues that learners have multiple types of intelligence and are needed to function productively in society. Differentiated assessment holds to the argument that teachers should assess learners differently. Teachers need to create an "intelligence profile" for each student, as Ahvan and Pour (2016) mentioned.

The study of Varsavsky and Rayner (2012) on exploring the use of differentiated assessment revealed that students took the alternative assessment tasks with a positive attitude, even when the teacher gave no extra credits for completing the task.

Based on the study of Tomlinson and Moon (2013), an effectively differentiated classroom also demonstrates meaningful connections between assessment and the learning environment and between assessment and classroom leadership/management. When teachers employ assessments that help students develop competence and a sense of autonomy rather than judging them, the environment feels safer and more predictable. When students are aware that differentiated tasks often stem from assessment information, they will know that the teacher's primary aim is to help them take the next appropriate step for active learning. With clear and functional learning objectives, student progress monitored by appropriate formative assessment, and teaching strategies that are designed to address their needs and help develop proficiencies necessary for growth, a student's quest for success are greatly enhanced when the summative or more judgmental aspects of assessment are in play (Tomlinson and Moon, 2013)

Differentiated assessments, when coupled with appropriate rubrics, can provide all students with the opportunity to choose their preferred way of demonstrating their understanding. When learners are exposed to this environment, their creativity is enhanced, allowing them to think outside the box. Also, fostering a learning environment where students find ways to express themselves can increase their engagement in the learning tasks (Dunlop, 2018)

In action research conducted by Waters et al. (2004), results suggested that students worked hard and learned a great deal by completing their tasks when the responsibility of learning the material is given to them and that they are in full control of their work. Students who prefer to use differentiated assessment also pointed out that this style allows them to work with others and increase their creativity. The social aspect of the differentiated assessment fulfills a need of the "interpersonal learners" to work as a member

of a team and attend to the social component of the brain functions. They also added that this type of assessment was fun, produced less pressure, and eventually increased their learning.

Based on Winarti, Yuanita, and Nur's (2018) study, learning strategies based on multiple intelligence help improve learners' intelligence, motivation, and achievement. This claim is based on their research conducted with 124 junior high school respondents using a quasi-experimental design where traditional and MI-based teaching strategies were used in each group of respondents. They found out that students were motivated to demonstrate their learnings based on their intelligence. Ali (2020) and Ahmad et al. (2015) also supported such findings, revealing that utilizing the MI-based strategy has increased students' motivation. Students become engaged if they are motivated to learn.

Ernawati et al. (2019) conducted another study in English teaching using multiple intelligence assessment strategies for young learners, they found out that learners have different interests and nature. According to them, it is imperative to assess the students' area of intelligence to understand their learning styles so that the teacher can design an appropriate learning activity suited to their type of intelligence. The study of Tamilselvi and Geetha (2015) stated that if teachers incorporate Multiple Intelligence theories in their teaching strategies and assessment techniques, they will find out that the student's understanding and assimilation of knowledge is much better.

DepEd Order No. 31 (2020) lays out the interim guidelines for assessment considering the Basic Education Learning Continuity Plan (BE-LCP). The order clearly states that teachers need to be creative in designing learning assessments by giving the learners a range of ways to demonstrate learning and congruent with the Most Essential Learning Competencies (MELCs) as adopted from Deped Order No. 12 (2020) that allows the implementation of the curriculum to focus on the most essential competencies during the time of the pandemic. To name a few, quizzes, written exercises, performances, models, and even electronic presentations can be given to students. These differentiated assessment forms are provided either as formative or summative assessments depending on the teacher's purpose. This means that students are not given a single form of assessment to demonstrate their learning.

Another study conducted by Saligumba and Segumpan (2019) has shown that students exposed to differentiated assessment (DA) in Mathematics subjects have increased academic performance and significantly higher self-efficacy levels than those exposed to non-differentiated assessments. They used a quasi-experimental design that focused on assessing the mathematics performance and self-efficacy of Grade 9 students. Their findings were supported by the study of Ali (2015) to 40 teachers in which they viewed that differentiated assessment is beneficial for both teachers and students in improving learning outcomes. In differentiated assessments, learners are assessed based on their type of intelligence.

While several studies recognize the contributions of incorporating multiple intelligences in improving student learning in the classroom, Ali (2015) pointed out several factors why only a few teachers are applying this strategy. Large class sizes, lack of training in its implementation, and teaching loads are among the enumerated challenges. They find it hard to address the diverse needs of the students, and they lack pedagogical skills in implementing the differentiated assessments; thus, some teachers still stick to the uniform type of assessment strategies.

A study conducted by Badajos (2019) revealed that most public school elementary teachers were already incorporating multiple intelligence instruction to a different extent because they struggle when preparing the appropriate activities and materials to be included in the lessons. The same study found that implementing multiple intelligences training, designing learning plans to integrate specific skills, and mentoring systems improved teaching performance. Thus, teachers need to incorporate differentiation in the teaching-learning process to help learners improve their performance. Instruction and assessment should correlate to the learners' needs by applying Gardner's MI theory.

Harper-Hogans (2017) studied teacher perceptions regarding the traditional instruction and theory of multiple intelligences. If various intelligence ideas intend to improve student achievement, there should be no separation between MI and assessment practices. Assessment should be partnered with MI so that the assessment correlates with the content, process, and product. Differentiation should be made in instruction and the assessment process to achieve the learning outcomes.

The present study focuses on the first quarter competencies in Araling Panlipunan 10 such as: nasusuri ang kahalagahan ng pag-aaral ng Kontemporaryong Isyu; natatalakay ang kalagayan, suliranin at pagtugon sa isyung pangkapaligiran ng Pilipinas; and natutukoy ang mga paghahandang nararapat gawin sa harap ng panganib na dulot ng mga suliraning pangkapaligiran as laid down in the Most Essential Learning Competencies (MELCs)

adapted in the Department of Education. It primarily focuses on the importance of studying contemporary issues, identifying the current environmental issues happening in the Philippines, and the ways to mitigate such issues. Thus, it needs activities that measures the skills expected for learners to demonstrate. These competencies should be assessed with appropriate assessment methods to evaluate learners' authentic learning outcomes based on the given standards.

Studies on teachers' perception and practices of multiple intelligences theory in the middle schools confirmed teachers' level of familiarity with Gardner's MI theory and techniques. Teachers were not demonstrating expertise in incorporating MI practices in the classroom, thus, needing more teacher training opportunities to deepen and expand their knowledge of MI. They need to widen their pedagogical skills to be better equipped to accommodate the learning needs of students with different intelligence profiles (Kennedy-Murray, 2016).

While studies have shown that incorporating differentiated assessment, particularly the one that uses multiple intelligences, improves student academic performance, teachers had a rather difficult task in implementing them in the classroom. This is due to a lack of the necessary training opportunities to deepen their knowledge about the MI theory. Teachers must hone their teaching skills in implementing more MI practices in the classroom. Moreover, there have not been connections between student academic performance and their perceptions of the use of differentiated assessment in the classroom, thereby posing the need to conduct the study.

Objective of the Study

This research assessed the status of utilization of differentiated assessment in relation to students' academic performance in Araling Panlipunan 10-Contemporary Issues among the identified students of Media Once National High School in Toledo City Division for School Year 2021-2022 as basis for enhanced learning activities.

Statement of the Null Hypothesis

Ho1: There is no significant difference between the mean scores before and after employing differentiated assessments in Araling Panlipunan 10.

MATERIALS AND METHODS

This study utilized a one-group pretest-posttest experimental research design since it will seek to determine the student's academic performance before and after employing differentiated assessments to a single group.

According to Arikunto (2010), an experimental study aimed at determining if there are or no changes in the variable being studied. In this connection, this study will determine the significant relationship between the pre-test and post-test scores of the respondents on the identified competencies. This study utilized the Input-Process-Output (IPO) Approach in handling information for the duration of the study.

The input of the study includes the respondent's intelligence profile based on the results of the Multiple Intelligence Test and respondents' pre-test and post-test scores on the identified competencies exposed to differentiated assessments. Another data in the input process will be the students' perceptions on differentiated assessment.

Process. This phase started with the transmittal letter asking permission from the Schools Division Superintendent and the School Principal to conduct the study. It was followed with the data collection by administering the multiple intelligences inventory checklist that determines how students learn and acquire information. This forms the basis for an assessment that suits the individual learners' needs. A pre-test was administered that determines students' prior knowledge of the specified learning competencies. It was then followed by the administration of differentiated assessment to test the student's level of understanding through varied learning activities suited to learners' type of intelligence. Post-test was then administered that determines if there were or no changes in their scores. A survey was administered to gather data about their perceptions of the use of differentiated assessments. A significant relationship was determined between the student's academic performance and their perceptions of the assessment.

Data analysis was done for interpretation, the hypothesis was verified, and the relationships of the variables of this study were also determined. Lastly, based on the findings, conclusions and recommendations were made.

The output of this study is a set of enhanced learning activity sheets incorporating differentiated assessments that teachers can use to improve the student's academic performance on the subject. Areas of concern were also identified to address gaps. From each area of concern, specific objectives were formulated. Strategies to attain the specified objectives were also enumerated. Necessary to successfully adapt the enhanced learning activity sheets will include the persons involved in implementing and monitoring the activities. Lastly, it will be essential to list the expected outcome and

remarks to establish and assess its utilization in the teaching-learning process.

The study was conducted in Media Once National High School situated in mountainous terrain in Toledo City. It is located some eight (8) kilometers away from the city center on the way to Cebu City and has a student population of more than 600 students both in junior high school and senior high and is facilitated by 20 teachers.

Being a medium-sized school in the division of Toledo City, the school faced a shortage of classrooms, which somehow affected the delivery of quality instruction. Seemingly, the challenge in students' comprehension and academic performance is also of paramount concern. Teachers attended various trainings on improving their pedagogical skills in different fields necessary for effective delivery of instruction. However, no specific training focuses on the importance of employing assessment approaches designed to address students' individual needs.

The school shares the vision, mission, and core values of the Department of Education while promoting the importance of integrity, stability, and excellence to its stakeholders, especially the learners. The school envisioned a more conducive learning environment where learners are given equal opportunities to discover learning independently.

The respondents of the study were determined randomly. It includes 60 Grade ten students who were given varied assessment activities through the learning activity sheets and survey questionnaires that determine their perceptions on the use of differentiated assessments. The distribution of the respondents is presented below.

Table 1 Distribution of Respondents

Respondent	N	n	%
Grade 10 students	109	60	55%

Legend: N- total population
n- sample

A multiple intelligence test adapted from Armstrong (2004) based on Gardner's Theory of Multiple Intelligences was administered to determine what assessment is suitable for the learner. According to Lash (2004), as cited by Ernawati et al. (2019), a teacher must first identify the type of intelligence of each learner to understand their learning styles in which the results will be the basis in designing appropriate learning activities suited to their area of intelligence. The researcher utilized a teacher-made pre-test to measure the students' prior knowledge of the specified learning competencies. Each competency consists of a 20-point test with a total of 60 points. A post-test consisting of learning activities based on the learners' type of intelligence was also administered and graded using performance rubrics. A learning activity sheet with differentiated assessments was also employed and was based on the GRASPS model designed by Wiggins & McTighe (2008) to gather data for students' academic performance. This was graded using performance rubrics. The student's scores were determined from their pre-test and post-test scores on the cited competencies.

On the other hand, a survey questionnaire was also administered to get the students' perceptions on using differentiated assessments. Learning activity sheets and student survey questionnaires were pilot tested in selected students to check their understanding of the instruments and determine confusion on using the said materials. Also, it was done to test its validity.

The researcher secured a letter asking permission from the Schools Division Superintendent of Toledo City and the School Principal to conduct the study. After the approval, the students were given orientation about the research purpose, and instructions were provided clearly to avoid confusion. They were also given time to ask questions for clarification before giving them the questionnaire. The data collection took place during their Araling Panlipunan 10 classes covering the identified competencies.

RESULTS AND DISCUSSION

Distribution of Respondents in terms of Intelligence Types

The first part shows the distribution of respondents based on the results of the multiple intelligences test adapted from the theory of Howard Gardner. This is composed of 63 statements and questions that best describe the types of intelligence of the respondents. It has an instruction that guides the respondents in answering the said inventory checklist. Before the administration of the test, the respondents were properly oriented on the conduct of the activity and were reminded to be honest while answering the given test. The results of the test provides the researcher a background of the research respondents in terms of their intelligenence types and serve as basis in crafting an assessment that best suits their abilities. Lastly, the respondents were reminded that the test was done to empower them on their abilities and not to label them.

Table 2 shows the respondents' total scores per intelligence based on the Multiple Intelligences Checklist. The checklist (refer to Appendix C) has 63 questions/statements and the respondents will rate the questions/statements from one as the lowest and five as the highest. As indicated in Table 3, those colored

numbers were the highest scores that the respondents have rated which best describes his/her type of intelligence (refer to Appendix D for respondents' individual scores on the MI Checklist). This forms the basis for crafting the appropriate assessment style that is suited to learners' type of intelligence.

Table 2 Respondents' Scores per Intelligence Types Based on the MI Checklist

Respondents	V-L	L-M	M	V-S	B-K	Inter	Intra	N	E
R1	22	24	27	25	22	28	31	28	24
R2	23	27	25	18	25	22	25	28	18
R3	26	20	17	12	23	14	18	10	16
R4	18	22	17	18	15	22	28	21	21
R5	19	16	20	23	12	15	28	20	22
R6	25	22	20	23	19	18	32	28	26
R7	28	15	22	22	18	18	25	17	17
R8	9	12	8	9	10	9	23	8	12
R9	27	16	20	21	23	22	23	22	23
R10	27	16	21	17	21	15	19	20	21
R11	21	16	17	18	18	20	20	24	19
R12	20	21	21	21	20	21	24	21	22
R13	17	19	13	20	19	18	27	22	21
R14	28	23	22	19	19	17	21	19	22
R15	32	32	31	31	33	32	35	31	26
R16	30	19	20	25	21	20	23	26	22
R17	28	13	15	22	12	10	19	24	8
R18	24	26	25	32	25	23	25	29	24
R19	21	26	26	31	26	26	25	26	24
R20	32	25	26	25	29	23	27	28	21
R21	32	28	24	26	24	26	27	30	22
R22	24	22	20	14	19	30	19	21	17
R23	13	17	13	19	13	21	30	17	17
R24	18	24	15	23	26	17	20	19	22
R25	31	18	21	21	22	21	20	21	21
R26	20	17	17	31	19	18	18	21	23
R27	25	16	12	14	17	17	13	16	8
R28	21	10	24	28	12	18	23	14	19
R29	17	13	18	17	17	11	26	13	15
R30	27	26	27	23	27	21	19	30	26
R31	33	22	21	25	22	21	19	27	22
R32	10	16	15	14	29	18	8	11	15
R33	28	14	12	13	14	15	11	12	13
R34	15	12	19	21	14	16	14	26	19
R35	22	20	15	18	12	16	26	20	14
R36	16	15	24	16	16	15	15	13	17
R37	15	14	16	24	15	12	17	15	10
R38	18	15	14	19	18	20	31	26	16
R39	18	17	17	16	18	16	26	18	18
R40	18	13	14	15	22	26	18	16	12
R41	15	13	15	14	17	20	16	24	17
R42	27	19	16	17	19	16	21	11	12
R43	22	13	15	16	15	14	18	16	17
R44	16	17	15	20	19	16	29	16	16
R45	26	17	18	13	18	16	19	18	14
R46	15	21	15	17	17	21	29	20	18
R47	17	13	26	16	19	23	22	18	14
R48	26	13	13	16	18	19	17	14	8

R49	17	12	10	8	12	13	17	28	11
R50	13	10	10	8	8	12	25	12	9
R51	14	16	16	12	12	13	14	25	18
R52	22	19	19	17	27	18	21	16	11
R53	24	18	20	18	17	4	18	22	21
R54	26	17	14	19	16	17	16	19	13
R55	25	25	26	21	24	25	30	18	9
R56	21	21	13	29	15	16	14	16	17
R57	14	15	16	22	17	17	13	18	7
R58	21	16	18	19	17	13	12	25	17
R59	14	15	20	17	15	15	13	29	17
R60	17	18	14	18	18	28	22	16	8

Legend: VL- Verbal Liguistic LM- Logical-Mathematical M- Musical VS- Visual Spatial BK= Bodily-Kinethetic Inter- Interpersonal Intra- Intrapersonal E- Existentialist N- Naturalistic

Based on the table, verbal-linguistic intelligence got the highest number of respondents comprising 19 out of 60 respondents who best learn through writing and speaking and followed by intrapersonal intelligence consisting of 17 respondents. On the other hand, logical-mathematical and existential types of intelligence got none of the respondents.

According to Ahvan & Pour (2016), every person possesses multiple intelligences. This can be true for a person who is verbally intelligent and at the same time, a musically-inclined learner. Their varying types of intelligence should be addressed in order to achieve authentic learning outcomes. This is in support of the study of Narad & Rani (2019) wherein they revealed that the multiple intelligences of students are vital factors in the overall academic achievement of students. This implies that students should be assessed and be given learning tasks based on their type of intelligence.

Table 3 Summary Distribution of Respondents in terms of Intelligence Types

Types of Intelligence	f	%
Verbal-Linguistic Intelligence	19	31.67
Intrapersonal Intelligence	17	28.33
Naturalistic Intelligence	9	15.00
Visual-Spatial Intelligence	7	11.67
Bodily-Kinesthetic Intelligence	3	5.00
Interpersonal Intelligence	3	5.00
Musical Intelligence	2	3.33
Logical-Mathematical Intelligence	0	0.00
Total	**60**	**100.00**

Table 3 shows the summary distribution of the respondents in relation to their type of intelligence, frequency, and percentage of each type. This was based on the results of the Multiple Intelligence assessment checklists administered at the initial part of the study. Identifying students' types of multiple intelligence can help teachers better understand their students (Gonzalez-Treviño et al., 2020).

As shown in Table 3, there were 31.67% of the total respondents who are verbal-linguistic learners, consisting of 19 learners who learn best through writing and speaking. This is followed by intrapersonal intelligence, consisting of 17 learners or 28.33% of the overall respondents. These types of students are good at being aware of their feelings and recognizing people's similarities and differences among themselves (Şener & Çokçalışkan, 2018). Bodily-kinesthetic and interpersonal types of intelligence both have three learners or 5% of the total respondents. None of the respondents have the logical-mathematical kind of intelligence.

THE PRE-TEST SCORES OF GRADE 10 STUDENTS IN ARALING PANLIPUNAN

The Department of Education put more emphasis on improving the delivery of the curriculum in response to its aim for quality education. Various training and capability-building workshops were initiated to help teachers improve their pedagogical skills to deliver the curriculum effectively.

This study used the essay-type of the test as a basis for the pre-test performance of the respondents. The results are presented below to answer the second sub-problem of the study.

Table 4 Pretest Scores of the Grade 10 Students on Nasusuri ang Kahalagahan ng Pag-aaral ng Kontemporaryong Isyu

Score Range	Grade 10 Students (n=60)		
	f	%	Category
16-20	0	0.00	P
11-15	31	51.67	AP
6-10	29	48.33	D
1-5	0	0.00	B
Mean	10.55		
Std Dev	1.65		

Legend: B-Beginning AP-Approaching Proficiency D-Developing P-Proficient

Table 4 shows that thirty-one students have a good performance in the pre-test towards the first cited competency with a percentage of 51.67%. Meanwhile, twenty-nine students performed averagely in the pre-test with a percentage score of 48.33%. On the other hand, none of the students have performed excellently in the pre-test of the first competency. The overall respondents have a grand mean of 10.55 and a standard deviation of 1.65.

The above data show that the students have a good prior knowledge of the first learning competency that focuses on studying contemporary issues. However, it also indicates that there is still a need to improve their performance to perform excellently in the subject since none of the students have an excellent performance in the pre-test. According to Madkour & Mohamed (2016), if students are aware of their type of intelligence, they enhance their motivation, thus increasing their academic performance.

Table 5 Pretest Scores of the Grade 10 Students on Natatalakay ang Kalagayan, Suliranin at Pagtugon sa Isyung Pangkapaligiran ng Pilipinas

Range of Score	Grade 10 students (n=60)		
	f	%	Category
16-20	0	0.00	P
11-15	28	46.67	AP
6-10	32	53.33	D
1-5	0	0.00	B
Mean	10.43		
Std Dev	2.04		

Legend: B- Beginning AP- Approaching Proficiency D- Developing P- Proficient

Table 5 shows the range of score, frequency, percentage, and category towards the pre-test performance of the students in the second cited learning competency. As indicated in the table, twenty-eight students had a good performance in the pre-test of the second learning competency. Meanwhile, thirty-two students are categorized as developing learners, constituting 53.33% of respondents. Overall, the students' performance got a mean of 10.43 and a standard deviation of 2.04.

Based on the data, more than half of the total respondents performed averagely in the pre-test that focuses on discussing the condition, problem, and the response to the environmental issues in the Philippines. This data conveys that there is still a need to improve the students' academic performance to perform excellently in the learning competency through innovative teaching strategies designed to address this issue.

Several studies support the claim that employing differentiated assessment techniques help improve students' academic performance. Students who were given instructional tasks based on the principles of multiple intelligences have improved academic performance (Torreon & Sumayang, 2021; Saligumba & Segumpan, 2019). The study of Winarta, Yuanita, and Nur (2018) also supported this claim. It asserted that students' performance in schools was enhanced when differentiated assessment tasks were employed in the teaching-learning process.

According to Naz & Murad (2017), innovative teaching strategies that address students' diversities positively impact academic performance. Based on their findings, traditional teaching does not address the diverse needs of higher education students, thus neglecting active learning. Innovative teaching strategies should be incorporated to engage in the learning process actively. This is supported by the study of Zhang et al. (2020). They found that innovative strategies applied in teaching and learning in computer craft practices are far more effective than the traditional delivery method.

Table 6 shows the range, frequency, percentage, and category towards the pre-test performance of the students in the third cited learning competency. As indicated in the table, thirty-one (31) students have approached proficiency in the third learning competency. On the other hand, twenty-nine (29) students, or 48.33%, make up the developing learners in the third competency. Overall, the students' performance got a mean of 10.77 and a standard deviation of 1.94.

Table 6 Pretest Scores of the Grade 10 Students on Natutukoy ang mga Paghahandang Nararapat Gawin sa Harap ng Panganib na Dulot ng mga Suliraning Pangkapaligiran

Score Range	Grade 10 Students (n=60)		
	f	%	Category
16-20	0	0.00	P
11-15	31	51.67	AP
6-10	29	48.33	D
1-5	0	0.00	B
Mean	10.77		
Std Dev	1.94		

Legend: B-Beginning AP-Approaching Proficiency D-Developing P-Proficient

Based on the data, more than half of the total respondents performed averagely in the pre-test that focuses on the necessary preparations undertaken by the people when faced with environmental dangers brought about by environmental problems. These data convey that a gap must be addressed to improve the

students' academic performance to perform excellently in the learning competency. Exposing them to varied assessment strategies can help them articulate what they learned in class. As pointed out by Torreon and Sumayang's (2021) recent study, student performance can be increased by employing differentiated assessment tasks. The study of Winarti, Yuanita, and Nur (2018) also revealed that learning strategies based on the learners' multiple intelligence help improve learners' achievement. A study conducted by Saligumba and Segumpan (2019) showed that students exposed to differentiated assessment tasks had increased academic performance compared to those given non-differentiated assessments.

In differentiation, teachers must learn about their students' differences by employing teaching methodologies where learning is active, dynamic, authentic, and experiential (Tomlinson, 2015). Ali (2015) also mentioned that differentiated assessments measure students' performance with different learning styles.

THE POST-TEST SCORES OF GRADE 10 STUDENTS IN ARALING PANLIPUNAN

This study assessed the utilization of differentiated assessments in Araling Panlipunan 10- Contemporary Issues in relation to students' academic performance. The table below presents the post-test scores of the respondents after being employed in differentiated assessment in the three cited competencies.

This study used the essay-type test as a basis for the post-test performance of the respondents. The results are presented below to answer the third sub-problem of the study.

Table 7 Posttest Scores of the Grade 10 Students on Nasusuri ang Kahalagahan ng Pag-aaral ng Kontemporaryong Isyu

Score Range	Grade 10 Students (n=60)		
	f	%	Category
16-20	26	43.33	P
11-15	34	56.67	AP
6-10	0	0.00	D
1-5	0	0.00	B
Mean	15.42		
Std Dev	2.25		

Legend: B-Beginning AP-Approaching Proficiency D-Developing P-Proficient

Table 7 shows the range of score, frequency, percentage, and category regarding the post-test performance of the students in the first cited learning competency. As indicated in the table, 34 students have a good performance in the post-test of the second learning competency. Moreover, as gleaned from the table, twenty-six (26) learners are proficient. Overall, the students' performance got a mean of 15.42 and a standard deviation of 2.25.

Based on the data, the respondents performed very well in the post-test that focuses on discussing current issues in the Philippines. These data convey a vast improvement in the students' academic performance in that learning competency. This is attributed to students being given an innovative teaching strategy designed to address this issue.

Addressing students' multiple intelligences positively impacts their academic performance, as evidenced by the study of Ahvan and Pour (2016). Their findings confirmed the assertions of Howard Gardner's Theory of Multiple Intelligences. There is a positive relationship between the multiple intelligences of the students and their academic performance; thus, Kandeel (2016) recommended that it is imperative to measure students' multiple intelligences and integrate them into the teaching-learning process to guide students toward academic tracks that are compatible with their intelligence.

Table 8 shows the range of score, frequency, percentage, and category regarding the post-test performance of the students in the second cited learning competency. The table indicates that twenty-four (24) students have approached proficiency. In contrast, the majority of the students, 36 of them, makeup 60 of the total respondents, are proficient given the post-test performance of the second learning competency. Overall, the students' performance got a mean of 15.67 and a standard deviation of 1.85.

Table 8 Posttest Scores of the Grade 10 Students on Natatalakay ang Kalagayan, Suliranin at Pagtugon sa Isyung Pangkapaligiran ng Pilipinas

Score Range	Grade 10 Students (n=60)		
	f	%	Category
16-20	36	60.00	P
11-15	24	40.00	AP
6-10	0	0.00	D
1-5	0	0.00	B
Mean	15.67		
Std Dev	1.85		

Legend: B-Beginning AP-Approaching Proficiency D-Developing P-Proficient

Based on the data, the respondents performed very well in the post-test that focuses on discussing the condition, problem, and response to the environmental issues in the Philippines. These data show a significant improvement in the students' academic performance in that learning competency.

Since learners are assessed based on their type of intelligence, improved academic performance is evident in their post-test scores. The kind of environment where learners are learning can be attributed to their improved academic performance. Students have increased motivation in learning if they are being assessed based on their type of intelligence (Madkour & Mohamed, 2016).

According to Shahzada et al. (2014), teachers should create an environment favorable in addressing the students' individual needs. They should be educated in integrating the curriculum with the framework of multiple intelligences for authentic learning experiences for students (Abdi et al., 2013).

Table 9 Posttest Scores of the Grade 10 Students on Natutukoy ang mga Paghahandang Nararapat Gawin sa Harap ng Panganib na Dulot ng mga Suliraning Pangkapaligiran

Score Range	Grade 10 Students (n=60)		
	f	%	Category
16-20	37	61.67	P
11-15	21	35.00	AP
6-10	2	3.33	D
1-5	0	0.00	B
Mean	16.02		
Std Dev	2.21		

Legend: B-Beginning AP-Approaching Proficiency D-Developing P-Proficient

Table 9 shows the range of score, frequency, percentage, and category towards the post-test performance of the students given the third learning competency. As indicated in the table, two (2) students fell under the developing category; twenty-one (21) approached proficiency, and more than half of the respondents were proficient in their performance. Overall, the students' performance got a mean of 16.02 and a standard deviation of 2.21.

The data clearly show that student performance improved in that given learning competency, and this can still be attributed to the differentiated assessment technique introduced to them. Innovating teaching strategies can be beneficial if students are given the opportunities to demonstrate learning based on their abilities. If the learning environment suits their needs as a student, active learning is achieved (Shahzada et al., 2014).

According to Varsavsky & Rayner (2013), as cited by Majuddin et al. (2020), the differentiated assessment provides flexibility in the acquisition of knowledge through catering to the individual needs of the students but also enhancing their skills through the contextualized application of the lessons. With this, teachers should consider assessment to improve students' academic performance and understand them holistically as learners (Heng & Song, 2020).

SIGNIFICANT DIFFERENCE BETWEEN THE PRE-TEST AND THE POST-TEST SCORES OF STUDENTS

The t-test was used as a statistical treatment to determine the significant difference between the pre and post-test scores with a p-value of 0.05. Thus, to answer the fourth sub-problem of this study, the significant difference between the pre-test and post-test scores of students based on the cited learning competencies is presented in the table below.

Table 10 Significant Difference in the Pre-test and Post-test Scores of Students based on the Most Essential Learning Competencies (MELCs)

Respondents	Scores				df	p-Value	Decision	Interpretation
	Pre-test		Posttest					
	Mean	Std Dev	Mean	Std Dev				
Performance	31.75	4.05	47.10	4.36	59.00	0.0000*	Reject Ho	Significant

**significant when p-value < 0.05*

A t-test was used to determine if there was a significant difference between the pre-test and post-test scores of the respondents. The table shows that the computations yielded a p-value smaller than 0.05 set at a 95% confidence level. It means that there is reason enough to reject the null hypothesis. This indicates a significant difference in the pre-test and post-test performance of the students.

The improved academic performance of the students can be attributed to the fact innovative assessment strategies were employed in learning the competencies.

Several studies supported the use of differentiated assessment in the classroom. For one, achievement of successful mastery of the competency taught in the classroom provides an avenue for meaningful learning to take place (Kaur and Noman, 2014). Moreover, VAKT (the visual-auditory-kinesthetic-tactile) learning styles model also supports that allowing students to demonstrate knowledge in different modalities has significantly improved students' reading ability given various intervention activities (Prasetyaningrum and Fardila, 2018).

Another study on the outcomes in employing classroom activities based on the theory of multiple intelligence to students' academic performance conducted by Torreon and Sumayang (2021) showed an increase in students' academic performance after given instructional activities based on the principles of multiple intelligences.

STUDENTS' PERCEPTIONS ON DIFFERENTIATED ASSESSMENT

This study assessed the utilization of differentiated assessments in Araling Panlipunan 10 - Contemporary Issues in relation to students' academic performance. This also determines students' level of perceptions on differentiated assessments that focus on the three areas: outcomes accountability, style of the assessment, and motivation.

This study utilized a survey questionnaire to determine students' perceptions on differentiated assessments. The results are presented below to answer the fifth sub-problem of the study.

The table below covers the agreement of students to a certain degree regarding the following indicators: the positive impact of the different assessment, the sense of responsibility in learning based on his learning inclination, active involvement in learning given assessment variations, taking the outcomes of one's work positively in accomplishing the tasks, and the ability to track academic performance conscientiously from the results of the assessment. Weighted mean of each statements were also presented in the table with corresponding verbal descriptions.

The table shows the mean of each statement with its corresponding verbal description. The statement "I am actively engaged in learning since the assessment is differentiated." got the highest mean of 3.33. Then, it is followed by the statement, "I feel a sense of ownership in learning since it is based on my type of intelligence." with a mean of 3.30. The statement "I positively take the outcomes of my work as I accomplish the tasks." garnered a mean of 3.02. Also, the statement "After being assessed, the assessment outcomes helped track my academic performance as a student." has a mean of 2.85, and "Differentiated assessments have a positive impact on my academic performance." with 2.65 mean.

Table 11 Students' Perceptions on the Outcomes Accountability in Using Differentiated Assessments

Statements	Weighted Mean	Verbal Description
a) Differentiated assessments have a positive impact on my academic performance.	2.65	A
b) I feel a sense of ownership in learning since it is based on my type of intelligence.	3.30	SA
c) I am actively engaged in learning since the assessment is differentiated.	3.33	SA
d) I positively take the outcomes of my work as I accomplish the tasks.	3.02	A
e) After being assessed, the assessment outcomes helped track my academic performance as a student.	2.85	A

Legend: SA-Strongly Agree SD- Strongly Disagree A-Agree D- Disagree

The work of Varsavsky and Rayner (2012) on exploring the use of differentiated assessment supported this claim. The study explains that students display a positive attitude in completing their tasks successfully. Golinghorst and Wessels (2001) also noted that students develop a positive feeling towards the learning area when differentiated assessment is employed.

A study by Waters et al. (2004) pointed out that students worked hard and learned a lot when given the full responsibility of completing their work. They take pride in their work because their learning is tested based on their preferred learning style.

Table 12 Students' Perceptions of the Assessment Style in Differentiated Assessments

Statements	Weighted Mean	Verbal Description
a) I prefer differentiated assessment to the traditional paper-and-pencil type of assessment.	3.40	SA
b) The assessment style is new to me, and it helped me express my talent as a student.	3.35	SA
c) I am allowed to demonstrate my learning in different activities.	2.88	A
d) The activities helped me in improving my performance in the subject.	3.50	SA
e) I am more active in doing my tasks because the activities are designed based on my type of intelligence.	3.07	A

Legend: SA-Strongly Agree SD- Strongly Disagree A-Agree D- Disagree

The table shows Students' Perceptions of the Assessment Style in Differentiated Assessment. Based on the data, the statement "The activities helped me in improving my performance in the subject." got the highest mean at

3.50. Students strongly agree that activities helped them improve their performance in the subject area. The statement "I prefer differentiated assessment to the traditional paper-and-pencil type of assessment." slowly closes in with a mean of 3.40, while the students' perception of "The assessment style is new to me, and it helped me express my talent as a student." garnered a mean of 3.35 rounds up the ones that are agreed strongly by the students.

Students agreed on the following perceptions on the style of the assessment in differentiated assessment: "I am allowed to demonstrate my learning in different activities." and "I am more active in doing my tasks because the activities are designed based on my type of intelligence." with means of 2.88 and 3.07, respectively.

Hanley and Hermiz (2002) claimed that the use of multiple intelligences improved the knowledge and interest of students. The works of Cluck and Hess (2003) also showed that using various intelligence improved student engagement and enthusiasm. If the teaching strategies being employed are based on students' types of intelligence, there is an increased level of motivation among them that ensures active engagement in the teaching-learning process.

Dunlop (2018) stressed that when students are exposed to an environment where they can learn the way they prefer, their creativity is enhanced. This will enable them to think outside the box and create meaningful learning outcomes designed based on their types of intelligence.

Differentiated assessment motivates students to achieve even more, and a study by Cluck and Hess (2003) supported this claim. The use of differentiated assessment in the form of multiple intelligence approaches in the classroom increases student motivation in doing their work.

Table 13 Students' Perceptions on Motivation of Students in Differentiated Assessments

Statements	Weighted Mean	Verbal Description
a) I am motivated to accomplish the learning tasks in the differentiated assessment.	3.33	SA
b) I am excited to participate in assessments to showcase my talent/skills.	2.95	A
c) Activities were designed for me to demonstrate my learned concepts creatively.	2.92	A
d) It helps me develop competence and confidence.	3.45	SA
e) The activities are more personalized thus, motivating me to do well.	3.33	SA

Legend: SA-Strongly Agree SD- Strongly Disagree A-Agree D- Disagree

The table shows the students' perceptions of students' motivations in differentiated assessment. As can be gleaned on the table, students strongly agree with the statement, "I am motivated to accomplish the learning tasks in the differentiated assessment." The activities are more personalized, thus motivating me to do well." which is tied with a mean of 3.33. Topping all is the statement "It helps me develop competence and confidence," which garnered a mean of 3.45.

Summary of Findings

The statements below are a summary of the findings based on the results of the study.

The pre-test mean scores are considerably lower than the post-test scores for each competency tested. The pre-test and post-test scores differ significantly, with a p-value less than 0.5 set at 59 degrees of freedom and sufficient to reject the null hypothesis. The respondents agreed that differentiated assessments promote outcomes accountability and that students are responsible for their learning. Results also showed that students believe that the activities helped them improve their performance in the subject. As to student perceptions of motivation, the differentiated assessment helped them develop their competence and confidence. The study revealed that differentiated assessment in multiple intelligences approaches increased student motivation in doing their work.

Conclusion

This section presents conclusions based on the findings. Teachers continue to find ways to improve students' academic performance. With teaching innovations such as differentiated assessment in the classroom, results of the study suggested academic performance is achieved when this technique is in the classroom. Thus, differentiated assessment is an essential tool in assessing students. The study revealed that differentiated assessment improved the students' academic performance in Araling Panlipunan 10. Therefore, the proposed enhanced learning activity sheets could be helpful.

Recommendations

First, an enhanced learning activity sheet employing differentiated assessment techniques be used in the classroom to improve the students' academic performance.

Second, training for teachers with a focus on differentiated assessments may be conducted so that teachers may be correctly oriented on the importance of addressing the needs of students and for its effective implementation.

Finally, a replication of the study is recommended to include other competencies, different learning areas, or different grade levels.

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