

Digital game-based learning approach in teaching Araling Panlipunan and academic performance of Grade Six learners of Talon-Talon Central School: Basis for instructional development plan

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ABSTRACT

This study aimed to determine the effectiveness of the Digital Game-Based Learning (DGBL) approach in improving the academic performance of Grade 6 learners in Araling Panlipunan at Talon-Talon Central School. Specifically, it sought to determine the learners' level of academic performance before and after the implementation of the DGBL approach, identify whether a significant difference existed between the pretest and posttest scores, and propose an instructional development plan based on the findings. The study utilized a quantitative research approach employing a quasi-experimental one-group pretest-posttest design. The respondents consisted of thirty (30) Grade 6 learners selected through purposive sampling. Data were gathered using an adapted 20-item achievement test aligned with the Most Essential Learning Competencies (MELCs) in Araling Panlipunan. The same instrument was administered as both a pretest and a posttest. Statistical treatments used in the study included frequency, percentage, mean, standard deviation, and paired sample t-test. The findings revealed that before the implementation of the DGBL approach, the learners obtained a mean pretest score of 13.77, interpreted as High academic performance. After the implementation of the intervention, the learners achieved a mean posttest score of 18.80, interpreted as Very High academic performance. The paired sample t-test showed a computed t-value of -12.083 and a p-value of 0.000, indicating a statistically significant difference between the pretest and posttest scores. The null hypothesis was therefore rejected. The study concluded that the Digital Game-Based Learning approach significantly improved the academic performance of Grade 6 learners in Araling Panlipunan. The interactive and engaging features of digital games enhanced learners' understanding, retention, and application of concepts. Based on the findings, an instructional development plan was proposed to strengthen the integration of technology-enhanced and learner-centered instructional strategies in Araling Panlipunan.

Keywords: Digital game-based learning (DGBL), academic performance, Araling Panlipunan, Grade 6 learners, instructional development plan, quasi-experimental design, educational technology.

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INTRODUCTION

The 21st-century education system continues to undergo rapid transformation driven by technological advancements and the evolving needs of learners. In the Philippine basic education context, digital learning has become a central component of instructional delivery, particularly with the implementation of policies such as the Basic Education Learning Continuity Plan (BE-LCP), which promotes the integration of technology to ensure accessible, flexible, and resilient education systems (Department of Education, 2022). Globally, educational systems are also shifting toward technology-enhanced learning environments, recognizing that digital tools can foster essential 21st-century competencies such as critical thinking, collaboration, and digital literacy (Organization for Economic Co-operation and Development [OECD], 2021). As a result, traditional teacher-centered approaches are increasingly being supplemented with learner-centered strategies that encourage active participation and engagement. One such emerging approach is Digital Game-Based Learning (DGBL), which integrates instructional content into interactive digital games to improve motivation and cognitive development among learners.

Game-based learning has been widely recognized as an effective pedagogical approach that enhances learner engagement, particularly among elementary students who are naturally inclined toward play and exploration (Plass, Homer, & Kinzer, 2015). Digital games provide immersive and interactive environments where learners can actively construct knowledge, apply concepts, and receive immediate feedback. These features align with constructivist and experiential learning theories, which emphasize learning through active involvement and real-life simulation (Plass et al., 2015). Furthermore, studies have shown that game-based learning improves learners' motivation, attention span, and participation, making it a suitable strategy for addressing disengagement in traditional classroom settings (Tokac, Novak, & Thompson, 2020). This is particularly relevant in the context of today's digital-native learners who are more responsive to interactive and technology-driven instructional approaches.

Araling Panlipunan is a core subject in the Philippine basic education curriculum that aims to develop learners' understanding of history, culture, geography, economics, and civic responsibility (Department of Education, 2020). It plays a crucial role in shaping learners' national identity and critical thinking skills. However, teaching Araling Panlipunan presents several challenges, especially at the elementary level, where learners are required to comprehend abstract concepts, complex historical events, and socio-political issues that may be difficult to visualize and retain (Department of Education, 2020). These challenges often result in reduced learner interest, limited participation, and lower academic performance.

Despite the importance of the subject, conventional teaching methods such as lecture-discussion and textbook-based instruction remain dominant in many classrooms, which may not effectively engage learners or accommodate diverse learning styles (OECD, 2020). Research suggests that passive learning environments can limit students' ability to develop higher-order thinking skills and may negatively affect their academic performance (OECD, 2021). Consequently, there is a growing need to explore innovative and interactive instructional approaches that can enhance both engagement and understanding in Araling Panlipunan.

Academic performance is a key indicator of learners' success and the effectiveness of instructional strategies. Empirical evidence indicates that learner engagement is strongly associated with improved academic outcomes, suggesting that more interactive and student-centered approaches can lead to better performance (Tokac et al., 2020). In particular, game-based learning has been found to positively influence students' achievement by promoting active participation, providing immediate feedback, and facilitating meaningful learning

experiences (Tokac et al., 2020). These findings highlight the potential of DGBL as an effective tool in improving academic performance across different subject areas.

However, despite the growing body of literature supporting the effectiveness of Digital Game-Based Learning, there remains a significant gap in its application within the context of Araling Panlipunan, particularly at the elementary level in Philippine public schools. Most existing studies focus on subjects such as Mathematics and Science, with limited empirical research examining its impact on social studies education. Furthermore, there is a lack of localized studies that investigate the effectiveness of DGBL in specific school settings, such as Talon-Talon Central School. This indicates a need for context-specific research to determine how digital game-based learning can be effectively implemented and how it influences the academic performance of Grade 6 learners in Araling Panlipunan.

In the case of Talon-Talon Central School, challenges related to learner engagement and academic performance in Araling Panlipunan may persist due to the continued use of conventional teaching strategies and limited integration of innovative digital tools. Thus, examining the effectiveness of Digital Game-Based Learning in this specific context is essential in identifying appropriate instructional strategies that can address these concerns. The findings of this study are expected to contribute to the development of an instructional development plan that enhances teaching practices and improves learner outcomes.

Statement of the problem

This study aims to identify the digital game – based learning approach in teaching Araling Panlipunan and the academic performance of grade six learners of Talon – Talon Central School as a basis for an instructional development plan.

Specifically, this study aims to answer the following;

1. What is the level of academic performance of Grade 6 learners before the implementation of the Digital Game-Based Learning approach as measured by the pretest scores?
2. What is the level of academic performance of Grade 6 learners after the implementation of the Digital Game-Based Learning approach as measured by the posttest scores?
3. Is there a significant difference between the pretest and posttest scores of Grade 6 learners after exposure to Digital Game-Based Learning approach?
4. Based on the findings, what instructional development plan can be proposed to enhance the teaching of Araling Panlipunan?

METHODOLOGY

This study will utilize a quantitative research approach employing a quasi-experimental design, specifically the one-group pretest-posttest design, to determine the effect of the Digital Game-Based Learning (DGBL) approach on the academic performance of Grade 6 learners in Araling Panlipunan. This design is suitable as it enables the researcher to measure changes in learners' performance before and after the implementation of the intervention without the need for random assignment of participants (Creswell & Creswell, 2018). In this design, a single group of Grade 6 learners will be subjected to both pretest and posttest assessments. The pretest will be administered to establish the baseline level of academic performance in selected Araling Panlipunan competencies. Following this, the Digital Game-Based Learning approach will be implemented as the instructional intervention, integrating lessons aligned with the Most Essential Learning Competencies (MELCs). After the intervention period, a posttest will be

conducted to measure any changes in learners' academic performance. The one-group pretest-posttest quasi-experimental design enables the comparison of mean scores before and after the intervention to determine whether there is a statistically significant improvement in academic performance, as the difference between pretest and posttest results will indicate the effect of the Digital Game-Based Learning approach on learners' achievement. This research design is suitable for classroom-based studies where manipulation of variables is limited, as it allows the implementation of an instructional intervention within a natural educational setting while still providing measurable and statistically analyzable results.

The study population will comprise all Grade 6 students registered at Talon-Talon Central School SPED Center, Talon-Talon, Zamboanga City, who were enrolled during the School Year 2025 to 2026. These learners previously participated in Araling Panlipunan classes and were selected as participants for the present study. Due to the conduct of the study during the vacation period, initial data collection will be carried out through home visitation to secure participation, administer the pretest, and provide orientation regarding the study. Afterward, the learners will be gathered in a designated classroom setting for the implementation of the Digital Game-Based Learning intervention and the administration of the posttest. Thirty sixth-grade students will act as the respondents. The research will employ a purposive sampling method, selecting one intact Grade 6 section based on accessibility, availability, and consent from the school administration. The selected class is projected to comprise 30 learners; hence, total enumeration will be implemented, ensuring that all learners in that class will partake in the study. All 30 students will participate in the pretest to assess their baseline academic performance in Araling Panlipunan. Subsequent to the adoption of the Digital Game-Based Learning strategy, the same group will undertake a posttest to assess any enhancement in performance. This sampling strategy is suitable for a quasi-experimental one-group pretest-posttest study, enabling the researcher to assess the intervention's impact in a natural classroom environment.

The primary data collection instrument for this study is an adapted achievement test designed to measure the academic performance of Grade 6 learners in Araling Panlipunan. The same test will be used as both the pretest and posttest to ensure consistency in measuring learners' knowledge before and after the implementation of the Digital Game-Based Learning approach. In line with the one-group pretest-posttest quasi-experimental design, a single group of Grade 6 learners with relatively similar academic levels will be assessed without the use of a control group. The pretest will be administered before the intervention to determine learners' baseline knowledge, while the posttest will be administered after the implementation of the DGBL approach using Kahoot to measure changes in academic performance. The DGBL intervention will utilize the Kahoot! platform as the instructional game-based environment, which will serve as the interactive assessment and reinforcement tool, accessible through both mobile devices and web browsers without requiring installation, as learners will join using a game PIN.

The Kahoot-based DGBL activities will include several interface types. The multiple-choice quiz interface presents four answer options per item, wherein learners select the correct answer using their devices and immediate feedback is provided after each question, with correct answers reinforced and incorrect responses immediately corrected through the system. The true or false interface presents statements requiring learners to identify whether they are correct or incorrect, and is used to assess factual knowledge and conceptual understanding of historical events. The fill in the blank or type answer interface, corresponding to Kahoot's puzzle or type answer mode depending on availability, requires learners to input short answers or complete missing information, encouraging recall and critical thinking. Finally, the game-based feedback and ranking system provides real-time scoring, leaderboard ranking, and automatic feedback,

so that learners can immediately see whether their answers are correct or incorrect, as well as their current ranking based on accuracy and response time, a feature that supports motivation, engagement, and self-assessment. Each Kahoot session is structured as an interactive learning activity where learners participate using smartphones or computers, with the teacher facilitating the session by displaying questions on a screen while learners respond individually in real time.

The assessment tool used in this study consists of two parts covering selected competencies in Araling Panlipunan, particularly topics related to the challenges faced by the Philippines after World War II and during the Third Republic. The first part is a True or False test composed of ten (10) items, which measures learners' basic knowledge and understanding of factual information such as post-war conditions, economic difficulties, social issues, and political developments. The second part consists of ten (10) multiple-choice questions, which assess higher-order thinking skills such as comprehension, analysis, and application, with each item providing four (4) options with one correct answer. The test contains a total of twenty (20) items, with one (1) point assigned for each correct answer, resulting in a maximum score of 20 points. The instrument is aligned with the Most Essential Learning Competencies (MELCs) to ensure content validity and curriculum relevance.

The data collection process of this study will be conducted methodically to achieve precision and uniformity in acquiring the requisite information. The researcher will initially obtain formal authorization from the principal of Talon-Talon Central School SPED Center to carry out the study, and a request letter will be submitted detailing the objective, methodology, and timeframe of the research. Upon receiving approval, informed consent forms will be disseminated to the parents or guardians of the Grade 6 students to obtain their authorization for participation. Secondly, before implementing the Digital Game-Based Learning strategy, the researcher will conduct a pretest with 30 Grade 6 students, which will assess their foundational academic performance in Araling Panlipunan, focusing on the chosen topic; the examination will be administered in standard classroom conditions to guarantee equity and dependability of responses. The researcher will then employ the Digital Game-Based Learning methodology while instructing the chosen Araling Panlipunan lessons, with the intervention occurring over a designated timeframe, for example, one week, incorporating structured digital games and interactive quizzes aligned with the Most Essential Learning Competencies. The instructor will conduct the sessions, assist students during gameplay, and guarantee the attainment of educational objectives. Upon concluding the intervention session, the posttest will be administered to the identical cohort of learners, employing the same validated instrument as the pretest to assess any enhancement in academic achievement. The test findings will thereafter be gathered, documented, and structured for statistical analysis.

This study will employ the following statistical tools for data analysis, each corresponding to the particular research inquiries articulated in the Statement of the Problem. The mean, or average, will be utilized to assess the academic performance of Grade 6 learners subjected to the Game-Based Learning (GBL) approach compared to the Traditional Lecture Instruction (TLI) technique, with the average score denoting the overall performance of students in each educational method and elevated mean scores signifying superior academic performance. The standard deviation will quantify the variability or dispersion of learners' scores relative to the mean, assisting in ascertaining whether the learners' performance scores are tightly grouped around the mean or broadly dispersed under both training methods. The paired samples t-test will be utilized to determine whether a significant difference exists in the academic performance of Grade 6 learners before and after exposure to the Game-Based Learning approach. This statistical test is appropriate since it compares the mean scores of the same group measured at two different time points, typically pretest and posttest. The level of

significance will be set at 0.05, and if the computed p-value is less than 0.05, the null hypothesis will be rejected, indicating a significant improvement in learners' academic performance following the implementation of the Game-Based Learning approach.

RESULTS AND DISCUSSION

This chapter presents the results of the study and provides a discussion of the findings gathered from 30 Grade 6 learners at Talon-Talon Central School SPED Center, Talon-Talon, Zamboanga City, who served as respondents through purposive sampling and total enumeration in accordance with the one-group pretest-posttest quasi-experimental design employed in this research. The discussion is grounded strictly in the data collected using an adapted twenty-item achievement test administered as both pretest and posttest, and the results are analyzed and interpreted in direct relation to the study's objectives of determining the level of academic performance of Grade 6 learners before and after the implementation of the Digital Game-Based Learning (DGBL) approach and of establishing whether a significant difference exists between their pretest and posttest scores. Frequencies, percentages, means, and standard deviations were used to describe the learners' level of academic performance, while a paired samples t-test was used to determine the significance of the difference between pretest and posttest scores at the 0.05 level of significance.

With respect to the learners' level of academic performance prior to the implementation of the DGBL approach, the pretest results revealed that the majority of the learners, comprising 20 or 66.7% of the respondents, obtained scores ranging from 13 to 16, corresponding to a High performance level, while 7 learners or 23.3% attained scores within the Moderate performance level ranging from 9 to 12, and 3 learners or 10.0% achieved scores from 17 to 20, corresponding to a Very High performance level. No learner obtained scores within the Low range of 5 to 8 or the Very Low range of 0 to 4, both accounting for 0 or 0.0%. The computed mean score of 13.77 indicates that, on average, the learners demonstrated a High level of academic performance before the implementation of the Digital Game-Based Learning approach, while the standard deviation of 2.14 suggests that the learners' scores were relatively clustered around the mean, indicating a moderate level of consistency in their performance. The highest score recorded was 17.00, while the lowest score was 9.00, showing that although differences in achievement existed among learners, most were able to demonstrate a satisfactory level of understanding of the Araling Panlipunan concepts covered in the pretest. These findings suggest that even before exposure to the DGBL approach, the Grade 6 learners already possessed a relatively strong foundation in Araling Panlipunan, with the predominance of learners in the High performance category indicating that prior classroom instruction and learning experiences may have effectively developed their basic knowledge and understanding of the subject matter. However, the presence of learners in the Moderate category signifies that there remained room for improvement, particularly in enhancing mastery and deeper comprehension of concepts, and since the baseline performance was already high, any subsequent improvement in posttest scores would provide evidence that DGBL can enhance learning outcomes beyond what is achieved through traditional teaching methods, with the pretest results thereby serving as an important benchmark for evaluating the effectiveness of the intervention. These findings are supported by Larson (2025), who noted that digital games are most effective when layered onto learners' established academic foundations, as learners who possess prior knowledge are better able to engage in interactive learning experiences and maximize the benefits of game-based instructional strategies. Similarly, Li et al. (2024) found that learners with adequate background knowledge demonstrate greater engagement and persistence in digital learning environments, allowing them to build upon previously acquired

concepts and deepen their understanding of academic content. These findings may also be explained through Constructivist Learning Theory, as discussed by Zhonggen (2022), which posits that learners actively construct knowledge based on prior experiences and existing understanding, and since the learners already demonstrated a high level of academic performance in the pretest, they possessed the foundational knowledge necessary to engage meaningfully in Digital Game-Based Learning activities.

Following the implementation of the DGBL approach, the posttest results revealed a marked shift in the learners' level of academic performance. Of the 30 respondents, 29 learners or 96.7% obtained scores ranging from 17 to 20, corresponding to a Very High-performance level, while only 1 learner or 3.3% achieved a high-performance level with a score ranging from 13 to 16. Notably, no learner fell under the Moderate, Low, or Very Low performance categories, each accounting for 0 or 0.0%. The computed mean score of 18.80 indicates that the learners attained a Very High level of academic performance after exposure to the DGBL approach, while the standard deviation of 1.19 suggests that the learners' scores were highly consistent and closely clustered around the mean, indicating relatively uniform academic achievement among the participants. The highest score recorded was 20.00, while the lowest score was 16.00, demonstrating that nearly all learners achieved mastery or near-mastery of the Araling Panlipunan lessons covered during the intervention period. These findings suggest that the implementation of the DGBL approach was associated with a substantial improvement in the academic performance of Grade 6 learners, as the overwhelming majority attaining a Very High performance level indicates that the integration of digital games into instruction may have enhanced learners' understanding, retention, and application of Araling Panlipunan concepts, an increase attributable to the interactive, engaging, and learner-centered nature of digital games, which encourage active participation and sustained attention during the learning process. The low standard deviation further implies that the intervention benefited not only high-performing learners but also those who may have initially demonstrated lower levels of achievement, and the absence of learners in the Moderate, Low, and Very Low categories suggests that DGBL may contribute to reducing performance gaps among students by providing an inclusive and motivating learning environment. From an educational perspective, these results imply that integrating digital game-based strategies into Araling Panlipunan instruction can serve as an effective means of improving academic outcomes, supporting the adoption of innovative teaching approaches that align with the interests and learning preferences of contemporary learners, and these results may guide teachers and school administrators in developing instructional plans that incorporate educational technologies to promote meaningful and engaging learning experiences. These findings are consistent with the study of Florese (2025), who reported significant improvements in learners' posttest scores following the implementation of game-based learning activities in Araling Panlipunan, finding that presenting lesson content through interactive digital activities enabled learners to understand historical and civic concepts more effectively, resulting in higher levels of academic achievement. Similarly, Nguyen et al. (2024) found that learners exposed to digital game-based activities demonstrated higher levels of classroom engagement, participation, and interaction, noting that increased learner involvement in instructional activities contributed positively to academic performance, and the dramatic improvement observed in the present study supports their conclusion that localized DGBL strategies can significantly enhance learning outcomes in Araling Panlipunan. Lastly, these findings are further supported by Garcia (2024), who emphasized that game-based learning promotes collaboration, communication, and active participation among learners, as through interactive activities and challenges, students become

more engaged in the learning process, thereby improving their understanding and retention of lesson content.

The significance of the difference between the pretest and posttest scores was examined using a paired samples t-test. The results showed that the learners obtained a mean score of 13.77 in the pretest and 18.80 in the posttest, indicating an increase of 5.03 points after exposure to the intervention. The computed paired t-value of -12.083, with a corresponding p-value of 0.000, was lower than the 0.05 level of significance, indicating a statistically significant difference between the pretest and posttest scores of the learners. Consequently, the null hypothesis stating that there is no significant difference between the pretest and posttest scores was rejected, with the remarks indicating that the result was significant. This implies that the Digital Game-Based Learning approach had a significant positive effect on the academic performance of Grade 6 learners in Araling Panlipunan. The significant increase in the learners' mean scores demonstrates the effectiveness of DGBL as an instructional strategy in improving academic achievement, suggesting that incorporating digital games into classroom instruction enhances learners' engagement, motivation, and active participation, leading to better understanding and retention of lesson content, as the interactive nature of digital games allows learners to learn through exploration, immediate feedback, challenges, and rewards, which can strengthen cognitive processing and facilitate meaningful learning. The substantial improvement from the pretest to the posttest further implies that DGBL can address diverse learning needs by providing an engaging environment where learners actively construct knowledge rather than passively receive information, an approach that may also help sustain learners' interest in Araling Panlipunan, a subject often perceived as content-heavy due to its historical and social concepts. From an instructional standpoint, these findings support the integration of technology-enhanced learning strategies in elementary education, as teachers may consider incorporating digital educational games into their lesson plans to improve learning outcomes and foster greater learner participation, while school administrators may likewise utilize these findings in designing professional development programs and instructional development plans that promote innovative teaching practices aligned with twenty-first century learning competencies. Moreover, the significant difference between the pretest and posttest results provides empirical evidence that DGBL is not merely an entertaining activity but a pedagogical tool capable of producing measurable improvements in academic performance, underscoring the importance of adopting learner-centered instructional approaches that leverage technology to enrich educational experiences and maximize learning gains.

The substantial improvement from the pretest to the posttest provides empirical support for Constructivist Learning Theory. According to Zhonggen (2022), learners construct knowledge actively through meaningful interactions with their learning environment rather than passively receiving information, and Digital Game-Based Learning creates opportunities for exploration, problem-solving, and decision-making, enabling learners to connect new information with prior knowledge and develop deeper conceptual understanding; the 5.03-point increase in mean scores suggests that learners were able to actively construct and reinforce their understanding of Araling Panlipunan concepts through the interactive learning experiences provided by the intervention. The findings also validate Self-Determination Theory, proposed by Ryan and Deci (2020), which emphasizes that academic achievement improves when learners' needs for autonomy, competence, and relatedness are fulfilled; through the DGBL approach, learners were given opportunities to make decisions, complete challenges, receive immediate feedback, and actively participate in instructional activities, experiences that likely enhanced their intrinsic motivation and sustained engagement throughout the intervention period, with the significant improvement in posttest performance indicating that learners

became more motivated and invested in the learning process, resulting in higher levels of achievement. Moreover, these results support the findings of Larson (2025), who reported that learners participating in DGBL activities achieved significantly higher academic performance and classroom engagement than those exposed to traditional instructional approaches, while Li et al. (2024) found that digital educational games increase learner motivation, persistence, and commitment to learning tasks, which contribute to improved academic outcomes. These findings are likewise consistent with Baltezarević and Baltezarević (2025), who explained that game-based learning enhances conceptual understanding through progressive challenges and immediate feedback mechanisms, features that encourage learners to apply prior knowledge, correct misconceptions, and continuously improve their performance, and Anno et al. (2025), who concluded that game-based learning consistently produces positive effects on academic achievement, learner engagement, and motivation across various educational settings.

Based on the significant improvement in the academic performance of Grade 6 learners after exposure to the DGBL approach, an instructional development plan is proposed to strengthen the integration of technology-driven and learner-centered strategies in the teaching of Araling Panlipunan, aiming to sustain learners' engagement, improve academic achievement, and promote meaningful learning experiences through the effective use of digital educational games and interactive instructional materials. The significant increase in learners' posttest performance indicates that DGBL serves as an effective instructional approach for teaching Araling Panlipunan, implying that integrating game-based activities into classroom instruction can enhance learners' motivation, participation, and comprehension of social studies concepts, and that as learners become more engaged in interactive and enjoyable learning experiences, they are more likely to retain information and develop a deeper understanding of historical, geographical, cultural, and civic concepts. The results further suggest that teachers should be equipped with the necessary knowledge and skills to design and implement game-based learning activities that align with curriculum standards and learning competencies, and that schools should provide technological resources and professional development opportunities to support the effective integration of digital tools in instruction, so that through a well-designed instructional development plan, teachers can maximize the benefits of DGBL while ensuring that educational objectives are achieved.

The proposed instructional development plan encompasses seven key result areas. Under instructional planning, the objective of improving teachers' ability to integrate Digital Game-Based Learning in lesson planning will be pursued through the development and revision of Daily Lesson Logs incorporating digital game-based activities aligned with the Most Essential Learning Competencies, involving the School Head, Master Teachers, and Araling Panlipunan teachers during the first quarter, with the success indicator being that 100% of Araling Panlipunan teachers integrate DGBL activities in their lesson plans. Under teaching strategies and methodologies, the objective of enhancing the use of innovative and learner-centered teaching approaches will be pursued through classroom demonstrations and Learning Action Cell sessions on DGBL strategies and best practices, involving Master Teachers and Teachers on a quarterly basis, with success indicated by increased utilization of interactive and game-based teaching strategies. Under technology integration, the objective of strengthening teachers' competence in utilizing educational technologies will be pursued through workshops on the use of educational platforms such as Kahoot, Quizizz, Wordwall, Blooket, and other digital learning tools, involving the ICT Coordinator and Teachers on a quarterly basis, with success indicated by teachers demonstrating proficiency in using digital platforms during instruction. Under classroom engagement, the objective of increasing learner participation and motivation during lessons will be pursued through the implementation of digital games,

collaborative challenges, and interactive quizzes in Araling Panlipunan classes, involving Teachers and Learners throughout the school year, with success indicated by improved learner engagement and active participation during classroom activities. Under assessment and evaluation, the objective of improving assessment practices through technology-enhanced tools will be pursued through the utilization of digital formative assessments, game-based quizzes, and instant feedback mechanisms, involving Teachers on a monthly basis, with success indicated by improved learner performance and timely monitoring of learning progress. Under professional development, the objective of enhancing teachers' professional growth in innovative instructional practices will be pursued through attendance at seminars, webinars, and training programs related to educational technology and game-based learning, involving the School Head and Teachers throughout the school year, with success indicated by increased participation in professional development activities and application of acquired skills. Finally, under monitoring and evaluation, the objective of assessing the effectiveness of DGBL implementation in teaching performance will be pursued through classroom observations, coaching sessions, and performance reviews focusing on technology integration and learner engagement, involving the School Head and Master Teachers every quarter, with success indicated by improved teaching performance ratings and instructional effectiveness.

Upon successful implementation of the instructional development plan, several outcomes are expected, namely improved teaching performance among Araling Panlipunan teachers through the effective integration of Digital Game-Based Learning strategies, increased teacher competence in utilizing digital tools and educational technologies, enhanced learner engagement, motivation, and participation during classroom instruction, improved learner academic achievement and mastery of Araling Panlipunan competencies, a strengthened culture of innovation, collaboration, and continuous professional development among teachers, and sustainable integration of technology-enhanced and learner-centered instructional practices within the school.

Taken together, the findings of this study demonstrate that the 30 Grade 6 learners of Talon-Talon Central School SPED Center exhibited a High level of academic performance prior to the implementation of the Digital Game-Based Learning approach ($M = 13.77$, $SD = 2.14$), which subsequently rose to a Very High level of academic performance following the intervention ($M = 18.80$, $SD = 1.19$), representing a mean gain of 5.03 points. The paired samples t-test confirmed that this improvement was statistically significant, $t = -12.083$, $p = 0.000$, which is less than the 0.05 level of significance, resulting in the rejection of the null hypothesis and the remark that the difference was significant. These results directly address the study's objectives by establishing that the Digital Game-Based Learning approach, implemented through the Kahoot! platform and its multiple-choice, true or false, and fill in the blank interfaces, produced a measurable and statistically significant improvement in the academic performance of Grade 6 learners in Araling Panlipunan, moving them from an already solid High baseline to near-uniform mastery at the Very High level, with the sharply reduced standard deviation further indicating that the intervention narrowed the performance gap among learners rather than benefiting only those who were already high achieving. These findings contribute to the field by providing localized, classroom-based empirical evidence, grounded in Constructivist Learning Theory and Self-Determination Theory, that digital game-based instruction can serve not merely as a motivational supplement but as a pedagogically effective tool for strengthening comprehension, retention, and engagement in a subject often regarded as content-heavy. Collectively, these results provide the empirical foundation for the instructional development plan presented in this chapter and set the stage for the concluding chapter of the manuscript, which will synthesize these findings into summary conclusions and

recommendations for the sustained integration of technology-enhanced, learner-centered instructional practices in the teaching of Araling Panlipunan.

CONCLUSION

Based on the findings of the study, it is concluded that the Digital Game Based Learning (DGBL) approach is an effective instructional strategy for enhancing the academic performance of Grade 6 learners in Araling Panlipunan. Prior to the implementation of the intervention, the learners demonstrated a high level of academic performance. Following their exposure to the Digital Game Based Learning approach, however, their academic performance improved to a Very High level, indicating that the intervention successfully strengthened learners' achievement in the subject. The statistically significant difference between the pretest and posttest scores further confirms that the implementation of Digital Game Based Learning contributed positively to learners' academic performance. The interactive, engaging, and learner centered nature of digital games promoted deeper understanding, improved retention, and more effective application of Araling Panlipunan concepts, ultimately resulting in enhanced learning outcomes. These findings demonstrate that integrating Digital Game Based Learning into classroom instruction can substantially improve instructional effectiveness while fostering meaningful and engaging learning experiences among elementary learners through innovative and technology-based teaching approaches.

In view of these findings, the study recommends that teachers integrate Digital Game Based Learning strategies into their Araling Panlipunan lessons by utilizing educational games and interactive digital activities that are carefully aligned with the prescribed curriculum competencies and learning objectives to further enhance learner engagement, motivation, and academic achievement. School administrators are encouraged to provide adequate technological resources, training programs, and continuous professional development opportunities to strengthen teachers' competence in implementing Digital Game Based Learning and other technology enhanced instructional approaches. Curriculum planners and education supervisors should likewise consider incorporating Digital Game Based Learning strategies into instructional programs and learning materials to support more effective delivery of Araling Panlipunan lessons and improve learner outcomes. Learners are encouraged to actively participate in game-based learning activities and maximize the educational opportunities provided through digital learning platforms to strengthen their understanding and mastery of Araling Panlipunan concepts. Parents and guardians also play a vital role by supporting the responsible use of educational digital games at home and reinforcing classroom learning through appropriate guidance. Finally, future researchers are encouraged to conduct similar studies involving larger sample sizes, different grade levels, subject areas, or alternative research designs to further validate the effectiveness of Digital Game Based Learning and explore additional factors that may influence learners' academic performance.

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