IJORER : International Journal of Recent Educational Research
Homepage : https://journal.ia-education.com/index.php/ijorer
Email : ijorer@ia-education.com

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 1-21

Game-Based Assessment Tool for Enhancing the Academic Performance of Grade 9 Learners in Araling Panlipunan

Ray Martin O. Benjamin[1], Bobby D.G. Lopez[2], Joseline M. Santos[3]
[1]Sta. Cruz High School, Santa Maria, Bulacan, Philippines
[2,3]Bulacan State University, City of Malolos, Bulacan, Philippines

DOI : https://doi.org/10.46245/ijorer.v7i1.901

Sections Info

Article history:
Submitted: May 28, 2025
Final Revised: July 16, 2025
Accepted: July 26, 2025
Published: January 30, 2026

Keywords:
Game-Based Assessment Tool; Wordwall; Academic Performance

ABSTRACT

Objective: This study tests the Wordwall game-based assessment tool's effectiveness in enhancing the summative test scores and academic performance of Grade 9 learners in Araling Panlipunan. Additionally, this study developed an action plan for teacher training in integrating the Wordwall application in the classroom, which will contribute to the broader discussion on teacher training and development. **Method:** The study utilized mixed-method research using a convergent parallel mixed-method design. The study respondents were 40 Grade 9 students for the experimental group, which utilized the assessment tool in the formative assessment, and 40 Grade 9 students for the control group, which used a traditional formative assessment. Thematic analysis was conducted to gather the students' experiences utilizing the Wordwall game-based assessment tool, and an interview with the subject coordinator and perception of the ICT expert was also conducted. **Results:** Based on the study's findings, the assessment tool developed is content quality assured and technologically accepted. Consequently, the assessment tool effectively enhances the summative test score and academic performance of Grade 9 students in Araling Panlipunan. **Novelty:** Overall, the study results show a positive effect of using a Game-Based Assessment Tool for enhancing the academic performance of Grade 9 learners. Teachers improve students' performance by using this kind of educational technology in the classroom.

INTRODUCTION

Education is crucial for shaping the future of society by equipping students with the necessary skills. Integrating technology in the classroom is essential to meet the demands of the digital world and prepare students for success in the modern workplace (Torchia, 2022). Effective technology integration fosters 21st-century skills, but challenges like equity and Internet access persist, along with proper teacher training.

Sustainable Development Goal 4 of the United Nations promotes inclusive, equitable, and high-quality education, emphasizing lifelong learning for all. Technology plays a crucial role in this by providing access to learning materials and personalized educational opportunities, while also addressing technology gaps in various communities. Additionally, as digital natives, students are comfortable with technology and expect similar engagement in the classroom. A study shows by Maini et al. (2021) students advocating for increased use of technology for learning because technology has greater access to information, engaging learning experiences, and offers collaboration and communication .

In the Philippines, the 1987 Constitution gives every student the right to quality education. Former Education Secretary Leonor Briones focused on innovations to improve basic education, tackle challenges, and enhance teacher skills and facilities (Perez, 2021). Public schools are now following DepEd Memorandum No. 08, S. 2023, which sets guidelines for evaluating teachers' performance. Teachers should use suitable

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 1-21

resources, including technology, to address learning gaps. Even though the effects of COVID-19 are decreasing, its impact is still changing education. Therefore, teachers need to update their skills in educational technology, and the Department of Education must ensure they have the proper training and support (Hernando-Malipot, 2021).

Using technology in teaching is changing how we learn. While online materials can help teach AP 9 Ekonomiks, they often do not match the AP 9 skills required by the Department of Education. According to Buenaflor (2024), no game-based activities are designed for the Most Essential Learning Competencies (MELC). Also, many online resources come from teachers in other countries and are in English, using their local context. In contrast, AP 9 focuses on the Philippine context and uses Filipino as the language of instruction. Furthermore, teachers are still learning to incorporate these tools into their classrooms.

The lack of resources for Araling Panlipunan high school teachers—such as outdated textbooks and limited access to technology—threatens education quality (Santiago, 2024). The K-12 curriculum's demands and additional teaching resources underscore the need for learning-competency-based and game-based assessment tools for AP 9. This study aims to develop such a tool using the Wordwall application, assess its effectiveness, and create a training action plan for teachers. Specifically, this study sought answers to the following questions:

1. How may the Wordwall game-based assessment tool content be evaluated using the DepEd Learning Resources Management and Development System (LRMDS) evaluation tool for non-print material:
   a. Content quality;
   b. Instructional quality;
   c. Technical quality; and
   d. Structure of material?
2. How may the Wordwall game-based assessment tool be evaluated in terms of its technological acceptability using the Technology Acceptance Model (TAM):
   a. Perceived usefulness;
   b. Perceived ease of use;
   c. Attitude toward using; and
   d. Intention to use?
3. Are there significant differences in the scores in the summative test and the academic performance of the control and experimental groups during the second quarter?
4. How may the experience of students, perception of ICT expert, and observation of the Subject Coordinator on the use of Wordwall game-based assessment tool be described?
5. What action plan may be developed to train the teachers in integrating technology in the classroom using Wordwall?

RESEARCH METHOD

Research Design

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 1-21

This study employed a convergent parallel mixed methods approach, collecting and analyzing quantitative and qualitative data simultaneously (Creswell & Creswell, 2017). After independent analyses, the results were combined to form a comprehensive understanding. The quantitative phase initially evaluated the validity of the Wordwall game-based assessment tool that was created by the researcher, utilizing the DepEd LRMDS evaluation tool for non-print materials to assess the content and the technology acceptance model to evaluate the technological acceptability of the Wordwall game-based assessment tool. Moreover, a posttest-only design that includes a control group, there are two distinct groups: one experimental group that undergoes an intervention and a control (comparison) group that does not receive any intervention (Gray et al., 2023) was employed to assess the effectiveness of the Wordwall game-based assessment tool. This study analyzed four summative tests, serving as post-tests for Grade 9 students. This narrower focus is a limitation, as it only examines the differences between these assessments and the academic performance of the control and experimental groups. For the qualitative phase, a triangulation of methods was also considered, including the focus group discussion of students, the perception of an ICT expert through an interview, and the observation of the Subject Coordinator.

Participants and Research Locale

The study involved 80 Grade 9 students during the 2024-2025 school year in a public school in the Municipality of Santa Maria, Bulacan, recommendation of a minimum cell size of 30 for group comparisons (Wilson Van Voorhis & Morgan, 2007). Also, three experts evaluate the Wordwall game-based assessment tool's content: a Learning Resource Management and Development System (LRMDS) Focal Person, an ICT expert, and a Head Teacher in Araling Panlipunan. Another three experts evaluate the technological acceptability of the Wordwall game-based assessment tool, which are three Master Teachers in Araling Panlipunan. Ten students were gathered as participants in the focus-group discussion from the experimental groups. Also, one ICT expert who evaluated the game-based assessment tool and one subject coordinator who observed the integration of the assessment tool were interviewed to support the study's findings.

Research Instrumentation

The DepEd LRMDS evaluation tool of non-print materials to determine the content of the game-based assessment tool. DepEd uses this tool to validate educational materials in non-print format before implementation. To pass this evaluation, content quality and instructional quality should score at least 30 out of 40 points; technical quality should score 39 out of 52 points; and the structure of materials should have a perfect point of 16 (DepEd, 2009). Another research instrument that was utilized in this study is the Technology Acceptance Model (TAM) developed by Davis (1989), adopted from the study by Weng et al. (2018) to evaluate the technology acceptance of a game-based assessment tool. The TAM comprises four factors: perceived usefulness, perceived ease of use, attitude toward using, and intention to use, a rating scale was applied for the technology acceptance model to analyze the data: Very Unacceptable (1.00-1.49); Unacceptable (1.50-2.49); Neutral (2.50-3.49); Acceptable (3.50-4.49); and Very Acceptable (4.50-5.00). Additionally, for the qualitative phase, the guide questions for the focus-group discussion and interview with the ICT expert and Subject Coordinator were created by the researcher and validated by three experts.

IJORER : International Journal of Recent Educational Research
Homepage : https://journal.ia-education.com/index.php/ijorer
Email : ijorer@ia-education.com

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 1-21

RESULTS AND DISCUSSION

Results

This section presents the evaluation of the Wordwall Game-Based Assessment Tool and its effectiveness. The results were organized to clarify the impact of this study for the readers.

Evaluation of Content of Wordwall Game-Based Assessment Tool using the DepEd LRMDS Evaluation Tool for Non-print Materials

Table 1. Descriptive Measure of Wordwall as Evaluated in terms of Content Quality

Content Quality	Evaluator 1	Evaluator 2	Evaluator 3	Sum of Scores from Evaluators	Interpretation
1. Content is consistent with topics/skills found in the DepED Learning Competencies for the subject and grade/year level it was intended.	4	4	4	12	Very Satisfactory
2. Concepts developed contribute to enrichment, reinforcement, or mastery of the identified learning objectives.	4	4	4	12	Very Satisfactory
3. Content is accurate.	4	4	4	12	Very Satisfactory
4. Content is up-to-date.	4	4	4	12	Very Satisfactory
5. Content is logically developed and organized.	4	4	4	12	Very Satisfactory
6. Content is free from cultural, gender, racial, or ethnic bias.	4	4	4	12	Very Satisfactory
7. Content stimulates and promotes critical thinking.	4	4	4	12	Very Satisfactory
8. Content is relevant to real-life situations.	4	4	4	12	Very Satisfactory
9. Language (including vocabulary) is appropriate to the target user level.	4	4	4	12	Very Satisfactory
10. Content promotes positive values that support formative growth.	4	4	4	12	Very Satisfactory
Total				**40**	
Evaluation				**Passed**	

Table 1 shows the Wordwall game-based assessment tool content evaluated in terms of content quality. All the evaluators gave the assessment material a very satisfactory rating. The total points obtained for content quality is 40, which is a verbal evaluation of passed.

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 1-21

A resource material needs to achieve a minimum score of 30 points using the evaluation tool to meet this standard. This indicates that the content quality of the Wordwall game-based assessment tool aligns with acceptable standards.

Table 2. Descriptive Measure of Wordwall as Evaluated in terms of Instructional Quality

Instructional Quality	Evaluator 1	Evaluator 2	Evaluator 3	Sum of Scores from Evaluators	Interpretation
1. Purpose of the material is well defined.	4	4	4	12	Very Satisfactory
2. Material achieves its defined purpose.	4	4	4	12	Very Satisfactory
3. Learning objectives are clearly stated and measurable.	4	4	4	12	Very Satisfactory
4. Level of difficulty is appropriate for the intended target user.	4	4	4	12	Very Satisfactory
5. Graphics / colors / sounds are used for appropriate instructional reasons.	4	4	4	12	Very Satisfactory
6. Material is enjoyable, stimulating, challenging, and engaging.	4	4	4	12	Very Satisfactory
7. Material effectively stimulates creativity of target user.	4	4	4	12	Very Satisfactory
8. Feedback on target user's responses is effectively employed.	4	4	4	12	Very Satisfactory
9. Target user can control the rate and sequence of presentation and review.	4	4	4	12	Very Satisfactory
10. Instruction is integrated with target user's previous experience.	4	4	4	12	Very Satisfactory
Total				**40**	
Evaluation				**Passed**	

Table 2 presents the evaluation of the Wordwall game-based assessment tool regarding its *instructional quality*. All evaluators assigned a *highly satisfactory* rating to this resource. The resource material must receive at least 30 points to achieve this criterion. The

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 1-21

resource passed the evaluation since it received 40 points for *content quality*. This implies that Wordwall's teaching quality satisfies acceptable requirements.

Table 3. Descriptive Measure of Wordwall as Evaluated in terms of Technical Quality

Technical Quality	Evaluator 1	Evaluator 2	Evaluator 3	Sum of Scores from Evaluators	Interpretation
1. Audio enhances understanding of the concept.	4	4	4	12	Very Satisfactory
2. Speech and narration (correct pacing, intonation, and pronunciation) is clear and can be easily understood.	3	3	3	9	Not Applicable
3. There is complete synchronization of audio with the visuals, if any.	4	4	4	12	Very Satisfactory
4. Music and sound effects are appropriate and effective for instructional purposes.	4	4	4	12	Very Satisfactory
5. Screen displays (text) are uncluttered, easy to read, and aesthetically pleasing.	4	4	4	12	Very Satisfactory
6. Visual presentations (non-text) are clear and easy to interpret.	4	4	4	12	Very Satisfactory
7. Visuals sustain interest and do not distract user's attention.	4	4	4	12	Very Satisfactory
8. Visuals provide accurate representation of the concept discussed.	4	4	4	12	Very Satisfactory
9. The user support materials (if any) are effective.	4	4	4	12	Very Satisfactory
10. The design allows the target user to navigate freely through the material.	4	4	4	12	Very Satisfactory
11. The material can easily and independently be used.	4	4	4	12	Very Satisfactory
12. The material will run using minimum system requirements.	3	4	4	11	Very Satisfactory
13. The program is free from technical problems.	3	4	4	11	Very Satisfactory
Total				**50.33**	
Evaluation				**Passed**	

Table 3 presents the evaluation of the content of the Wordwall game-based tool in terms of its *technical quality*. Based on the validation instrument, if speech and narration do not apply to the resource material, the evaluator must rate the resource material 3, which

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 1-21

means it does not apply to the resource material. Additionally, all items received a very satisfactory rating, except *items 12 and 13*, which showed variation in ratings. A resource material must achieve a minimum score of 39 points on the evaluation tool to meet this criterion. The total score for content quality was 50.33, indicating a *passing* verbal evaluation. This suggests that the technical quality of Wordwall is at an acceptable level.

Table 4. Descriptive Measure of Wordwall as Evaluated in terms of Structure of Materials

Structure of Materials	Evaluator 1	Evaluator 2	Evaluator 3	Sum of Scores from Evaluators	Interpretation
1. Conceptual errors.	4	4	4	12	Not Present
2. Factual errors.	4	4	4	12	Not Present
3. Grammatical and/or typographical errors.	4	4	4	12	Not Present
4. Other errors (i.e., computational errors, obsolete information, errors in the visuals, etc.).	4	4	4	12	Not Present
Total				**16**	
Evaluation				**Passed**	

Table 4 shows the Wordwall game-based assessment tool content as evaluated in terms of the structure of materials. The resource material must score a perfect 16 points based on the evaluation tool used to pass this criterion. It can be seen that the total points obtained for the structure of materials is 16, which has a verbal evaluation of passed. This implies that the structure of the Wordwall materials meets an acceptable standard.

Evaluation of Technology Acceptability of Wordwall Game-Based Assessment Tool using Technology Acceptance Model

Table 5. Descriptive Measure of Wordwall as Evaluated in Terms of Technology Acceptability: Perceived Usefulness

Perceived Usefulness	Evaluator 1	Evaluator 2	Evaluator 3	Mean	Verbal Description
1. Use of Wordwall app in my class helps me to control the pedagogy.	5	5	5	5.00	Very Acceptable
2. Use of Wordwall app in my class enhances the teaching performance.	4	5	5	4.67	Very Acceptable
3. I find the Wordwall app useful in my class.	4	5	5	4.67	Very Acceptable
4. Use of Wordwall app makes it easier to catch individual students' needs.	4	5	5	4.67	Very Acceptable
Overall				**4.75**	**Very Acceptable**

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 1-21

Table 5 shows the Wordwall game-based assessment tool evaluated in terms of its perceived usefulness. Relatively, the item that obtained the highest mean score is item 1, which has a verbal description of very acceptable. This item pertains to using the Wordwall app in their class, which helps them control the pedagogy. While items 2,3 and 4 have the same mean score, which has a verbal description of very acceptable. Overall, the technology acceptability for the Wordwall app in terms of perceived usefulness is very acceptable.

Table 6. Descriptive Measure of Wordwall as Evaluated in Terms of Technology Acceptability: Perceived Ease of Use

Perceived Ease of Use	Evaluator 1	Evaluator 2	Evaluator 3	Mean	Verbal Description
1. It is easy to become skillful at using Wordwall app.	5	5	5	5.00	Very Acceptable
2. I find it easy to apply the Wordwall app in my class.	5	5	5	5.00	Very Acceptable
3. Use of Wordwall app is easy and understandable.	5	5	5	5.00	Very Acceptable
4. Use of Wordwall app is more flexible to teach than traditional one.	5	5	5	5.00	Very Acceptable
			Overall	**5.00**	**Very Acceptable**

Table 6 illustrates the Wordwall game-based assessment tool evaluated in terms of perceived ease of use. The expert teachers rated the assessment tool as very acceptable in all items. Overall, the technology acceptability for the Wordwall app in terms of perceived ease of use is very acceptable.

Table 7. Descriptive Measure of Wordwall as Evaluated in Terms of Technology Acceptability: Attitude Toward Use

Attitude Toward Use	Evaluator 1	Evaluator 2	Evaluator 3	Mean	Verbal Description
1. Use of Wordwall app in class is good.	4	5	5	4.67	Very Acceptable
2. Use of Wordwall app in class is favorable.	4	5	5	4.67	Very Acceptable
3. It is a positive influence for me to use Wordwall app in class.	5	5	5	5.00	Very Acceptable
4. I think it is valuable to use the Wordwall app in class.	4	5	5	4.67	Very Acceptable
5. I think it is a trend to use Wordwall app in class.	4	5	5	4.67	Very Acceptable
Overall				**4.73**	**Very Acceptable**

Table 7 shows the Wordwall game-based assessment tool evaluated in terms of attitude toward use. Relatively, the item that obtained the highest mean score is item 3, which has a verbal description that is very acceptable. This item pertains to their positive influence on using the Wordwall app in class. While items 1,2, 4, and 5 have the same mean score,

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 1-21

which has a verbal description of very acceptable. Overall, the technology acceptability for the Wordwall app in terms of attitude toward use is very acceptable.

Table 8. Descriptive Measure of Wordwall as Evaluated in Terms of Technology Acceptability: Intention To Use

Intention To Use	Evaluator 1	Evaluator 2	Evaluator 3	Mean	Verbal Description
1. I tend to use Wordwall app in my class.	4	4	5	4.33	Acceptable
2. I increase the occurrences of using Wordwall app in class.	4	5	5	4.67	Very Acceptable
3. Use of Wordwall app in my class enhances students' learning interest.	5	5	5	5.00	Very Acceptable
4. I'd love to use Wordwall app in my class.	4	5	5	4.67	Very Acceptable
5. I use Wordwall app to provide multi-approaches on teaching.	4	4	5	4.33	Acceptable
			Overall	**4.60**	**Very Acceptable**

Table 8 shows the Wordwall game-based assessment tool evaluated for intention to use. Relatively, the item that obtained the highest mean score is item 3, which has a verbal description of very acceptable. It refers to using the Wordwall app in class to enhance student's learning interests. Meanwhile, items 1 and 5 got the lowest mean score, with a verbal description of acceptable. Overall, the technology acceptability for the Wordwall app in terms of intention to use is very acceptable.

Effectiveness of Wordwall Game-Based Assessment Tool

This part contains the summary of scores in the summative tests and the academic performance based on the second quarter grades of the Grade 9 learners of the control and experimental groups. It also includes the significant difference between the control and experimental groups and its effect size based on Cohen's d.

Table 9. Independent Samples t-Test Results for Control and Experimental Groups in the Summative Test Scores and Academic Performance During the Second Quarter

Variable	Control *M* (*SD*)	Experimental *M* (*SD*)	*t*	*p*	Description	Decision
Summative Test 1	15.23 (3.69)	17.00 (3.01)	-2.36	.021	Significant	Reject Ho
Summative Test 2	12.05 (3.05)	13.78 (3.47)	-2.36	.021	Significant	Reject Ho
Summative Test 3	14.68 (4.27)	19.78 (3.53)	-5.82	.000	Significant	Reject Ho
Summative Test 4	11.83 (2.77)	15.18 (3.70)	-4.58	.000	Significant	Reject Ho
Academic Performance	84.68 (3.46)	88.88 (3.24)	-5.71	.000	Significant	Reject Ho

Note: The independent samples test conducted assumes unequal variances. N = 40 each, df = 75, mean M, standard deviation SD, t-value t, p-value p, Cohen's d for effect size with > 0.2 small effect, > 0.5 medium effect, > 0.8 large effect (Cohen, 1988, p.25).

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 1-21

Based on Table 9, for summative test 1, the experimental group (M = 17.00, SD = 3.01) scored significantly higher than the control group (M = 15.23, SD = 3.69), with a p-value of 0.021, rejecting the null hypothesis. Cohen's d = 0.53 indicates a medium effect size. In summative test 2, the experimental group (M = 13.78, SD = 3.47) again outperformed the control group (M = 12.05, SD = 3.05) with a p-value of 0.021, also rejecting the null hypothesis and a medium effect size (Cohen's d = 0.53).

For summative test 3, the experimental group (M = 19.78, SD = 3.53) significantly exceeded the control group (M = 14.68, SD = 4.27), showing a p-value of .000, with a large effect size (Cohen's d = 1.30). In summative test 4, the experimental group (M = 15.18, SD = 3.70) scored higher than the control group (M = 11.83, SD = 2.77), with a p-value of .000 and a large effect size (Cohen's d = 1.03).

For overall academic performance, the experimental group (M = 88.88, SD = 3.24) significantly outperformed the control group (M = 84.68, SD = 3.46), with a p-value of .000 and a large effect size (Cohen's d = 1.25), indicating a significant impact. This suggests that the difference results in significant change and has a noticeable impact.

Students' Experience, Subject Coordinator Observation, and ICT Expert Perception on the Use of Wordwall Game-Based Assessment Tool

Table 10. Students Experiences Using the Wordwall Game-Based Assessment Tool

Codes	Categories	Themes
Engagement and adaptability in learning Fun and enjoyment in learning Interactive learning and focus improvement through games	Engagement and Motivation	Engagement and Enjoyment in Learning
Gamification and improving computer skills Variety of games and memory exercises	Gamification and Learning Tools	Effectiveness of Gamified Learning Tools
Convenience and ICT skills development Easier learning and environmental benefits	Learning Efficiency and Convenience	Convenience and Accessibility in Learning
Review process and challenges with Wordwall Gradual difficulty increase and strategy development	Challenges and Skill Development	Learning Challenges and Personal Growth

In Question No. 1, student participants were asked about their experiences using the Wordwall game-based assessment tool. It is very evident in their answers that students are engaged and enjoy learning. It also provides convenience and accessibility in learning, and brings learning challenges and personal growth. Student involvement in the learning process boosts motivation and can be measured by class participation, feedback, and retention (Hess & Tremblay, 2024). Engaged learners are more likely to apply lessons practically and achieve better outcomes.

Student motivation refers to students' engagement in educational activities that influence the attainment of their academic objectives and overall performance (Ge & Ifenthaler, 2017). Personalized learning experiences foster a greater intrinsic motivation as students perceive the relevance of the material to their own lives (Collie & Martin, 2019). This finding is evident in the subject coordinator's observation, which supports the students' experiences that *the Wordwall game allows teachers to customize content to align with their lessons, offering flexibility in student engagement.* The coordinator also noted that

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 1-21

this adaptability can enhance motivation as students perceive the material relevant to their learning. When students feel that the educational material is tailored to their needs, their motivation to engage with the content increases significantly.

Interactive platforms can increase student satisfaction and interest in the subject matter (D'Angelo, 2018). This finding can be gleaned from the response of the ICT expert, "*Wordwall makes learning in AP more interactive and enjoyable, which can increase student motivation and participation.*" This is particularly crucial in Araling Panlipunan, where the curriculum demands a high level of engagement due to its rigor. Integrating Wordwall into classrooms represents a significant shift toward a more interactive and engaging learning experience.

Students using easy-to-navigate technology are more likely to engage with the material and perform better academically (Ibrahim et al., 2023). An ICT expert supports this view by saying, "*Wordwall is very easy to use and navigate.*" Wordwall is an accessible, user-friendly platform that helps students focus on learning without getting lost in difficult navigation. Its simple design makes Wordwall an effective educational tool that boosts student engagement and success. By focusing on usability, Wordwall enhances the educational experience for students.

Table 11. Game Aspect of Wordwall Game-Based Assessment Tool that Feels Distracting in Students' Focus

Codes	Categories	Themes
Technical issues (game lag and unexpected pop-ups)	Technical Issues and Distractions	Distractions from Technical Problems
Distraction due to slow internet		
Distraction due to slow internet and time constraints		
Distraction due to slow internet and device usage		
Distraction from animations and timers in games		
Insufficient laptops and slow internet connection	Internet and Device Connectivity	Challenges with Internet and Device Accessibility
Distraction from slow internet and focus on specific subject (Araling Panlipunan)		
Time-saving benefit and helpfulness of Wordwall	Time Management and Game Structure	Need for Better Time Management in Games
Need for a longer timer for answering questions		

In Question 2, student participants discussed distractions experienced while using the Wordwall game-based assessment tools. They noted that technical issues, internet problems, and device accessibility challenges hindered their focus on learning. Additionally, students indicated a need for better time management during the assessment. The sustainable and successful use of technology in education depends on monitoring usage and controlling distractions. As media multitasking is a harmful habit rather than a way to increase efficiency, it is crucial to educate students about the distractions that come with technology (Pérez-Juárez et al., 2023).

Key issues include accessibility and technology access, essential for effective learning (Francom, 2020). Compatibility problems can disrupt setup and limit the effectiveness of digital tools (Haleem et al., 2022). The subject coordinator noted that "*not*

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 1-21

all classrooms may have the necessary technology for Wordwall games," leading to potential disparities, particularly in lower-resourced areas. Technical difficulties for some students can create frustration and unequal learning outcomes.

The study shows that internet access quality directly affects student engagement and achievement in digital learning environments. While many students find game-based assessment tools beneficial for learning and motivation, unstable internet can reduce their motivation in class (Anane, 2024). Furthermore, significant gaps in student access to personal devices remain despite technological adoption in schools (National Center for Education Statistics, 2020). An ICT expert noted that "*the availability of fast internet connectivity for multiple students is a challenge for Wordwall, along with access to computers/tablets/phones.*" Limited device accessibility can hinder effective engagement with platforms like Wordwall, highlighting the need for better hardware integration in education.

Table 12. Student Performance on their Summative Test using the Wordwall Game-Based Assessment Tool

Codes	Categories	Themes
Understanding and Memorization	Learning Improvement	Enhanced Understanding and Retention
Ease of Learning		
Facilitated Comprehension		
Enhanced Conceptual Understanding		
Recall of Past Topics		
Improved Scores	Academic Performance	Improved Academic Outcomes
Grade Improvement		
Simplified Answering	Assessment Experience	Positive Assessment Interaction
Increased Engagement and Retention		

Question 3 focuses on student performance after using the Wordwall game-based assessment tool as a formative assessment. Students reported enhanced understanding and retention, leading to improved academic outcomes and positive interactions with evaluations. Students' understanding of complex subjects was considerably enhanced when participating in a game-based assessment tool (Hamari et al., 2016). It highlights how learners can investigate concepts through hands-on activities in gamified learning environments. These interactive elements inspire students to try new things, make errors, and grow from them, which helps them understand the material more thoroughly.

Researchers found that game-based learning tools, such as Wordwall, significantly improved students' engagement and comprehension, leading to better learning outcomes (Nadeem et al., 2023). This finding underpinned the observation of the subject coordinator that it is " *valuable for reinforcing learning in various subjects*" and " *very effective to encourage critical thinking pattern recognition*." By leveraging interactive assessment methods, teachers can create a more stimulating learning environment that supports critical thinking skill development and fosters a deeper understanding of the content.

A study shows that interactive and game-based assessment tools can help students remember information better. Game-based assessment tools like Wordwall provide students with instant feedback on their answers. This quick feedback helps students develop good study habits by allowing them to identify and correct their mistakes before

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 1-21

tests. An ICT expert notes, "I*t helps students retain information better by linking learning to fun activities. It will surely boost student motivation and engagement in learning.*" This response highlights how Wordwall's interactive features enhance students' understanding of the subject. Integrating content into a game-based format makes the material more interesting and reinforces learning.

Table 13. Student Engagement and Motivation in Learning Araling Panlipunan using Wordwall Game-Based Assessment Tool

Codes	Categories	Themes
Fun and Engagement Engaging Learning Experience Increased Motivation Game-Based Motivation Engagement and Motivation	Engagement and Motivation	Increased Engagement and Motivation
Enjoyable and Accessible Learning Boredom Reduction Understanding Through Structure Ease and ICT Skill Development	Learning Experience	Enhanced Learning Experience through Accessibility, Structure, and Skill Development

Question 4 examines student engagement and motivation in Araling Panlipunan using the Wordwall game-based assessment tool. Students reported increased engagement, motivation, and enhanced learning experience. Engagement involves active participation in the teaching-learning process, motivating students and measurable through participation, feedback, and understanding retention (Hess & Tremblay, 2024). Engaged learners tend to apply lesson contexts practically and achieve better outcomes.

Getting students involved in education helps them actively participate in learning. This involvement inspires them to learn and can be seen through their class participation, the feedback they give, and how well they understand the material. Engaged students are more likely to use what they learn in real-life situations and achieve better results (Tremblay, 2023). The subject coordinator observed, "*Many learners find the game more engaging than traditional testing methods*," "*They are encouraged to participate more actively*," and "*It can provide an interactive and engaging way to evaluate students' progress.*" The coordinator noted that using Wordwall in the classroom improved student engagement. Using a game-based assessment tool, we expect to see better student engagement than traditional assessment methods (Mazelin et al., 2022).

Effective questioning strategies are essential for enhancing student comprehension and retention (Ghafar & Hazaymeh, 2024). An ICT expert suggests "*limiting questions to those discussed in class and using game-based assessments to train teachers in effective questioning*". Modifying questions for specific game contexts can reinforce learning, with game-based learning significantly boosting student motivation and outcomes when paired with appropriate questioning techniques.

Table 14. Proposed Action Plan for Teacher Training

Phases	Strategies	Persons Involved
Exploring Game-Based Assessment Tool: Principles, Accessibility, Evaluation, and Exploration	**Presentation and Discussion**	Educational Program Supervisor of Araling Panlipunan
	Conducting a Seminar Based on GBAT Principles	Educational Technology Expert
	Discussing the Importance of Internet and Device Accessibility in Schools	LRMDS Focal Person

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 1-21

Phases	Strategies	Persons Involved
	Presenting and Analyzing the Basis of Developing GBAT	Technical Working Group
	Introducing DepEd LRMDS Evaluation Tool for Non-print Materials and Technology Acceptance Model	
Equip teachers with the skills and knowledge needed to develop game-based assessment tools.	**Interactive Demonstration Session**	
	Conducting a Live Demonstration of Wordwall	
	Providing a step-by-step guide	
	Hands-on exploration approach in real-time	
Familiarize teachers with Wordwall features.	**Encourages Engagement** Asking a question to the Resource Person	
	Acknowledging participants' progress and successes throughout the training	
Wordwall Hands-on: Developing Activities and Receiving Feedback	**Divide Teachers into Small Groups**	Educational Technology Experts
	Providing each group with a specific learning objective based on their subject matter	Technical Working Group
	Creating a Wordwall activity aligned with it.	
Conduct a Hands-on Activity & Guided Practice	**Guided Practice and Support**	
	Circulating among the groups, providing individual guidance, and support as needed.	
	Answering questions, addressing technical difficulties, and offer suggestions for improvement by the facilitator.	
	Sharing and Feedbacking	
	Presenting their created activity.	
	Constructing feedback provided by peers and the facilitator.	
From Planning to Practice: Lesson Design, Wordwall Integration, Evaluation, and Classroom Observation	**Development of Lesson Plan**	Educational Technology Expert
	Looking for a topic based on the most essential competencies next week.	Master Teacher
	Creating a lesson plan and gathering learning resources.	Head Teacher
Create a Lesson Plan and Integrate the Wordwall application in assessment strategies	**Choose Appropriate Wordwall Activities**	LRDMS Focal Person
	Selecting activities that align with your students' learning styles and the design for your assessment.	

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 1-21

Phases	Strategies	Persons Involved
	Adjusting the difficulty level of activities by modifying the number of questions, time limits, or content.	
	Evaluation of Wordwall Game-Based Assessment Tool	
	Validating of Wordwall Game-Based Assessment Tool by expert Coordinators	
	Addressing the concerns shared by the expert	
	Conduct of Classroom Observation	
	Observing the utilization of a game-based assessment tool	
	Providing constructive feedback based on classroom observation.	
	Planning of agreement based on the classroom observation	
Empowering Teachers: Assessing and Supporting Wordwall Implementation	**Conduct a post-training session**	Master Teacher
	Assessing teacher confidence and competence in using Wordwall	Head Teacher/AP Coordinator
	Identifying challenges, successes, and areas where further support is needed	LRDMS Focal Person
Evaluate Teacher's Competence	**Constant Monitoring and Evaluation**	
	Monitoring classroom implementation through classroom observations.	
	Conducting regular check-ins with teachers to address any challenges they are facing and provide ongoing support	
Building a Game-Based Assessment Tool Resource Bank: Collection, Storage, and Application	**Adapt Game-Based Assessments**	Teachers
	Collecting of validated Game-based assessment tool	Master Teachers
	Storing of validated Game-based assessment tool	Head Teachers/AP Coordinators
	Utilizing of the collected validated Game-based assessment tool	LRDMS Focal Person
Establishing a readily available Wordwall game-based assessment tool	**Share Best Practices**	
	Attending a seminar/workshop for a game-based assessment tool	
	Sharing of experience on its implementation in your school	
	Cascading of the information at the school level	

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 1-21

In today's digital age, educational technology is pivotal in enhancing teaching and learning processes. The Wordwall application is a tool that allows teachers to create interactive activities and games that engage students, reinforce learning, and assess students' knowledge. This action plan showed in Table 13 aims to provide comprehensive teacher training on effectively integrating Wordwall into classroom instruction. By integrating Wordwall into assessment, teachers can create dynamic activities that capture students' attention and encourage participation. Training teachers to design and implement these activities will create a more stimulating learning environment.

To enhance teachers' proficiency in utilizing the Wordwall game-based assessment tool, extensive teacher training will be given based on the following objectives: (1) equip teachers with the skills and knowledge needed to develop game-based assessment tools; (2) familiarize teachers with the Wordwall application's features, highlighting its potential for interactive learning; (3) engage teachers in a collaborative, practical workshop to explore creating dynamic learning activities and assessments with the Wordwall application; (4) support teachers in creating successful lesson plans that include Wordwall game-based assessment tools in their teaching and evaluation methods while guaranteeing conformity to academic standards; (5) implement evaluation measures to gauge teachers' proficiency using Wordwall and suggest further development; and (6) develop an easily accessible collection of Wordwall-created game-based tests so teachers can quickly incorporate engaging assessments into their lessons.

Discussion

Three experts evaluated the Wordwall Game-Based Assessment Tool using the DepEd LRMDS Evaluation Tool for Non-Print Material. Table 1 shows that the tool met the requirements for four key areas: content quality, instructional quality, technical quality, and structure of materials. For the tool to pass, the content and instructional quality needed at least 30 points, the technical quality needed at least 39 points, and the structure of materials required 16 points. The Wordwall tool achieved the necessary scores in all areas. This study adds to existing research on educational technology and shows that using a Game-Based Assessment Tool can improve students' academic performance.

Quality resource materials support effective teaching and boost student involvement (Funa & Ricafort, 2019). A validation process is essential to evaluate whether the content is suitable for the intended students and meets the learning standards set by the education department. This process ensures that the resources are high-quality and effective for students' needs. By checking that the content is appropriate and aligns with established learning goals, teachers can provide a better learning experience. This approach helps students achieve their educational objectives and maintains the quality of educational resources.

The Wordwall game-based assessment tool successfully met all evaluation criteria (content quality, instructional quality, technical quality, and structure of materials) based on DepEd's LRMDS guidelines for non-print materials. This indicates that the tool is a valuable learning resource.

The three experts evaluate the Wordwall game-based assessment tool as being technologically acceptable across four criteria: perceived usefulness, perceived ease of use, attitude towards its use, and intention to use it. This positive feedback indicates that

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 1-21

these experts recognize the technological acceptability of the Wordwall game-based assessment tool. The results emphasize that the Wordwall game-based assessment tool could be a beneficial resource for teachers looking to integrate these assessments into their evaluation methods.

The importance of selecting an appropriate evaluation tool for game-based assessment tools before implementation (Amaro et al., 2024). The study provides a comprehensive overview of the various factors teachers should consider when evaluating the usability and effectiveness of these tools, particularly within the realm of social studies education.

The technology acceptance model addresses the gap between technology development and student adoption, ensuring that systems, particularly game-based assessment tools, are effectively integrated into the user's lives, especially the teacher's and students', when integrated into the classroom.

The experimental group consistently outperformed the control group on all five variables. The p-values for every test were significant ($p < .05$), implying that the differences noted were unlikely to be due to chance. The effect sizes varied from medium (Cohen's $d = 0.53$) to large (Cohen's $d = 1.30$), showing that the intervention significantly affected the experimental group's performance. These results prove the effectiveness of the Wordwall game-based assessment tool in enhancing students' academic performance.

The value of incorporating game-based assessment tools in educational settings. Their research showed that students who participated in a game-based assessment tool experienced better scores and learning results than those who depended only on traditional assessment methods (Matt et al., 2022 & M. Tokitsu & Cabigan, 2022).

Tokitsu and Cabigan (2022) studied the effectiveness of a web-based assessment tool for teaching Araling Panlipunan. They used Kahoot, Quizziz, and Wordwall to compare diagnostic and summative test scores of 86 tenth-grade students. Results indicated a significant improvement, with the summative test outperforming the diagnostic test. Both this study and Tokitsu and Cabigan's research examine game-based assessment tools in teaching AP. However, their study focused on AP 10 and did not evaluate technology acceptance. Tokitsu and Cabigan's findings underscore the potential of game-based assessment tools to enhance student performance in AP, providing valuable insights.

Students' experience utilizing the Wordwall game-based assessment tool revealed positive experiences and technical issues that brought their negative experiences, consistent with the observation of the subject coordinator and the perception of the ICT expert. Students experienced that through the game-based assessment tool, they were engaged and motivated in learning as well, and it was convenient at the same time, which is aligned with the observation of the Subject Coordinator that this assessment tool enhances the motivation of the students and as shared by the ICT expert the assessment tool is easy to navigate and use. Engaging platforms have the potential to boost student satisfaction and enhance their interest in the topic being studied (D'Angelo, 2018). When motivated, students are more likely to be engaged in the subject matter. In contrast, game-based assessment tools also brought negative experiences to the students, like issues with the internet, devices, and the appearance of the game, which is consistent with the subject coordinator's observation and perception of ICT experts, which shows that there are challenges that remain, including reliable internet access and sufficient student devices.

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 1-21

Addressing these accessibility issues is crucial for ensuring equitable access to this valuable learning tool. Numerous students view game-based assessment tools as advantageous for their learning and motivation, but unstable internet connectivity can diminish their enthusiasm in the classroom (Anane, 2024).

The focus-group discussion (FGD) with ten students using the Wordwall game-based assessment tool highlighted several key experiences: high engagement and enjoyment in learning, effectiveness of gamified tools, convenience and accessibility, learning challenges, and personal growth. While students faced distractions from technical issues and issues with internet access, they also noted better time management, enhanced understanding, improved academic outcomes, and positive interactions with assessments.

The subject coordinator observed that Wordwall engages students, reinforces learning, boosts motivation, and enhances mastery, but noted challenges in its use. An ICT expert described Wordwall as interactive and user-friendly, fostering critical thinking, yet emphasized the ongoing challenges of the internet and device availability.

CONCLUSION

Fundamental Finding: The Wordwall game-based assessment tool ensures content quality through expert evaluation using the DepEd evaluation tool for non-print materials and is accepted based on the technology acceptance model (TAM). It demonstrates effectiveness, with summative tests showing medium to large effect sizes for academic performance in the experimental group. While it enhances student learning outcomes, challenges like internet access and device availability must be addressed for optimal classroom use. **Implication :** The use of the Game-Based Assessment Tools significantly contributes to the enhancement of the academic performance and engagement of the students. **Limitation :** The research was conducted only in a single public school and within the context of Grade 9 Araling Panlipunan and academic performance through summative test scores and second-quarter grades as the study variable. **Future Research :** Additional aspects may be considered, which measure learning goals, gameplay mechanics, content accuracy, the design of the user interface, and the overall effect on student learning. Also, additional variables, such as students' engagement and motivation, may be included to determine the significant difference between a more extensive, varied sample population and different subject matters, which can provide deeper insights and enhance the validity of the findings.

REFERENCES

Anane, Chiraz. "Impact of a Game-Based Tool on Student Engagement in a Foreign Language Course: A Three-Term Analysis." *Frontiers in Education*, vol. 9, Sept. 2024, p. 1430729. *DOI.org (Crossref)*, https://doi.org/10.3389/feduc.2024.1430729.

Buenaflor, A. (2024). Agila (Araling panlipunan game-based interactive learning activity): Boosting the learning attitudes of the students. *International Journal of Research and Innovation in Social Science*, *VIII*(II), 414–424. https://doi.org/10.47772/IJRISS.2024.802029

Amaro, B. J., Bueno, M., & Querol-Areola, E. M. (2024). Google sites and wordwall. Net – online tools for learning basic integration. In M. Madah Marzuki, W. M. Wan Omar, S. N. Z. Omar, K. Abdul Wahid, & W. N. Wan Mohamed (Eds.), *Proceedings*

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 1-21

of International Conference on Governance, Management & Social Innovation (ICGMSI 2023) (Vol. 282, pp. 71–88). Atlantis Press International BV. https://doi.org/10.2991/978-94-6463-425-9_7

Collie, R. J., & Martin, A. J. (2019). Motivation and engagement in learning. In R. J. Collie & A. J. Martin, *Oxford Research Encyclopedia of Education*. Oxford University Press. https://doi.org/10.1093/acrefore/9780190264093.013.891

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. SAGE Publications.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. SAGE Publications.

D'Angelo, C. (2018). *The impact of technology: Student engagement and success*. https://pressbooks.pub/techandcurriculum/chapter/engagement-and-success/

Department of Education. (2009). STRIVE Strengthening Implementation of Visayas Education Guidelines and Processes for LRMDS Assessment & Evaluation. https://lrmds.deped.gov.ph/docs/LRMDSGuidelines.pdf

DM 008, s. 2023 – Multi-year guidelines on the results-based performance management system-philippine professional standards for teachers | department of education. (n.d.). Retrieved June 11, 2025, from https://www.deped.gov.ph/2023/02/03/february-3-2023-dm-008-s-2023-multi-year-guidelines-on-the-results-based-performance-management-system-philippine-professional-standards-for-teachers/

Francom, G. M. (2020). Barriers to technology integration: A time-series survey study. *Journal of Research on Technology in Education*, *52*(1), 1–16. https://doi.org/10.1080/15391523.2019.1679055

Funa, A. A., & Ricafort, J. D. (2019). *Developing gamified instructional materials in genetics for grade 12 stem* (pp. 20597–20600). https://eric.ed.gov/?id=ED611849

Ge, X., & Ifenthaler, D. (2017). *Designing engaging educational games and assessing engagement in game-based learning* (R. Zheng, Ed.; pp. 255–272). IGI Global. https://www.researchgate.net/publication/308935197_Designing_engaging_educational_games_and_assessing_engagement_in_games

Ghafar, Z. N., & Hazaymeh, O. (2024). The effective questioning in the classroom: An overview of the techniques used by instructors. *International Journal of Childhood Education*, *5*(2), 1–14. https://doi.org/10.33422/ijce.v5i2.676

Gray, J. R., Grove, S. K., & Sutherland, S. (2016). *Burns and grove's the practice of nursing research-E-book: Appraisal, synthesis, and generation of evidence*. Elsevier Health Sciences.

Hamari, J., Shernoff, D. J., Rowe, E., Coller, B., Asbell-Clarke, J., & Edwards, T. (2016). Challenging games help students learn: An empirical study on engagement, flow and immersion in game-based learning. *Computers in Human Behavior*, *54*, 170–179. https://doi.org/10.1016/j.chb.2015.07.045

Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*, *3*, 275–285. https://doi.org/10.1016/j.susoc.2022.05.004

Hassan, M. (2024, March 26). Triangulation in research—Types, methods and guide. *Research Method*. https://researchmethod.net/triangulation/

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 1-21

Hernando-Malipot, M. (2021, July 22). *DepEd continues to uplift educational technology in PH*. Manila Bulletin. http://mb.com.ph/2021/07/22/deped-continues-to-uplift-educational-technology-in-ph/

Hess, S., & Tremblay, F. (2024). Student engagement and the role of technology. *Humans*, *4*(4), 351–370. https://doi.org/10.3390/humans4040023

Hwang, G.-J., Lai, C.-L., Liang, J.-C., Chu, H.-C., & Tsai, C.-C. (2018). A long-term experiment to investigate the relationships between high school students' perceptions of mobile learning and peer interaction and higher-order thinking tendencies. *Educational Technology Research and Development*, *66*(1), 75–93. https://doi.org/10.1007/s11423-017-9540-3

Ibrahim, E., Napu, K., & Darman, D. (2023). The influence of environment and satisfaction on student learning motivation. *West Science Journal Economic and Entrepreneurship*, *1*(05), 100–106. https://doi.org/10.58812/wsjee.v1i02.85

Maini, R., Sehgal, S., & Agrawal, G. (2021). Todays' digital natives: An exploratory study on students' engagement and satisfaction towards virtual classes amid COVID-19 pandemic. *The International Journal of Information and Learning Technology*, *38*(5), 454–472. https://doi.org/10.1108/IJILT-03-2021-0055

Matt, D. G. F., Banseng, S., Gerry, D., & Handrianto, C. (2022). Effect of wordwall in teaching malay literature component amongst form one students. *International Journal of Education, Technology and Science*, *2*(3), 279–287. https://ijets.org/index.php/IJETS/article/view/56

Mazelin, N., Maniam, M., Jeyaraja, S. S. B., Ng, M. M., Xiaoqi, Z., & Jingjing, Z. (2022). Using wordwall to improve students' engagement in esl classroom. *International Journal of Asian Social Science*, *12*(8), 273–280. https://doi.org/10.55493/5007.v12i8.4558

Nadeem, M., Oroszlanyova, M., & Farag, W. (2023). Effect of digital game-based learning on student engagement and motivation. *Computers*, *12*(9), 177. https://doi.org/10.3390/computers12090177

National Center for Education Statistics. (2020). "Technology in Schools: Current Status and Future Prospects." Retrieved from [NCES](https://nces.ed.gov)

Santiago, CJ. (2024, February 24). Facing the Frontlines: Challenges Commonly Encounter by High School Araling Panlipunan Teachers. Pressreader. Retrieved June 11, 2025, from https://www.pressreader.com/philippines/sunstarpampanga/20240224/281603835401426

Pérez-Juárez, M. Á., González-Ortega, D., & Aguiar-Pérez, J. M. (2023). Digital distractions from the point of view of higher education students. *Sustainability*, *15*(7), 6044. https://doi.org/10.3390/su15076044

Perez, Arra (2021, December 22). *Education must continue despite challenges, says DepEd chief | ABS-CBN News*. ABS-CBN. https://www.abs-cbn.com/news/12/22/21/education-must-continue-despite-challenges-briones

Torchia, R. (2022). *Technology in the classroom & the benefits for k-12 schools*. Technology Solutions That Drive Education. Retrieved June 11, 2025, from https://edtechmagazine.com/k12/article/2022/09/benefits-integrating-technology-todays-k-12-classrooms-perfcon

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 1-21

Tokitsu, T., & Victoria A. Cabigan, Ma. (2022). Web-based assessment tools in araling panlipunan 10. *International Journal of Research Publications*, *105*(1). https://doi.org/10.47119/IJRP1001051720223662

Tremblay, R. (2023, August 24). What is learner engagement? Definition + success strategies. *Docebo*. https://www.docebo.com/learning-network/blog/learner-engagement-strategies/

Wilson Van Voorhis, C. R., & Morgan, B. L. (2007). Understanding power and rules of thumb for determining sample sizes. *Tutorials in Quantitative Methods for Psychology*, *3*(2), 43–50. https://doi.org/10.20982/tqmp.03.2.p043

Weng, F., Yang, R.-J., Ho, H.-J., & Su, H.-M. (2018). A tam-based study of the attitude towards use intention of multimedia among school teachers. *Applied System Innovation*, *1*(3), 36. https://doi.org/10.3390/asi1030036

***Ray Martin O. Benjamin (Corresponding Author)**
Sta. Cruz High School, Department of Education
Sta. Cruz, Santa Maria, Bulacan, Philippines, 3022
Email: raymartin.benjamin@deped.gov.ph

Bobby D.G. Lopez
College of Social Sciences and Philosophy, Bulacan State University
City of Malolos, Bulacan, Philippines, 3000
Email: bobby.lopez@bulsu.edu.ph

Joseline M. Santos
College of Education, Bulacan State University
City of Malolos, Bulacan, Philippines, 3000
Email: joseline.santos@bulsu.edu.ph