

## AGILA

# (Araling Panlipunan Game-based Interactive Learning Activity): Boosting the Learning Attitudes of the Students

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## ABSTRACT

The use of game-based learning has emerged as an innovative educational strategy that promotes student motivation, emotional engagement, and enjoyment. Gamification in education has been found to be popular and engaging among students. This study assessed the increase in students' learning attitudes through the implementation and utilization of AGILA (Araling panlipunan Game-based Interactive Learning Activity) at Luis Hervias National High School in Villamonte, Bacolod City, focusing on Grade 10 Junior High School students enrolled for the school year 2022 – 2023. To gauge the participants' reactions and experiences after engaging in game-based learning, the researchers utilized an adopted and modified survey questionnaire of game-based learning attitudes. The findings suggest that the students' learning and interests are not enduring and impactful due to the limited range of modalities available for utilization. Most of the measured statements reflect only average results, indicating a lack of high engagement with the modular approach. Moreover, the AGILA brings about significant enhancements in students' attitudes towards learning Araling Panlipunan. The mean results, which are based on the students' capabilities and adjustments in game-playing, affirm the positive impact on the students' learning experiences.

## CONTEXT AND RATIONALE

A game is an exciting activity that fosters skill and insight, and it contains rules that affect how much fun you can have (Turkish Language Association [TLA], 2020). It is well recognized that games play an important role in the lives of all living species, not just humans. Recreational activities are beneficial for a variety of reasons for people of all ages, but their main goals are human development and education. In this way, distractions have to be coordinated into the educational module, not just as an instrument of excitement but also as an instrument of instruction (Arcagok, 2021).

The development of educational tools compatible with social exclusion has developed into a key procedure in a period affected by the 2019 coronavirus disease (COVID-19), as millions of students are kept to slow the epidemic's spread. As a result, almost all of education has quickly shifted to specialized learning in order to provide appropriate social distance (Johnson et. al., 2020).

According to Bustillo and Aguilos (2022), as they conducted a study in the Philippines, the unstructured interviews revealed that the majority of students struggled to complete the tasks because of numerous obstacles. These include issues with internet connectivity, insufficient learning materials, a lack of understanding of the module's contents and assessment instructions, an unfavorable learning environment,

too many remote learning tasks, and mental health issues.

The use of game-based learning in the classroom has become a cutting-edge learning strategy that can boost motivation, emotional engagement, and enjoyment in students. According to Hosseini and Mostafapour (2020), the game-based lecture was more popular and engaging with the students and justified that gamification is well suited for education planning.

Innovation improves the development and sharing of knowledge and offers students greater access to data, but it also necessitates that teachers look for new ways to inspire and engage their pupils. So much effort has also been put on developing untapped teaching strategies that improve students' motivation and commitment while maximizing information security. Gamification is one standout strategy that has teachers interested. In recent years, they have been exploring its potential to advance student learning (Koivisto and Hamari, 2019).

In the past 20 years, educational settings have been increasingly interested in game-based digital learning. Despite the fact that game-based learning is a relatively new area of systematic research, meta-analyses are uncommon. However, they also present a wide range of theories, research questions, designs, methods, and types of games used in the reviewed studies. In general, the studies have shown that game-based learning is linked to a broad range of perceptual, cognitive, behavioral, affective, and motivational effects and outcomes.

According to Wang and Zheng (2020), the term game-based learning refers to educational settings where students can play games to develop their knowledge and skills in a fun way which can be classified into digital and analog games.

COVID-19 pandemic limits the activities in school in relation to students' learning. The public schools with the efforts of the DEPED Division of Bacolod City creates localized modules and learning activity sheets that can sustain student's needs which congruent to the competencies mandated by the DepEd.

Among the public schools of the Division of Bacolod City, it is evident that there is no existing game-based activity that is being utilized by the students with the alignment to the Most Essential Learning Competencies (MELC). The gap of the study is the lack of motivation of the students towards learning since they are focused with modular learning. It would be an eye opener to public schools to utilize technology in education to be purposive and meaningful to every learner.

The Luis Hervias National High School opens the door of innovative activities and one of which is the AGILA which stands for Araling Panlipunan Game-based Interactive Learning Activity. The primary goal of AGILA is to sustain and improve the learning of the students in both school and home set-up. This game-based activity encourages learners to utilize their mobile phones effectively for educational purposes.

### **Statement of the Problem**

This study aims to determine the student's learning attitudes and motivation towards AGILA as an innovative activity in Araling Panlipunan of Luis Hervias National High School focusing on selected grade 10 students.

Specifically, this study seeks to answer the following questions:

1. What is the level of perceived modular experience of the respondents based on their Grade 9 level module experience?
2. Will this AGILA boost the learning attitudes of the respondents as a supplementary learning activity

in Araling Panlipunan?

3. Will this AGILA increase the learning motivations of the respondents as a supplementary learning activity in Araling Panlipunan?

## LITERATURE REVIEW

The Philippines' basic education system uses modular distance learning (MDL), which enables students to access printed self-learning modules (SLM) as well as modules that can be accessed digitally or through electronic devices like laptops, computers, tablets, and smartphones (Canete and Potane, 2022).

Teachers should convey the most difficult ideas in the chosen way while educating an individual. Simpler topics should be presented in a different manner. If teachers want to reach every student in a class, they should incorporate all learning styles in their presentations. This may be a rather straightforward process (Giles, et.al. 2016).

A case study by Boctor (2012) aimed at evaluating the effectiveness of game-based learning in reviewing clinical materials among nursing students with different learning styles. The game utilized was called "Nursopady" – a Jeopardy-inspired game. It was concluded that after the implementation of the game, the survey showed that most students agreed that the game was proven to be beneficial in reviewing clinical materials while garnering positive comments as well. It is also noted that another survey was also conducted, through convenience sampling, on students' preference in reviewing materials. It can be noted that most respondents preferred the utilization of games over other methods such as lectures and videos as means of reviewing.

Likewise, a notable survey was conducted by Rogayan Jr. and Bautista (2019) on 106 students' preferences in terms of motivational strategies for learning Science. Three classifications were made with corresponding motivational activities for each. Findings showed that respondents were likely to be motivated by activities that encourage critical and deep thinking such as thought-provoking questions. On the contrary, they were most inclined to do activities such as riddles, 4 pics and 1 word, and relay as they were considered fun and enjoyable.

## INNOVATION, INTERVENTION AND STRATEGY

The Araling Panlipunan Game-based Interactive Learning Activity (AGILA) is an innovative project of the Araling Panlipunan Department of Luis Hervias National High School to meet the school's goal of Zero drop-outs, Zero failure, and 60% MPS. This game was designed not only for school purposes but also for both school and at home as a supplementary activity. Moreover, it can be useful to every student amidst pandemic. This innovative project can fill in the gap of 2-year modular/distant learning and adapt to the needs of the students, education and world of technology.

The AGILA is a software code designed to sustain the educational needs of the students with the alignment of Araling Panlipunan most essential learning competencies (AP MELCs). It is an offline game-based activity as the goal of this project to be gadget-friendly, free to access and updated. Since the advent of technology continuously improves the educational processes of the school, this game can combat the said educational gaps and difficulties of the teachers in instilling the analytical and creative skills of the students as expected to be acquired by the 21<sup>st</sup> century students.



Figure 1: Homepage

The researcher takes a step in innovating the modular/distant learning into a digital and user-friendly game-based activity. The AGILA has four (4) elements in settings: Transparency, Scale, Vertical Position, and Horizontal Position. Transparency refers to the visibility of the buttons. Scale refers to the size of the given buttons. Vertical and Horizontal Position refer only to the positioning of the buttons.

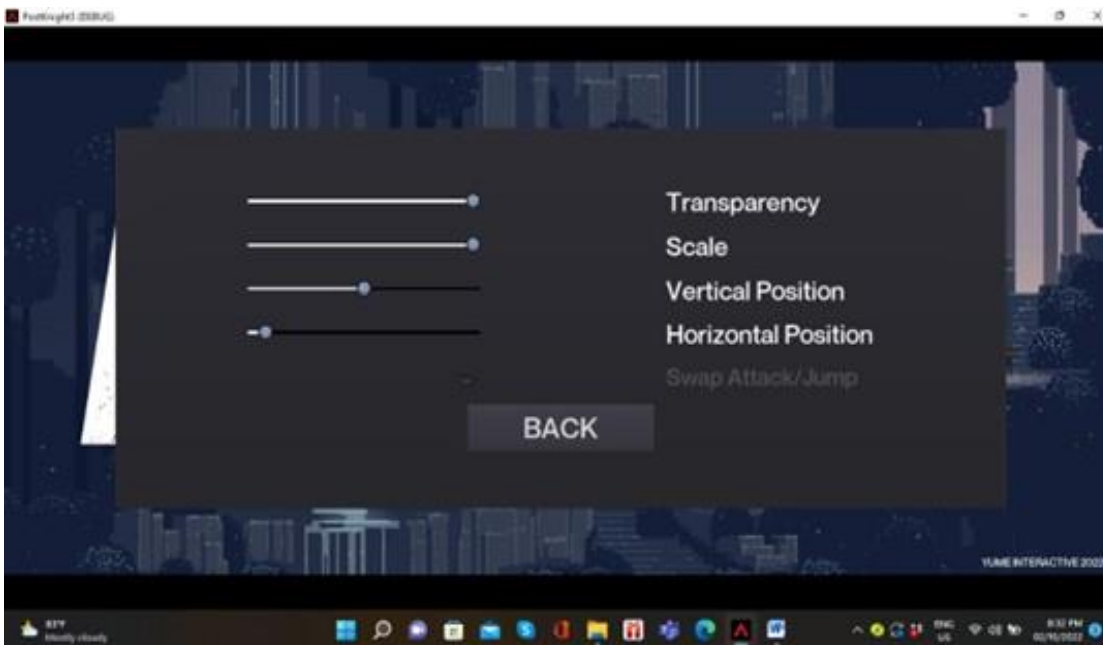


Figure 2: Game (AGILA) Settings

When the students navigate and play the game, there is an enemy along the way that diminishes your life as you have close contact with them. The red bar in the upper left represents the life of the character while the green bar is the energy of the character. The game provided a letter button with different functions. Button A is the walking function on the left side while Button B is for the right walking function. Button Y is the jumping function and Button X is for the attack.

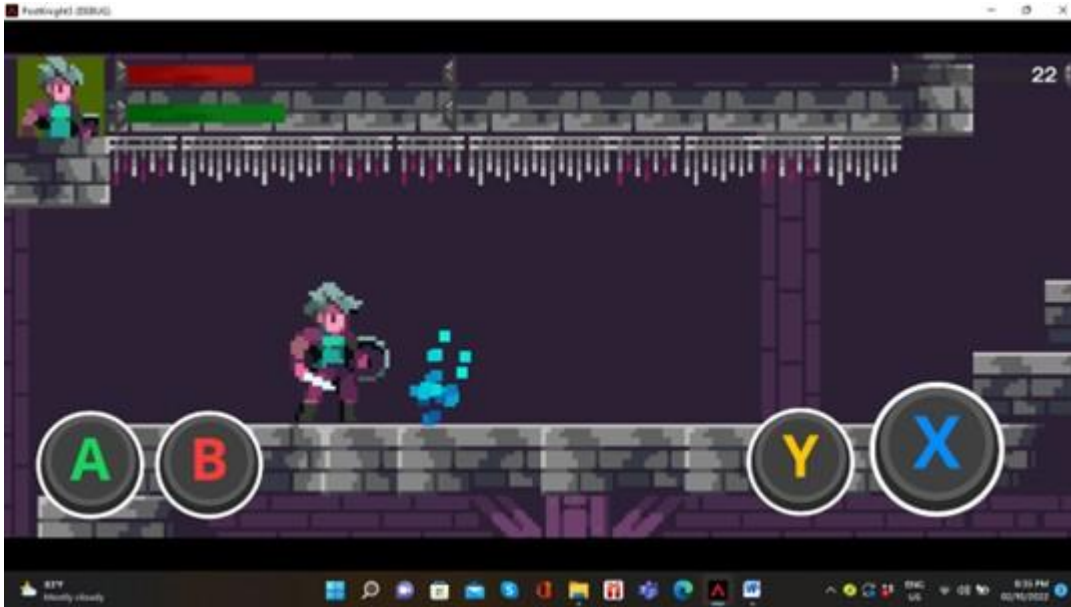


Figure 3: Rest and Question Portal

In the game, there is a blue fire that serves as a rest post and question portal. There is a corresponding question related to Grade 10 araling panlipunan lesson based on the modules of Deped. In answering the question, there is a provided keyboard that will pop out to have an easy submission of the answer. Every correct answer will give you corresponding energy that can be used in attacks.

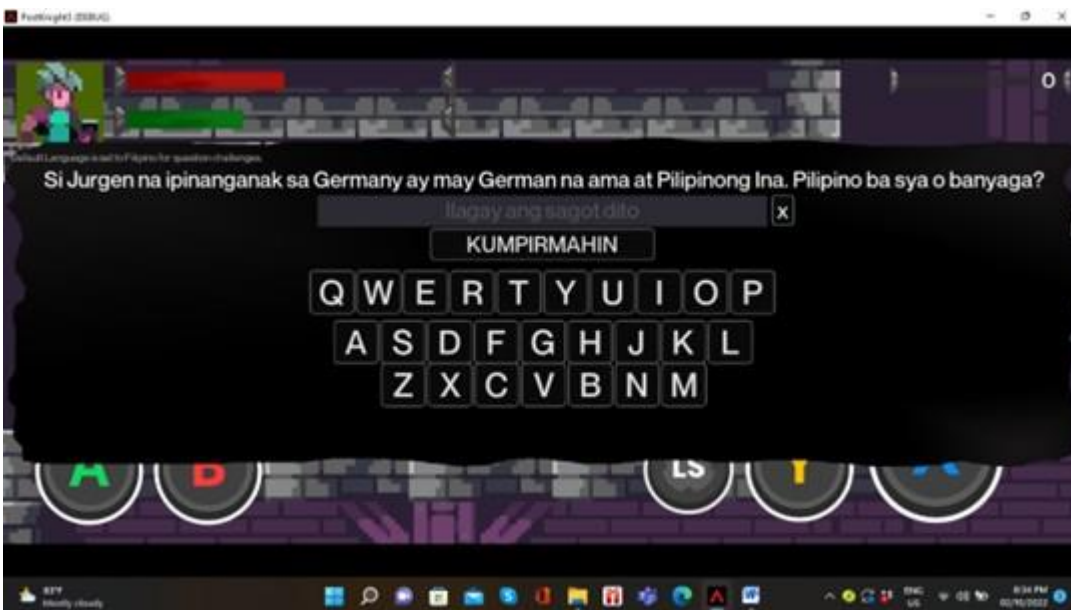


Figure 4: Araling Panlipunan Question

The last part of the game is the assessment in which the students will answer a set of questions to recall and analyze again the content of the lesson. The AGILA gives a motivational factor to students as they use their gadgets in an educational manner. The researcher addresses the adaptive and relevance of the educational changes that anchors to the goals of 21st century skills.

The AGILA is beneficial to students, teachers, and even to the principal. Students will able to uplift and continuously improves itself based on his capabilities with the help of this learning material. Teachers able

transform a new strategy in the classroom that is more engaging and newer to the students. Lastly, to the principal since there are goals that need to be attained as the school is being measured through MPS, drop-outs and failures.

The transformation of this teaching delivery will be successful when things and goals are anchored to the Sustainable Development Goals of 2030 which specifies the educational progress as we build the nation into a motivating and adaptive to changes.

## SCOPE OF THE STUDY

This research study focuses on determining the increase of learning motivations of the students with the use of game-based learning. The study will be conducted in Luis Hervias National High School, Villamonte, Bacolod City. The respondents of the study will be the selected Grade 10 Junior High School, who are officially enrolled for the school year 2022 – 2023.

## RESEARCH METHODS

- **Participants and Sources of Data and Information**

This action research was participated by selected Grade 10 Junior High School Students of Luis Hervias National High School. The respondents of the study were selected using the random sampling technique. They are also the focus group to utilize the AGILA to measure their learning attitudes towards the game-based activity.

The content of the game is the Araling Panlipunan Grade 10 subject that focuses on the MELC-based contemporary issues. Students will answer the following questions as they play the game and they must also observe the different features of the game to be the basis of answering the survey questionnaire afterwards.

- **Data Gathering Methods**

This research aims to boost student’s learning attitudes and motivations to the Araling Panlipunan by improving the learning materials and adapting to the changing time of the educational process. In gathering data, the researcher performed the three steps of implementation stages: Pre-Implementation, During Implementation, and Post-Implementation.

In the Pre-Implementation stage, the researcher conducts a face-to-face meeting with the game developer of Robotics and STEM Education Academy, a China-based company. The game developer lays down all the sample frameworks of the game that are user-friendly and aligned to the ages of the students. The researcher submitted the research proposal to the Chairman of the school-based research committee. After the approval of the chairman, the researcher created a letter to ask permission to run-through the game in the selected grade 10 students. Selected grade 10 students are being gathered in one room for the orientation of the game on how to download and play the game with the consent of their section adviser. Moreover, before the students play the game, they will answer a survey about their modular experience as a basis for comparison of the data.

Table 1: Module Experience Survey

	5	4	3	2	1
1. The way the module materials were presented helped to maintain my interest.					
2. The study workload on this module fitted with my personal circumstances.					

3. The structure of the module meant I could interact with my peers when learning.					
4. Resources I accessed through the library (e.g., journal articles) helped me to understand the core concepts of the module.					
5. The instructions on how to complete the assessed tasks were easy to follow.					
6. Sufficient opportunities were provided to check my understanding on the module.					
7. There was enough time in the study planner to prepare for the end of module assessment.					

Source: Wylie J. (2013). Student Experience on a Module Survey. The Open University- United Kingdom. [https://www.open.ac.uk/student-surveys/sites/www.open.ac.uk.student-surveys/files/files/SEaM\\_20-Revised\\_Survey.pdf](https://www.open.ac.uk/student-surveys/sites/www.open.ac.uk.student-surveys/files/files/SEaM_20-Revised_Survey.pdf)

During the implementation, students have the choice on what gadget they want to use for playing the game. The game developer provided downloadable games for mobile phone users and laptop/personal computer users. The selected students will play the game that focuses on their module 1 in Araling Panlipunan 10. The researcher facilitates their queries and answers in their created group chat in messenger. After they played the game, the selected grade 10 students will answer the survey questionnaire about their learning attitudes towards the game. All gathered data was compared to their learning experiences from the past during their modular/distant learning.

The students will answer the survey through google forms following the Data Privacy Act of 2012 regarding the confidentiality of the data. The survey questionnaire will determine their learning attitudes.

To gauge participants’ reactions and experiences after finishing the game, the researchers used the adopted and modified survey questionnaire of game-based learning attitudes. There were a total of 8 statements/questions on this survey. A scale of 1 to 5 was used to rate each question, with 1 denoting “strongly disagree” and 5 denoting “strongly agree.”

Table 2: Survey Questionnaire

INDICATORS	5	4	3	2	1
• The English instructions provided makes it easy to use the “game-based learning materials”					
• This “game-based learning materials is easy to use					
• This “game-based learning materials” could help me learn the knowledge of Araling Panlipunan.					
• This “game-based learning materials” could help me apply what I learned.					
• This “game-based learning materials” could extend my knowledge about contemporary issues in the society.					

<ul style="list-style-type: none"> <li>• It will be more interesting than lectures only in class if teachers apply game-based learning materials on their teaching.</li> </ul>					
<ul style="list-style-type: none"> <li>• I will be more motivated on learning with game-based learning materials.</li> </ul>					
<ul style="list-style-type: none"> <li>• Overall, I'm satisfied with the way of learning through this "game-based learning materials".</li> </ul>					

Source: Chang et.al., (2014). An Exploration of The Attitude and Learning Effectiveness of Business College Students Towards Game Based Learning. Retrieved from: <https://files.eric.ed.gov/fulltext/ED557261.pdf>

On the Post-Implementation, the feed backing session for game developer and araling panlipunan grade 10 teachers and the master teacher of Aralpan will be conducted. The said focus group discussion will be a way of improving and developing the AGILA based on the strengths and weaknesses given that the survey questionnaire was being utilized.

• **Ethical Consideration**

The informed consent of the respondents shall be safeguarded prior to the study. The participation of the respondents is not mandatory and the information gathered through them shall be secured of their consent and they have the right to withdraw anytime they feel offended or uncomfortable. The participants are also briefed in answering with honesty following the Data Privacy Act of 2012 securing the full assurance of the confidentiality of their data. Personal information of the respondents is to be kept and secured to prevent the disruption of security and privacy of the participants preceding the study. The medium or materials where information was gathered through participants shall be disposed of by deleting all the data gathered though Google Forms to eradicate any opportunity of recuperation. Any printed documents containing raw information that presents the involvement of respondents shall be discarded by shredding to prevent retrieval of data.

• **Data Analysis Plan**

The researcher utilized the google forms in getting the data from the respondents using a survey questionnaire. The survey used a 1-5 Likert Scale measurement, 1 – strongly disagree and 5 – strongly disagree.

Research Problem 1. The Frequency and Percentage were used.

Research Problem 2: The Mean and Standard Deviation were used.

Research Problem 3: The Mean and Standard Deviation were used.

**RESULTS AND DISCUSSION**

The researcher utilized all gathered data from the selected grade 10 students as they utilized the game (AGILA).



Table 3: Module Experience Survey Results

ITEMS	MEAN	INTERPRETATION
1. The way the module materials were presented helped to maintain my interest.	3.31	Uncertain
2. The study workload on this module fitted with my personal circumstances.	3.19	Uncertain
3. The structure of the module meant I could interact with my peers when learning.	3.44	Agree
4. Resources I accessed through the library (e.g., journal articles) helped me to understand the core concepts of the module.	3.44	Agree
5. The instructions on how to complete the assessed tasks were easy to follow.	3.69	Agree
6. Sufficient opportunities were provided to check my understanding on the module.	3.50	Agree
7. There was enough time in the study planner to prepare for the end of module assessment.	3.69	Agree

As shown in the table 3 above, the results indicates that the learnings and interests of the students are not sustain and not impactful as they have only a limited modality to be utilized. Most of the statements being measured indicates only in the average results. They are not high engaged to the modular. This gap of the study is evident since pandemic creates barrier for both teaching-learning process. It is contrary to the theory of John Dewey of learning by doing. Students are more effective in practical works than paper and pencil only.

Table 4: Descriptive Results of Student’s Learning Attitudes toward AGILA

INDICATORS	MEAN	INTERPRETATION
1. The English instructions provided makes it easy to use the “game-based learning materials”	4.00	Agree
2. This “game-based learning materials is easy to use	4.00	Agree
3. This “game-based learning materials” could help me learn the knowledge of Araling Panlipunan.	4.06	Agree
4. This “game-based learning materials” could help me apply what I learned.	3.88	Agree
5. This “game-based learning materials” could extend my knowledge about contemporary issues in the society.	4.19	Agree
6. It will be more interesting than lectures only in class if teachers apply game-based learning materials on their teaching.	4.06	Agree
7. I will be more motivated on learning with game-based learning materials.	4.25	Strongly Agree
8. Overall, I’m satisfied with the way of learning through this “game-based learning materials”.	4.33	Strongly Agree

The table gives evidence on how AGILA significantly improves students’ learning attitudes for Araling

Panlipunan. Based on the students' abilities, game-playing adjustments, and manipulations, the mean outcomes support the learning experiences of the students. According to game-based learning theory (JTCL, 2019), constructivism is the foundation of game-based learning. Teachers must give students the resources they need to create their own methods for resolving problems. This suggests that students engage in a participatory process in which they engage with their surroundings to address the problem that is presented to them.

## CONCLUSION

The study presented in this paper examined the learning attitudes of the students toward Araling Panlipunan Game-based Interactive Learning Activity. The AGILA promotes positive reinforcement to students with adaptation of educational technology.

Reinforcing decision-making abilities is one of game-based learning's most helpful advantages. The idea of using games in the classroom is a very recent one. It's crucial to introduce students to the idea of instructional gaming as they get used to their high-graphics environment. It is feasible to modify game-based learning to suit a person's interests, personality, and learning preferences. One of the numerous advantages of game-based learning in education is its capacity to adjust to the individual demands of each learner. Even though the world changes, it is still obvious that teachers serve as a bridge for learning and a figure of accuracy in the classroom. When teachers are designated as the learning facilitators for their students, this game-based learning will be relevant.

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