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Pedagogical Interaction of Game Based Learning on Learner's Learning Attitudes and Social Skills

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Abstract*—This study's primary goal is to ascertain how students' social skills and attitudes toward learning were affected by game-based learning. More precisely, it seeks to ascertain how deeply learners perceive game-based learning. Additionally, pro-social behavior, self-regulation, teamwork, self-management, and community behavior were among the behavioral, emotional, and cognitive manifestations of learners' attitudes toward learning. The study also looks at the important connection between learners' social skills and learning attitude and game-based learning. The primary instrument for collecting data was a structured questionnaire that the researcher developed using the descriptive approach. 170 junior high school students from particular General Luna District schools participated in the survey. To make sure the tool was dependable and consistent, it was tested and validated. Frequency, percentage, weighted mean, standard deviation, and Pearson Product-Moment Correlation Coefficient were used to assess the quantitative data that had been gathered. The results show that all aspects of game-based learning implementation were usually high, especially when it came to active participation, teamwork, and competition. In terms of behavioral, emotional, and cognitive characteristics, learners also showed a high degree of positive learning attitudes. In a similar vein, social skills received good ratings, particularly in pro-social behavior and teamwork. According to statistical analysis, learners' learning attitudes and game-based learning are significantly correlated. The null hypotheses are also rejected because a strong correlation was shown between learners' social abilities and game-based learning. The results imply that well-structured game-based learning strategies contribute positively to the development of learners' attitudes toward learning and their social competencies. Hence, educators are encouraged to integrate purposeful and immersive game-based activities to enhance engagement, motivation, and social interaction in the classroom. Future studies may further investigate the long-term effects of game-based learning on academic achievement and behavioral development.*

Keywords*—Pedagogical influence, game based learning, learning attitudes, social skills, academic achievement, and behavioral development*.

I. INTRODUCTION

In today's changing learning environment, educators are exploring new ways to make instruction more meaningful, engaging, and responsive to the needs of various learners. Game-Based Learning (GBL) is a teaching strategy that combines game elements, mechanics, and interactive challenges to support both academic and personal growth. The impact of game-based learning refers to how these game-driven experiences affect the teaching and learning process. They can increase motivation and participation while promoting a deeper understanding. Through structured gameplay, students absorb concepts and also develop persistence, strategic thinking, and active engagement. Traditional methods may not always support these skills.

Understanding this influence also requires looking closely at the learner. A student's learning attitude, their beliefs, feelings, and behavioral tendencies toward schoolwork plays a crucial role in how they respond to instructional innovations. Nadeem, Oroszlanyova and Farag (2023) stated that positive attitudes often lead to greater enthusiasm, willingness to participate, and openness to challenges. When students perceive learning as enjoyable and rewarding, their confidence and curiosity naturally grow. Game-based learning, with its interactive nature, immediate feedback loops, and sense of achievement, has the potential to shape these attitudes in transformative ways.

Moreover, beyond academic dispositions, education also nurtures how learners interact with others. Social skills, which include communication, cooperation, empathy, conflict resolution, and the ability to work effectively in groups, are essential competencies for success in both school and real-life settings. Games often require players to collaborate, follow rules, negotiate roles, and build strategies together making them a powerful medium for strengthening these interpersonal abilities.

This research, therefore, examined how game-based learning influences learners not only in terms of their attitudes toward learning but also their social skills. By understanding these connections, educators can make informed decisions on integrating games not simply as classroom entertainment, but as purposeful and meaningful pedagogical tools that support holistic learner development.

1.1 Statement of the Problem

Problem/s which were addressed by the research

The primary aim of this study was to analyze the pedagogical influence of game-based learning on learner's learning attitudes and social skills.

Specifically, it sought to answer the following questions:

1. What is the level of Game-Based Learning as perceived by the learners in terms of:
   1.1 Clear Goals and Rules;
   1.2 Active Engagement;
   1.3 Immediate Feedback;
   1.4 Collaboration and Competition; and Immersive?
2. What is the level of learners' Learning Attitude in terms of:
   2.1 Behavioral;
   2.2 Emotional; and

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2.3 Cognitive?
3. What is the level of learners' Social Skills in terms of:
3.1 Self-Management;
3.2 Teamwork;
3.3 Self-Regulation;
3.4 Pro-Social Behavior; and
3.5 Community Behavior?
4. Is there a significant relationship between Game-Based Learning and learners Learning Attitude?
5. Is there a significant relationship between Game-Based Learning and learners' Social Skills?

II. Methodology

The primary instrument for collecting data was a structured questionnaire that the researcher developed using the descriptive approach. 170 junior high school students from particular General Luna District schools participated in the survey. To make sure the tool was dependable and consistent, it was tested and validated. Frequency, percentage, weighted mean, standard deviation, and Pearson Product-Moment Correlation Coefficient were used to assess the quantitative data that had been gathered.

III. Results and Discussion

This part presents, analyzes, and interprets the data gathered to determine the level of game-based learning and its significant relationship with learners' learning attitude and social skills. The chapter addresses the specific variables and indicators used in the study and provides a clear discussion of the findings based on the statistical treatment applied.

Level of Game-Based Learning

In this study, game-based learning involves the implementation of games that are structured and interactive as teaching methods for promoting the comprehension, engagement, and collaboration of learners in both competitive and collaborative environments. This approach promotes active learning because it involves applying concepts learned through enjoyable activities.

The following tables illustrate the level of game-based learning, including variables such as clear goals and rules, active engagement, immediate feedback, collaboration and competition, and immersive learning experiences. Each variable is assessed using mean and standard deviation to determine the extent to which these practices are observed and applied in the classroom. These results provide insight into how effectively game-based learning strategies are implemented and their potential impact on learner's attitudes and social skills.

Table 1 show the level of Game-Based Learning as perceived by the learners in terms of clear goals and rules.
The findings indicate that learners strongly agreed that their teacher establishes clear goals and rules that guide them throughout the activity and help them remain focused on the learning task. They also strongly agreed that the rules are explained in a manner that is easy to understand and that objectives are clearly presented so students know what they are expected to accomplish. Furthermore, learners strongly affirmed that the teacher explains rules thoroughly to prevent confusion during gameplay. These responses signify that clarity and structure are consistently emphasized during game-based activities.

Table 1. Level of Game-Based Learning as perceived by the Learners in terms of Clear Goals and Rules

Statements My teacher establishes clear goals and rules to …	Mean	SD	Remarks
…guide us throughout the activity.	4.83	0.42	Strongly Agree
…present rules that are easy for us to understand.	4.57	0.65	Strongly Agree
…provide objectives that help us know what we must achieve.	4.55	0.64	Strongly Agree
…explain rules that prevent confusion during the game.	4.75	0.58	Strongly Agree
…help us stay focused on the learning task.	4.76	0.45	Strongly Agree
Weighted Mean	4.69		
SD	0.57		
Verbal Interpretation	Very High		

The verbal interpretation of the weighted mean of 4.69 with a standard deviation of 0.57 is "Very High." This suggests that the application of game-based learning clearly demonstrates the need for well-defined objectives and regulations. The very low standard deviation suggests that learners' opinions are consistent, demonstrating a high degree of agreement among respondents about the structure and intelligibility of educational games.

The findings show that teachers consistently integrate structured games into their instruction and emphasize the importance of clear guidance in Game-Based Learning. Clearly defined goals and rules create an organized and focused learning environment, reducing confusion and promoting active engagement. By aligning game activities with explicit objectives and understandable guidelines, teachers enhance instructional effectiveness and ensure that learning remains purposeful and outcome-driven.

Clear goals provide students with direction. When students know what they need to accomplish, they are more likely to stay focused and put in the effort necessary to succeed.

Table 2 shows the level of Game-Based Learning as perceived by the learners in terms of Active Engagement.

The findings indicate that learners strongly agreed that their teacher encourages sustained attention throughout the activities, stimulates active participation through game mechanics, and promotes continuous involvement via interactive features. Learners also strongly affirmed that the teacher encourages critical thinking, prompt responses to challenges, and the active application of strategies during game tasks. These responses highlight the consistent emphasis on student's participation and cognitive involvement during game-based learning activities.

The verbal interpretation of the weighted mean of 4.51 with a standard deviation of 0.75 is "Very High." This suggests that the application of game-based learning clearly demonstrates the element of active participation. A common understanding of the teacher's efforts to sustain engagement

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and interaction throughout the learning process is suggested by the comparatively low standard deviation, which demonstrates consistency in students' perspectives.

Table 2. Level of Game-Based Learning as perceived by the Learners in terms of Active Engagement

Statements My teacher encourages active participation by …	Mean	SD	Remarks
…sustaining our attention throughout the task in regard to learning activities in the game	4.50	0.73	Strongly Agree
…stimulating us to participate actively in each activity through game mechanics	4.51	0.76	Strongly Agree
…promoting continuous involvement from us through the interactive features of the game	4.44	0.78	Strongly Agree
…encouraging us to think critically and respond promptly in the challenges of the game	4.63	0.64	Strongly Agree
…pushing us to apply strategies and make decisions actively in the game tasks	4.49	0.82	Strongly Agree
Weighted Mean	4.51		
SD	0.75		
Verbal Interpretation	Very High		

The results imply that a crucial component of game-based learning in this classroom is active involvement. In order to improve total engagement, learning effectiveness, and the development of higher-order thinking abilities through structured gameplay, teachers effectively create an environment where students are constantly driven to participate, think critically, and make judgments.

One of the main benefits of game-based learning is increasing student motivation. Students often find traditional teaching methods boring and uninteresting.

Table 3 shows the level of Game-Based Learning as perceived by the learners in terms of Immediate Feedback.

Table 3. Level of Game-Based Learning as perceived by the Learners in terms of Immediate Feedback

Statements My teacher reinforces immediate feedback by …	Mean	SD	Remarks
…providing timely responses that help learners adjust their performance during the activity.	4.58	0.69	Strongly Agree
…delivering clear corrective cues that guide learners toward improved understanding.	4.70	0.58	Strongly Agree
…supporting learners' decision-making by offering prompt evaluation of their actions.	4.61	0.62	Strongly Agree
…enhancing learning efficiency by immediately addressing misconceptions.	4.39	0.83	Strongly Agree
…increasing learner motivation through quick acknowledgment of progress.	4.53	0.71	Strongly Agree
Weighted Mean	4.56		
SD	0.70		
Verbal Interpretation	Very High		

The findings indicate that learners strongly agreed that their teacher provides timely responses that help them adjust their performance during activities, delivers clear corrective cues to guide understanding, and supports decision-making by promptly evaluating their actions. Learners also strongly affirmed that the teacher immediately addresses misconceptions and acknowledges their progress to enhance motivation. These responses emphasize the consistent provision of immediate feedback as a key feature in facilitating learning during game-based activities.

The verbal interpretation of the weighted mean of 4.56 with a standard deviation of 0.70 is "Very High." This suggests that the use of game-based learning clearly shows immediate feedback. The comparatively low standard deviation demonstrates consistency in students' opinions, indicating that they all acknowledge the teacher's prompt direction and encouragement during the game.

The findings suggest that immediate feedback plays a crucial role in enhancing learners' performance, understanding, and motivation. By promptly addressing errors and acknowledging achievements, teachers effectively support continuous learning and engagement, ensuring that students can adapt and improve their strategies during game-based learning activities.

In game-based learning, instant feedback has emerged as a potent instrument for raising student motivation, engagement, and retention. Students can participate with educational games and get immediate feedback on their efforts.

Table 4. Level of Game-Based Learning as perceived by the Learners in terms of Collaboration and Competition

Statements My teacher fosters the spirit of collaboration and competition by:	Mean	SD	Remarks
…encouraging learners to work together toward shared goals during gameplay.	4.56	0.74	Strongly Agree
…promoting healthy competition motivates learners to improve performance.	4.70	0.56	Strongly Agree
…enhancing peer interaction by requiring learners to coordinate strategies.	4.54	0.74	Strongly Agree
…promoting teamwork skills as learners rely on one another to progress in the game.	4.63	0.73	Strongly Agree
…building communication skills by prompting learners to exchange ideas during tasks.	4.58	0.79	Strongly Agree
Weighted Mean	4.60		
SD	0.72		
Verbal Interpretation	Very High		

Table 4 presents the level of Game-Based Learning as perceived by the learners in terms of Collaboration and Competition. The findings indicate that learners strongly agreed that their teacher encourages them to work together toward shared goals during gameplay, promotes healthy competition to motivate improvement, and enhances peer interaction by requiring coordination of strategies. Learners also strongly affirmed that teamwork skills are developed as they rely on one another to progress in the game and that communication skills are strengthened through the exchange of ideas during tasks. These responses highlight the consistent emphasis on collaboration and competition as integral elements of game-based learning.

The verbal interpretation of the weighted mean of 4.60 with a standard deviation of 0.72 is "Very High." This implies that the application of game-based learning clearly demonstrates both cooperative and competitive elements. Strong agreement that cooperation and healthy competition are successfully incorporated into games is demonstrated by the

comparatively low standard deviation, which represents consistency in learners' perceptions.

The findings suggest that fostering collaboration and competition enhances learners' engagement, social interaction, and problem-solving skills. By promoting teamwork and motivating students through competition, teachers create an environment where learners actively participate, communicate effectively, and apply strategies collectively to achieve success in game-based learning activities.

Table 5. Level of Game-Based Learning as perceived by the Learners in terms of Immersive

Statements My teacher creates an immersive learning environment through …	Mean	SD	Remarks
…building a learning space that fully engages the senses.	4.41	0.84	Strongly Agree
…enabling us to stay focused on tasks without distraction.	4.46	0.68	Strongly Agree
…simulating real-world scenarios that deepen understanding.	4.61	0.62	Strongly Agree
…sustaining our attention through visually rich and interactive elements.	4.45	0.83	Strongly Agree
…encouraging us to remain actively involved throughout the activity.	4.65	0.72	Strongly Agree
Weighted Mean	4.52		
SD	0.75		
Verbal Interpretation	Very High		

Table 5 presents the level of Game-Based Learning as perceived by the learners in terms of Immersive Experience. The findings indicate that learners strongly agree that their teacher creates a learning environment that fully engages the senses, enables them to stay focused on tasks without distraction, and simulates real-world scenarios to deepen understanding. Learners also strongly affirmed that attention is sustained through visually rich and interactive elements and that they are encouraged to remain actively involved throughout the activity. These responses suggest that the immersive aspects of game-based learning are consistently emphasized to enhance engagement and understanding.

The verbal interpretation of the weighted mean of 4.52 with a standard deviation of 0.75 is "Very High." The comparatively low standard deviation demonstrates consistency in learners' perceptions, demonstrating substantial agreement across respondents, and this suggests that immersive experiences are very evident in the application of game-based learning.

According to the results, an immersive learning environment successfully draws students in, motivates them to participate actively, and fosters deeper comprehension. Teachers can design a dynamic game-based learning experience that encourages students to fully participate and apply knowledge throughout the activity by incorporating realistic, interactive, and engaging features.

Level of learners' Learning Attitude

In this study, the level of learners' learning attitude refers to the extent to which students demonstrate positive behavioral, emotional, and cognitive dispositions toward learning. Behavioral attitude examines participation, engagement, and responsibility in learning tasks; emotional attitude explores motivation, interest, and feelings toward learning activities; and cognitive attitude assesses learners' thinking, problem-solving, and understanding of concepts.

The following tables present the learners' responses on these variables, including the statements, mean, standard deviation, and verbal interpretations. These data provide insights into how learners perceive and approach learning tasks, offering a basis for understanding their overall attitude toward academic activities and instructional strategies. Furthermore, the results help identifies patterns and trends in learners' responses across different indicators. These findings can also guide educators in designing more effective and responsive teaching strategies.

Table 6. Level of Learners' Learning Attitude in terms of Behavioral

Statements As a learner participating in a game-based learning I can …	Mean	SD	Remarks
…demonstrate consistent effort in completing learning tasks.	4.73	0.53	Strongly Agree
…participate actively in classroom discussions.	4.67	0.60	Strongly Agree
…show persistence when facing challenging tasks.	4.63	0.63	Strongly Agree
…manage time effectively during learning activities.	4.66	0.68	Strongly Agree
…seek additional resources to enhance understanding.	4.61	0.66	Strongly Agree
Weighted Mean	4.66		
SD	0.64		
Verbal Interpretation	Very Positive		

Table 6 presents the level of learners' learning attitude as perceived by the learners in terms of Behavioral. The findings indicate that learners strongly agreed that they demonstrate consistent effort in completing learning tasks, participate actively in classroom discussions, show persistence when facing challenging tasks, manage time effectively during learning activities, and seek additional resources to enhance understanding. These answers imply that during game-based activities, students regularly display constructive behaviors that encourage active participation and learning.

The verbal interpretation of the weighted mean of 4.66 with a standard deviation of 0.64 is "Very Positive Learning Attitude." This suggests that learners exhibit highly visible positive behavioral attitudes, and the comparatively low standard deviation demonstrates consistency in their opinions, indicating great agreement among respondents.

The findings suggest that learners' behavioral learning attitudes effective promote engagement, persistence, and responsibility. By demonstrating consistent effort and proactive participation, learners enhance their ability to interact meaningfully with game-based learning activities, which contributes to better understanding and application of knowledge.

Table 7 presents the level of learners' learning attitude as perceived by the learners in terms of Emotional. The findings indicate that learners strongly agreed that they express interest and curiosity during learning activities, show enthusiasm when exploring new topics, demonstrate confidence in handling learning tasks, maintain a calm attitude when facing

academic difficulties, and exhibit patience during complex or slow-paced lessons. These responses suggest that learners consistently display positive emotional dispositions that support engagement and effective learning in game-based activities.

Table 7. Level of Learners' Learning Attitude in terms of Emotional

Statements As a learner participating in a game-based learning, I can …	Mean	SD	Remarks
…express interest and curiosity during learning activities	4.69	0.64	Strongly Agree
…show enthusiasm when exploring new topics.	4.57	0.60	Strongly Agree
…demonstrate confidence in handling learning tasks.	4.58	0.74	Strongly Agree
…maintain a calm attitude when facing academic difficulties.	4.58	0.62	Strongly Agree
…exhibit patience during complex or slow-paced lessons	4.59	0.66	Strongly Agree
Weighted Mean	4.59		
SD	0.68		
Verbal Interpretation	Very Positive		

The verbal interpretation of the weighted mean of 4.59 with a standard deviation of 0.68 is Very Positive Learning Attitude. This suggests that learners have very clear positive emotional attitudes, and the comparatively low standard deviation indicates that respondents' perceptions are consistent, indicating good agreement.

The findings suggest that learners' emotional learning attitudes enhance their motivation, confidence, and resilience. By maintaining interest, patience, and enthusiasm, learners are better able to engage actively with game-based learning activities, contributing to a supportive and productive learning environment.

Table 8. Level of Learners' Learning Attitude in terms of Cognitive

Statements As a learner participating in a game-based learning I can …	Mean	SD	Remarks
…analyse information critically to draw meaningful conclusions.	4.59	0.69	Strongly Agree
…apply theoretical knowledge to solve complex problems.	4.48	0.70	Strongly Agree
…evaluate multiple perspectives before making decisions.	4.64	0.61	Strongly Agree
…synthesize ideas from different sources to create new understanding.	4.59	0.67	Strongly Agree
…identify patterns and relationships within learning materials.	4.54	0.79	Strongly Agree
Weighted Mean	4.54		
SD	0.73		
Verbal Interpretation	Very Positive		

Table 8 presents the level of learners' learning attitude as perceived by the learners in terms of Cognitive. The findings indicate that learners strongly agreed that they are able to analyze information critically to draw meaningful conclusions, apply theoretical knowledge to solve complex problems, evaluate multiple perspectives before making decisions, synthesize ideas from different sources to create new understanding, and identify patterns and relationships within learning materials. These responses suggest that learners consistently demonstrate strong cognitive engagement and critical thinking skills when participating in game-based learning activities.

The verbal interpretation of the weighted mean of 4.54 with a standard deviation of 0.73 is "Very Positive Learning Attitude." This suggests that learners have very clear positive cognitive attitudes, and the comparatively low standard deviation demonstrates consistency in their beliefs, indicating substantial agreement among respondents.

The findings suggest that learners' cognitive learning attitudes contribute significantly to problem-solving, analytical reasoning, and knowledge construction. By engaging critically with content and synthesizing information, learners are better equipped to make informed decisions, apply concepts effectively, and enhance overall learning outcomes in game-based learning activities.

Level of Learners' Social Skills

In this study, the level of learners' social skills refers to the extent to which learners demonstrate effective interpersonal and intrapersonal abilities while participating in game-based learning activities.

The variables considered include Self-Management, Teamwork, Self-Regulation, Pro-Social Behavior, and Community Behavior. These dimensions describe learners' ability to organize tasks, collaborate with peers, regulate their behavior, support and actively engage in school or community initiatives.

The following tables present the statements, mean, standard deviation, remarks, and verbal interpretation based on the responses of the participants, providing a comprehensive overview of learners' social skill development.

Table 9 presents the level of learners' social skills as perceived by the learners in terms of Self-Management. The findings indicate that learners strongly agreed that they can organize tasks to meet academic deadlines efficiently, prioritize activities to maximize learning outcomes, regulate time effectively during study sessions, monitor progress toward achieving learning goals, and maintain discipline when performing complex or repetitive tasks. These responses suggest that learners consistently demonstrate strong self-Management skills, which allow them to effectively plan, regulate, and monitor their learning activities.

Table 9. Level of Learners' Social Skills in terms of Self-Management

Statements As a learner participating in a game-based learning I can …	Mean	SD	Remarks
…organize tasks to meet academic deadlines efficiently.	4.72	0.54	Strongly Agree
…prioritize activities to maximize learning outcomes.	4.59	0.63	Strongly Agree
…regulate time effectively during study sessions.	4.64	0.64	Strongly Agree
…monitor progress toward achieving learning goals.	4.54	0.71	Strongly Agree
…maintain discipline when performing complex or repetitive tasks.	4.68	0.63	Strongly Agree
Weighted Mean	4.62		
SD	0.66		
Verbal Interpretation	Very High		

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The weighted mean of 4.62 with a standard deviation of 0.66 is verbally interpreted as Very High Social Skills. This indicates that self-management skill is highly evident among learners, and the relatively low standard deviation shows consistency in their perceptions, reflecting strong agreement across respondents.

The findings suggest that learners' self-management skills enhance their ability to stay organized, disciplined, and focused on achieving learning goals. These skills contribute to effective participation in game-based learning activities and support overall academic performance and personal responsibility.

Self-management is a crucial skill for students in educational contexts. An important strategy involves time management, which includes prioritizing tasks and creating schedules. Effective time management allows students to allocate their time wisely, balancing academic and personal responsibilities.

Table 10. Level of Learners' Social Skills in terms of Teamwork

Statements As a learner participating in a game-based learning I can …	Mean	SD	Remarks
…collaborate effectively with peers to achieve shared goals.	4.71	0.56	Strongly Agree
…contribute ideas constructively during group activities.	4.62	0.64	Strongly Agree
…listen actively to understand teammates' perspectives.	4.79	0.48	Strongly Agree
…integrate diverse viewpoints to strengthen team outcomes.	4.64	0.57	Strongly Agree
…coordinate roles and responsibilities to enhance team efficiency.	4.64	0.64	Strongly Agree
Weighted Mean	4.67		
SD	0.60		
Verbal Interpretation	Very High		

Table 10 presents the level of learners' social skills as perceived by the learners in terms of Teamwork. The findings indicate that learners strongly agreed that they can collaborate effectively with peers to achieve shared goals, contribute ideas constructively during group activities, listen actively to understand teammates' perspectives, integrate diverse viewpoints to strengthen team outcomes, and coordinate roles and responsibilities to enhance team efficiency. These responses suggest that teamwork skills are consistently demonstrated by learners, enabling them to work harmoniously,

The weighted mean of 4.67 with a standard deviation of 0.60 is verbally interpreted as Very High Social Skills. This indicates that teamwork skills are highly evident among learners, and the relatively low standard deviation shows consistency in perceptions, reflecting strong agreement across respondents.

The findings suggest that learners' teamwork skills promote collaboration, constructive communication, and efficient coordination in game-based learning activities. By working effectively with peers, learners enhance both their social interactions and overall learning outcomes.

Table 11 presents the level of learners' social skills as perceived by the learners in terms of Self-Regulation. The findings indicate that learners strongly agreed that they can monitor their personal progress to ensure task completion, adjust strategies to maintain focus during challenging tasks, control impulses that may hinder learning activities, evaluate performance to identify areas for improvement, and manage distractions to sustain concentration during lessons. These responses suggest that learners consistently demonstrate self-regulation, which allows them to take responsibility for their learning, maintain focus, and improve performance in game-based learning activities.

Table 11. Level of Learners' Social Skills in terms of Self-Regulation

Statements As a learner participating in a game-based learning I can …	Mean	SD	Remarks
…monitor personal progress to ensure task completion.	4.67	0.63	Strongly Agree
…adjust strategies to maintain focus during challenging tasks.	4.56	0.68	Strongly Agree
…control impulses that may hinder learning activities.	4.58	0.64	Strongly Agree
…evaluate performance to identify areas for improvement.	4.64	0.64	Strongly Agree
…manage distractions to sustain concentration during lessons.	4.62	0.66	Strongly Agree
Weighted Mean	4.59		
SD	0.67		
Verbal Interpretation	Very High		

The weighted mean of 4.59 with a standard deviation of 0.67 is verbally interpreted as Very High Social Skills. This suggests that learners exhibit a high degree of self-regulation, and the comparatively low standard deviation demonstrates consistency in perceptions, indicating substantial agreement among respondents.

The findings suggest that learners' self-regulation skills enhance their ability to manage attention, sustain focus, and apply strategies effectively, contributing to better learning outcomes in game-based activities.

Table 12 presents the level of learners' social skills as perceived by the learners in terms of Pro-Social Behavior. The findings indicate that learners strongly agreed that they can assist their peers voluntarily in completing learning tasks, demonstrate respect for the opinions and contributions of others, share resources and knowledge to support group learning, respond empathetically to their peers' academic or emotional needs, and demonstrate fairness and integrity in their interactions. These responses suggest that learners consistently engage in pro-social behaviors, fostering collaboration, empathy, and ethical interactions during game-based learning activities.

Very High Social Skills is the linguistic interpretation of the weighted mean of 4.63 with a standard deviation of 0.68. This suggests that learners exhibit a high degree of pro-social conduct, and the comparatively low standard deviation shows that respondents' perceptions are consistent.

The findings suggest that learners' pro-social behaviors enhance teamwork, peer support, and positive social interactions, contributing to a cooperative and respectful learning environment in game-based activities.

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Table 12. Level of Learners' Social Skills in terms of Pro-Social Behavior

Statements As a learner participating in a game-based learning I can …	Mean	SD	Remarks
…assist my peers voluntarily in completing learning tasks.	4.67	0.64	Strongly Agree
…demonstrate respect for the opinions and contributions of others.	4.61	0.65	Strongly Agree
…share resources and knowledge to support group learning.	4.71	0.68	Strongly Agree
…respond empathetically to my peers' academic or emotional needs.	4.59	0.65	Strongly Agree
…demonstrate fairness and integrity in my interactions with others.	4.62	0.70	Strongly Agree
Weighted Mean	4.63		
SD	0.68		
Verbal Interpretation	Very High		

Table 13. Level of Learners' Social Skills in terms of Community Behavior

Statements As a learner participating in a game-based learning I can …	Mean	SD	Remarks
…participate actively in school or community initiatives.	4.72	0.56	Strongly Agree
…demonstrate responsibility toward communal learning environments.	4.57	0.70	Strongly Agree
…contribute ideas that benefit group or community activities.	4.64	0.66	Strongly Agree
…collaborate with peers to achieve shared community goals.	4.64	0.69	Strongly Agree
…engage in activities that promote social welfare and inclusion.	4.62	0.75	Strongly Agree
Weighted Mean	4.62		
SD	0.70		
Verbal Interpretation	Very High		

Table 13 presents the level of learners' social skills as perceived by the learners in terms of Community Behavior. The findings indicate that learners strongly agreed that they participate actively in school or community initiatives, demonstrate responsibility toward communal learning environments, contribute ideas that benefit group or community activities, collaborate with peers to achieve shared community goals, and engage in activities that promote social welfare and inclusion. These responses suggest that learners consistently exhibit behaviors that support the welfare of their learning community and demonstrate active participation in collective initiatives.

The verbal interpretation of the weighted mean of 4.62 with a standard deviation of 0.70 is Very High Social Skills. This suggests that learners exhibit a high degree of community-oriented behavior, and the comparatively low standard deviation demonstrates consistency in perceptions, indicating great agreement among respondents.

The findings suggest that learners' community behaviors promote social responsibility, collaboration, and inclusion, enhancing the overall learning environment and fostering active engagement beyond the classroom.

Significant Relationship between Game-Based Learning and Learners' Learning Attitude

This section examines the significant relationship between Game-Based Learning and learners' Learning Attitude. It aims to determine whether the implementation of structured and interactive game-based instructional strategies such as clear goals and rules, active engagement, immediate feedback, collaboration and competition, and immersive experiences—has a measurable impact on learners' Behavioral, Emotional, and Cognitive attitudes toward learning. The analysis employs the Pearson Product-Moment Correlation to assess the strength and direction of these relationships and to provide insights into how game-based approaches may influence learners' overall engagement and disposition in the classroom.

The behavioral, emotional, and cognitive aspects of learners' learning attitudes are significantly correlated with game-based learning, as shown in Table 14. To ascertain the direction and intensity of the relationships, the Pearson Product-Moment Correlation Coefficient was utilized.

Table 14. Significant relationship between Game-Based Learning and Learners' Learning Attitude

Game-Based Learning		Learning Attitude		
		Behavioral	Emotional	Cognitive
Clear Goals and Rules	Pearson Correlation	.502***	.533***	.449***
	N	170	170	170
Active Engagement	Pearson Correlation	.527***	.472***	.469***
	N	170	170	170
Immediate Feedback	Pearson Correlation	.476***	.498***	.564***
	N	170	170	170
Collaboration and Competition	Pearson Correlation	.667***	.575***	.671***
	N	170	170	170
Immersive	Pearson Correlation	.416***	.541***	.529***
	N	170	170	170

The results indicate that all components of Game-Based Learning—clear goals and rules, active engagement, immediate feedback, collaboration and competition, and immersive experiences have statistically significant positive relationships with learners' behavioral, emotional, and cognitive attitudes toward learning. This means that increased implementation of structured and interactive game-based strategies is associated with more positive learning attitudes across all three domains. All p-values were less than 0.001, confirming that the relationships are statistically significant. This indicates that when game-based elements are more effectively implemented, learners tend to show improved participation in class activities, more positive emotional responses toward learning tasks, and deeper cognitive involvement in understanding lesson content.

The results signify that well-designed Game Based Learning environments do not merely increase enjoyment but also positively shape learners' attitudes across behavioral, emotional, and cognitive dimensions. Educators are therefore encouraged to strategically incorporate structured, interactive, and feedback-rich game elements to cultivate more engaged, motivated, and cognitively invested learners.

Significant Relationship between Game-Based Learning and Learners' Social Skills

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This section examines the significant relationship between Game-Based Learning and learners' Social Skills. It aims to determine whether the implementation of game-based instructional strategies—such as clear goals and rules, active engagement, immediate feedback, collaboration and competition, and immersive experiences—has a meaningful effect on learners' social development. The analysis focuses on five dimensions of social skills: Self-Management, Teamwork, Self-Regulation, Pro-Social Behavior, and Community Behavior. The strength, direction, and statistical significance of the relationships are evaluated using the Pearson Product-Moment Correlation Coefficient, which highlights the possible impact of game-based learning on learners' capacity to collaborate with peers, interact effectively, and exhibit positive social behaviors in educational settings.

Additionally, it is anticipated that the analysis's findings would offer empirical proof in favor of incorporating game-based learning techniques into teaching methods. Teachers can create more focused and successful teaching strategies by determining which elements of game-based learning are most closely linked to particular social skills. This could therefore lead to the creation of a more stimulating learning environment that fosters students' overall social development in addition to improving academic performance. Ultimately, these findings may guide educators and policymakers in implementing innovative teaching strategies that address both cognitive and social learning outcomes.

The substantial correlation between game-based learning and students' social abilities across five dimensions is shown in Table 15. To ascertain the direction and strength of the correlations between the variables, the analysis employed Pearson Product-Moment Correlation.

Table 15. Significant relationship between Game-Based Learning and Learners' Social Skills

Game-Based Learning		Social Skills				
		S-M	T	S-R	PSB	CB
Clear Goals and Rules	Pearson Correlation	.609***	.473***	.357***	.393***	.441***
	N	170	170	170	170	170
Active Engagement	Pearson Correlation	.624***	.399***	.349***	.379***	.483***
	N	170	170	170	170	170
Immediate Feedback	Pearson Correlation	.684***	.485***	.432***	.545***	.547***
	N	170	170	170	170	170
Collaboration and Competition	Pearson Correlation	.758***	.594***	.472***	.583***	.649***
	N	170	170	170	170	170
Immersive	Pearson Correlation	.642***	.442***	.324***	.473***	.414***
	N	170	170	170	170	170

The findings show that all five social skill dimensions have statistically significant positive associations with all aspects of game-based learning, including clear objectives and rules, active participation, instant feedback, teamwork and competition, and immersive experiences. At the 0.05 level, all calculated p-values are less than 0.001, indicating that the connections are very significant. This implies that learners' social skills tend to get better when more game-based learning methodologies are used.

Overall, the findings signify that Game-Based Learning significantly contributes to the development of learners' social skills. The consistent moderate to strong positive correlations implies that incorporating well-designed game elements in instruction not only enhances academic engagement but also strengthens students' ability to manage themselves, collaborate effectively, regulate behavior, and demonstrate positive social interactions within the school community.

IV. Conclusion and Recommendations

The first hypothesis, which stated that there is no significant relationship between Game-Based Learning and learners' learning attitude, was rejected. The results indicate that Game-Based Learning significantly influences learners' learning attitudes, demonstrating that structured goals, active engagement, immediate feedback, collaboration, and immersive experiences positively affect learners' behavioral, emotional, and cognitive dispositions toward learning.

The second hypothesis, which stated that there is no significant relationship between Game-Based Learning and learners' behavioral skills, was also rejected. The findings show that Game-Based Learning significantly affects learners' social skills, highlighting that well-implemented game-based strategies enhance self-management, teamwork, self-regulation, pro-social behavior, and community behavior.

Based on the findings and conclusions drawn from this study, the following recommendations

Teachers may clearly communicate the learners learning objectives, rules, and instructions in game-based activities while designing interactive and immersive tasks that sustain learners' attention and engagement.

Teachers may encourage the students to provide timely and constructive feedback, promoting critical thinking, problem-solving and reflection to enhance learners' cognitive understanding.

Teachers collaborative and competitive elements be incorporated in games to strengthen teamwork, communication, and social interaction among learners.

Teachers may support learners in developing positive behavioral and emotional attitudes, including persistence, confidence, patience, enthusiasm, and curiosity, throughout game-based learning activities.

Learners may guide in self-management, self-regulation, pro-social behavior, and community participation to cultivate

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responsibility, discipline, empathy, and active contribution to group and community tasks.

Future researchers may conduct the additional factors such as technology integration, different game mechanics, and digital literacy that may further influence learners' attitudes and social skills.

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