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Rolling Through Learning: A Phenomenological Study of Grade 10 Learners' Experiences with Snake and Ladder in Social Studies

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ABSTRACT

This qualitative study aims to explore the experiences of 10th-grade students who use the traditional game "Snakes and Ladders" as a teaching tool in social studies. This study uses a qualitative phenomenological methodology to understand students' perceptions and interpretations of game-based learning in their classroom. Thirty students from a purposively selected group at Bagong Nayon II National High School participated in the adapted game as part of the curriculum. Data were collected using semi-structured in-depth interviews, focus group discussions, and reflective diaries. Braun and Clarke's method was used to analyze the data: familiarizing oneself with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. It was observed that students showed more interest in their studies when Snakes and Ladders was engaging, motivating, and stimulating-unlike lectures. The game's new mechanic required everyone to work together, encouraging teamwork through communication and problem-solving. Playing the game multiple times helped students retain social studies material. The game provided opportunities for active recall and recapitulation of just-learned content. Through this program, students had a secure, comfortable environment, which reduced their fear and increased their self-confidence. This study indicated that playing traditional games is an engaging, cost-effective way to educate. It supports development across cognitive, social, and emotional domains. The results indicate that game-based approaches in social studies provide more understanding of the students. It creates a more rounded and complete learning experience, facilitating greater engagement in class.

INTRODUCTION

The 21st century poses the greatest challenges to humankind, and social studies helps prepare citizens to deal with them. Instead of rote memorization, Social Studies builds skills in critical thinking, communication, collaboration, and creativity. Most importantly, it enables students to contend with contemporary issues in a global and digital landscape. It is worth noting that Social Studies is recognized as of national importance, as it provides complementary civic values and skills required to cultivate informed citizenship (Oluwagbohunmi & Alonge, 2023), a point previously highlighted in the literature. Moreover, by fostering moral sense, cross-cultural competence, and civic competence (Dhakal, 2025), it helps build globally competent citizens. This paper argues for growing these outcomes through innovative instructional approaches beyond traditional methods.

Teachers developing trend-driven practices face many pedagogical challenges (Khamkhien, 2025; du Plessis *et al.*, 2024). Methods such as rote learning and lectures, which are teacher-centered, do not foster higher-order thinking or student engagement. Education is shifting toward a learner-centered approach. However, teachers often struggle to adapt without adequate training or support (Donkoh & Amoakwah, 2024). Context for 21st-century skills exists, but integration with subject matter is often ritualistic rather than systematic (Dolmeci &

Acar, 2025). This gap between curriculum expectations and outcomes leaves students in passive environments, learning skills at a very low level.

A new trend in experiential, active learning is gaining momentum: game-based learning. Snakes and Ladders games have been used to promote meaning-making and context (Thaha *et al.*, 2022; Fauziahnur & Baidullah, 2025). Experiential techniques, especially those involving social interaction and real-world scenarios — such as gamification, group projects, and case studies — create more engaging experiences, motivate students, and improve comprehension (Kaya & Ercag, 2023). Although outcomes-based game design and play are popular (Pan *et al.*, 2021; Grabner-Hagen & Kingsley, 2023; Rajendran *et al.*, 2024), little research covers their use in secondary social studies.

The difference is clear in the literature, where phenomenological methods are used to examine students' reflections on altered versions of classic games in schools. Most research focuses on the effectiveness of new pedagogies and their implications. However, much of this work neglects qualitative inquiry through phenomenology. Without students' voices, we miss deeper insight into their learning experiences, feelings, and meaning-making. This study aims to highlight students' perspectives on social studies teaching and learning.

Culturally relevant, context-based learning is crucial

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when introducing Snakes and Ladders, especially in developing countries seeking cost-effective solutions. Traditional games include cultural learning, but little research examines how games or simulations help student engagement, understanding, and skills in social studies (Nadeem, Oroszlanyova, & Farag, 2023). This research explores students' experiences using Snakes and Ladders as a pedagogical tool to address this gap. This phenomenological study evaluates the intervention's impact on students' understanding, participation, and 21st-century skills. The results can help educators and policymakers choose effective instructional strategies.

This paper argues that integrating alternative pedagogies, particularly traditional games such as Snakes and Ladders, can bridge the gap between curriculum goals and actual student learning. It supports research-informed, learner-centered teaching methods and aims to contribute to the field by highlighting students' responsibility for shaping innovative educational practices. Ultimately, the main argument is that effective and meaningful social studies education requires both innovative pedagogy and active student participation in developing such methods. Therefore, this study aims to directly investigate the main question: *What are Grade 10 students' lived experiences of Snake and Ladder as a learning tool in Social Studies?* Using a phenomenological approach, it examines how participants perceive and make sense of this game-based activity.

LITERATURE REVIEW

Theoretical Framework

This study draws on three main principles of learning and advocates more participatory, student-centered educational methods, including constructivism, Experiential Learning Theory, and Social Learning Theory.

Constructivism, however, derived from the research of Jean Piaget (1972) and later Lev Vygotsky (1978), suggested that learners construct knowledge through experiences with their environment and through interactions in social contexts. This assumption is rooted in the idea that knowledge is gained through experience and documented by humans (discussed throughout Piaget's works) (Chand, 2024). So, Piaget's research studies how people make sense of what is through the interaction between experience and concepts. The primary tenet of constructivism is that students do not passively receive knowledge but rather build their own understanding of the world through experiencing and reflecting on those experiences, thereby producing learner-centered instruction. In a constructivist classroom, learning is considered built, active, reflective, collaborative, inquiry-based (problem-based), and developmental.

Although Vygotsky was influenced by the works of Piaget and other psychologists, he profoundly acknowledged the importance of social interaction in the learning process, as well as proposed new concepts such as the Zone of Proximal Development (ZPD), saying that students

can achieve independent learning through collaborative processes with the support of educators or peers (Mir, Alam, & Modi, 2025). This paper uses the Snake and Ladders game as a platform for collaborative interaction, enabling learners to understand the Social Studies curriculum through their peers' participatory learning experiences. This is a different version of the game Snake and Ladder that uses a learning grid. It affirms that superb instruction is both contextual and learner-driven, helping students not only master critical content but also develop the ability to thrive in an unpredictable 21st century.

David Kolb's (1984) experiential learning theory suggests that the transformation of experience creates knowledge. Knowledge relies on the merger between understanding and experience. Kolb's Experiential Learning Model outlines a four-stage process of learning: Concrete Experience, Reflective Observation, Abstract Conceptualization, and Active Experimentation. A simple game like Snakes and Ladders is used to create an immersive experience for the learners while they learn through play. It provides students with structured opportunities to engage in reflective thinking while creating specific conditions for understanding topics, allowing them to practice collaborative practice socially and academically.

In 1977, Albert Bandura proposed Social Learning Theory, which primarily focused on observational learning, imitation, and modeling. People learn vicariously in social contexts that encourage and reinforce behaviors through observation. As a result, this theory is based on the idea of learning through social interaction. As they process knowledge while watching others play throughout each game, this indirect modeling of teamwork and self-affirmation makes it an incredibly effective platform for social and academic learning.

These collectively sit under a strong epistemological umbrella for making sense of learning in other forms, such as standards or practices that can effectively motivate and engage learners to study Social Studies through play-based, collaborative media, such as the Snakes and Ladders game.

Related Studies on Game-Based Learning

Game-Based Learning (GBL) is a modern educational strategy that introduces new instructional design methods, particularly for subjects such as Social Studies, which are often perceived as boring and unengaging. Many studies have investigated the effectiveness of game-based learning in improving student motivation, collaboration, engagement, and mastery of the material, while others have identified challenges in implementing connected learning.

Arguably, the most observable benefit you may have heard of relating to game-based learning is improved motivation and engagement levels amongst learners. According to Al-Khayat *et al.* (2023), this interactive game-based learning improves students' interest and engagement, thereby developing cognitive skills. The

immersive, dynamic nature of processes that create a learning environment, such as games, can help develop skills like critical thinking, teamwork, and problem-solving. This supports the finding of Thi (2025), which noted that practice based upon an aspect of game-based learning can improve and strengthen elements in the cognitive, behavioral, and affective areas for students, as well as enhancing enjoyment, student-to-student engagement, generally encourages concept knowledge gain in participants, and has a boost on confidence. Students felt safe in the learning environment, which embraced a growth mindset.

In subjects like Social Studies, where abstract concepts — government, civic responsibility, and historical teaching — are often the focus, GBL provided a way to create tangible connections to deeper meanings. Research indicates that integrating game-based learning into classroom settings fosters a profound increase in students' engagement, maintains their attention spans, and heightens their enthusiasm for acquiring Social Studies content (Tolentino *et al.*, 2024); aids learners in elevating their understanding; cultivates critical thinking; and encourages cooperation. Through active participation in team-based and competitive game environments, students build communication and negotiation skills essential to real-world civic engagement.

In addition, GBL supports experiential and active learning as described in Kolb's Experiential Learning Theory. Khoo *et al.* (2025) point out that teaching and game-based environments promote deeper learning and cognitive development in the education ecosystem by placing people in "decision" situations that require them to take measures with future consequences. This encourages critical, motivated, creative computational, design, and problem-solving thinking, as well as fun and engagement. Game-based learning offers many benefits, but it is not without its downsides. However, despite these advantages, another significant drawback of the game is distraction, frustration, and unwillingness to play, as gamification can be more powerful than the intent behind it (Rokhmat *et al.*, 2025). Making the exercise about winning rather than learning could diminish its instructional value.

Other challenges include time constraints and insufficient professional development for building or modifying educational games. Because of this, they might need training and preparation time to sync game mechanics with learning objectives (Muruga & Jamaludin, 2025). Others may experience anxiety in competitive environments, while others find the amount of competition to be a little too simple or not challenging enough. When used in group settings, game-based learning can also lead to unequal engagement, with some students playing a more passive role while others compete for the win. These features can lead to an unfair distribution of learning opportunities in collaborative games, ultimately undermining inclusivity.

While game-based learning can enhance pathways to academic performance, motivation, and interaction, it must be designed intentionally, with transparent

alignment of instructional content and a desirable balance in facilitation. By acknowledging its strengths and limitations, educators can use GBL more effectively to engage students in curriculum-based content within a flexible framework that promotes learning.

GBL has emerged as a well-established, innovative instructional approach for enhancing student engagement, motivation, and learning outcomes across different disciplines. Education gradually transformed to meet the needs of 21st-century learners, and games increasingly entered the curriculum in subjects such as mathematics, science, language arts, and social sciences.

Research has shown that game-based learning can improve conceptual understanding and problem-solving skills in mathematics education. Paglomutan (2024), for example, found that game-based strategies significantly improved learning optimization in mathematics. The test results further reflected this, as students recalled learned concepts and applied them skillfully across a variety of activities. The results show that teaching methods such as class games improve learning outcomes, engagement, and immediate retention, thereby enhancing educational practice.

Science classrooms have also benefited from the integration of educational games. Rodriguez (2025) used an experimental research design and found that game-based instruction fosters a more engaging, student-centered learning environment, enhancing motivation and collaboration among learners. These outcomes underscore the potential of game-based learning as a pedagogical tool to address difficulties in Science education and to improve achievement in complex topics such as biodiversity. The study concludes that integrating game-based instruction into Science teaching provides meaningful learning opportunities that positively influence student achievement.

GBL has been used for language learning as it can affect vocabulary, reading comprehension, and grammar. Chan, Chong, and Tran (2026) reported that students' usage of the game results in improved English grammar. As they progress, they become more interested in moving to a higher tier. These results support the use of a game-based approach to grammar learning in companies, enabling students to learn grammar more effectively. Grammar is a major component of good writing, and students need solid grammar skills to write sound assignments. It also improves and enriches education in Social studies, as game-based learning brings context to historical and civic events, making them less abstract and allowing learners to appreciate events that seem distant. For instance, McCall (2022) explored the use of historical simulation games and found that learners developed a deeper understanding of historical context and diverse perspectives. Games that model government processes, economic systems, or social dynamics invite students to engage more actively with subjects that might otherwise feel distant or abstract. In addition, GBL has proven well-suited to the domains of technology and computer science education. Chang,

Chung, and Chang (2020) found that college students' exposure to game-based learning via a problem-based approach increased their understanding of computer programming. According to the study results, the problem-based game approach provides a user interface, motivation, engaging content, and even satisfaction with the problem-based learning courseware. This area regularly includes coding challenges, logic puzzles, or simulation platforms designed to directly train computational thinking skills. In contrast, GBL provides instructors with a feasible way to enhance their learners' enjoyment of learning several subjects, including a tough one such as computer programming.

Its adaptability across subject areas exemplifies the versatility of game-based learning as a pedagogical tool. GBL serves as a creative, participatory medium that caters to diverse learning styles and motivations — it can be used to teach mathematical equations, emulate scientific experimentation, build language skills, or visualize historical events. The results validate the game-based method, which has already been implemented by adapting games like Snake and Ladder for analogous topics, such as Social Studies, because interactive motivation fosters meaningful engagement.

That growing interest in bringing traditional or classic games-i.e., board, folk, etc.-into other educational spheres as inexpensive tools to facilitate learning comes despite the recent uptick in digital gaming in modern-day classrooms. These are easy to implement and also lend themselves towards more genre-specific content, as learners will tell you. Examiners have investigated the potential of traditional games to foster active learning, engagement, and collaboration across a variety of educational contexts when used together during instruction.

Research has shown that reframing these games to focus on material acquisition, using games such as Monopoly, Bingo, and Snakes & Ladders, can lead to greater student involvement in exam preparation while allowing them to internalize information over extended periods. For instance, the adaptation of Snakes and Ladders for use in Ghanaian classrooms to teach mathematics is discussed by Aboagye and Yidana (2021). It was found to facilitate peer connections, increase student engagement, and deepen thinking, even among students less inclined toward abstract subjects like mathematics. In the same context, Lee *et al.* (2024) found that educational board games improved knowledge and performance among nursing students, enabling them to develop clinical competencies that were otherwise unattainable. Compared with seminar-taught students, subjects who played a traditional trivia-style board game were more motivated and retained significantly more information. The physical and interactive nature of traditional activities promoted better learning and collaboration among the group.

The main concern of indigenous education is bringing the meaning and content of traditional and cultural practices into learning situations to encourage more meaningful practice. For example, Fatimatuszahro *et al.*

(2024) investigate the connection between elementary mathematics and congkak, a traditional game from Southeast Asia. The findings showed that the game not only enhanced numeracy but also fostered cultural appreciation and cooperation in the classroom. This study is similar to that of Soylu and Yelken (2021), who taught English vocabulary in Turkey using the Memory Card Game method. Their conclusion indicated that these basic, familiar exercises demonstrated modest but statistically significant benefits both on vocabulary memory and instructor engagement, suggesting they could be adapted to a much wider range of themes and user groups.

The pedagogical advantages of traditional games are numerous: they can be played in low-tech, low-cost settings, facilitate face-to-face collaboration, and be easily adaptable across diverse curriculum areas. Ratminingsih, Budasi, and Kurnia (2020) highlight that in large or resource-constrained classrooms, where access to digital tools may be limited, these games can be beneficial. In addition, the combination of pleasure and instruction helps reduce student anxiety and improve the classroom climate. Traditional games provide experiential and social learning environments that support multiple learning styles - kinesthetic, visual, and auditory - making them unique in their approach to teaching.

Most of the relevant literature on translating traditional games into educational formats suggests that they have tested strategies that enhance student engagement and interactivity, as well as culturally responsive teaching. Various studies have shown that games like Snakes and Ladders can be developed into useful teaching tools when aligned with curriculum goals. In the context of Social Studies, such games allow for play, discussion, and reflection to understand abstract concepts, fostering deeper thinking, clearer communication, and, in turn, improved cognitive development and social readiness.

Collaborative Learning in Social Studies

Collaborative learning has proven to be a successful technique in Social Studies education, fostering critical thinking and deeper insight among students. The last groups that teach human connections, cultures, government, and social problems need to act and discuss to understand the complex social realities. Students are encouraged to actively construct knowledge, challenge concepts, and build rich understandings through inquiry, conversation, and collaboration.

According to Vygotsky (1978), sociocultural theory is a social constructivist theory in which knowledge is constructed through culturally embedded interactions. Collaborative learning contexts facilitate ways of being for learners that extend beyond the verbatim recall of facts-meaning-making, hypothesis testing, and traceable articulation. Keeping this in mind, such participatory debate is particularly relevant to Social Studies, where inherent themes are often value-laden and couched in objective terms.

According to Kausar (2025), collaborative learning environments promote communication and reasoning through dialogues, critical thinking, and peer problem-solving. Structured group discussion provides learners with a more robust understanding of social issues and the inclination to embrace incoherence in thought - both necessary ingredients for democratic participation and civic education.

The classroom provides students a forum to ask questions, analyze their observations, and synthesize what they know about politics (our governance systems), economics (how societies make use of limited resources), and technology. The reading of strong civic competences is a crucial aspect of preparing students for these challenges. These characteristics include knowledge of citizens' rights and duties, as well as the capacity to work with people and organizations from all walks of life to bring about positive societal change. According to Suyato *et al.* (2024), the collaborative learning model is highly relevant to the development of civic skills in today's era. In this model, students are encouraged to share knowledge, participate actively, and collaborate in workgroups to confront social problems, reflect on cultural differences, and generate solutions.

The results showed that groups of students who were able to discuss questions performed better on tests of higher-order thinking skills than they had individually (Li, 2025). Indeed, this shows how important collaborative learning is for providing strong peer support and driving student engagement. Peers often serve as cognitive sparring partners in these environments, challenging one another to dissect their thinking and strengthen their conclusions. These interactions also contribute to the development of interpersonal and civic skills that align well with the broader goals of social studies curricula.

In the Social Studies section, students may participate in group projects, role-playing exercises, short debates, simulations, or other cooperative learning activities. Also, collaborative learning engages students in working and communicating across disciplines, which promotes critical thinking through problem-solving and relationship-building (Sappaile *et al.*, 2025). Furthermore, it contributes to student engagement and future participation by promoting environments conducive to collaborative learning. Collaborative learning and group work also enhance the development of critical skills such as adaptability, communication, and teamwork that are essential for thriving now and in the future, beyond academic performance alone (Binoy, 2024). This enables students to collaborate in a free space of inquiry outside the classroom and to reformulate knowledge from their life experiences into key material for engagement.

In addition, educational board games, such as modified versions of Snakes and Ladders, can encourage cooperative behavior. These well-planned games also encourage teamwork, communication, and critical thinking, thereby increasing student engagement and academic success. These methods rely on interactive,

multiplayer, and simulation games, such as prompting peer input and providing benefits (a form of reward) for group work, as well as role-play that promotes knowledge creation through social interaction and, at a higher level, understanding (Hu, 2024).

This form of collaboration promotes dialogue and engagement in social studies. Through cooperative problem-solving, idea sharing, peer discussion, and active participation, teachers can help students become informed citizens who understand the real world and their own community. By engaging in such group activities, students acquire basic civic skills and prepare themselves for active engagement in democratic societies.

As education transforms, Social Studies continues to play a critical role in equipping students with the skills to think critically, engage appropriately in their communities, and contribute to an effective democracy. The potential for achieving such aims through peer teaching, where students are placed in realistic social contexts and must communicate effectively and collaborate as a group to solve real-life problems.

As valuable as teaching relevant content is, it was not sufficient; given the complexity of how social processes are interwoven and entangled, students need guidance in learning to engage in source evaluation and to think critically about the content we offer for learning. Through collaborative group discussions, simulations, and problem-based learning, students can engage in feedback-rich discourse, reason with one another, challenge their own assumptions, and contemplate multiple perspectives. According to Kalukar *et al.* (2024), collaborative learning occurs in interactive environments where students discuss, share ideas, and provide feedback. Not only do these collaborative activities sharpen both students' communication and teamwork skills, but they also help develop higher-order thinking skills by requiring students to formulate and substantiate claims, critically evaluate evidence, and address counterarguments. Critical thinking, while important in classroom instruction at any level, is an integral part of the collaborative environment we create as students engage with Social Studies topics - rather than rote memorization that leads to a shallow understanding through cognitive and social construction. These collaborative learning settings allow students to externalize their reasoning, listen to one another's perspectives, and build knowledge cooperatively. Describing and justifying others' positions in a group, whether or not they agree, encourages metacognitive awareness as learners become more skilled at adapting their own thinking in response to others' input and more thoughtful about the nature of self-versus-other.

However, in addition to the cognitive advantages of working with others, peer learning also fosters the social and civic skills vital to democratic participation. Content in these disciplines, such as human rights, governance, and justice, lends itself to collective investigation and reflection. By working alongside other students, we develop the dispositions required for active citizenship:

empathy, tolerance, and a sense of shared responsibility. In our increasingly globalized world, the willingness to engage collaboratively and think critically is more important than ever. Collaborative learning is also aligned with a global competencies approach and 21st-century skills, necessary to prepare students to address complex civic issues and engage in informed decision-making. Collaborative strategies are not merely tied to Social Studies but are integral to achieving the mission of an active, engaged, informed citizenry.

The significance of how students develop critical thinking and civic engagement is a factor of collaborative inquiry in Social Studies. Collaboration also forces them to engage more deeply with the content, while modeling the dispositions and skills they need for thoughtful, engaged citizenship. However, Social Studies rooms become spaces where collaborative inquiry, thoughtful deliberation, and dialogue set the stage for critical reflection on the world and enable students to envision their role in making it a more just place.

Phenomenological Studies in Education

Phenomenology has been widely used as a qualitative research method in education over the past few years for its ability to delve deeply into learners' lived experiences. Phenomenological inquiry, designed to tap into the value of lived experience through the lens of the people involved and free from imposed research, is used to explicate the meanings individuals attribute to phenomena (Moustakas, 1994). Therefore, within the education sphere, phenomenology enables researchers to grasp students' complex, subjective perceptions of their environments and, consequently, to reveal how they perceived, framed meaning, and made sense of classroom happenings and experiences related to different learning elements, such as pedagogical practices, teaching aids, or social activities. This is particularly useful for studying the cognitive and affective components of learning that are difficult to quantify.

One of the main goals of phenomenological research in education is to enhance student voice. In education, phenomenology is an approach that seeks to understand the experience of being a student in a particular learning setting (van Manen, 1990). This approach reveals students' emotions, motivations, struggles, and insights through interviews, reflections, and observations— aspects often overlooked in traditional educational evaluations. For example, Creswell and Poth (2018) note that phenomenological research is particularly well-suited when the essence of an experience has yet to be fully understood, and the goal is to inform educational practice through the lens of learners' experiences. It has been used in studies examining students' responses to online learning, classroom engagement, academic hardships, and interactions with specific educational models.

A potential lens for observing students engaging with at least some aspects of new teaching tools is a phenomenological perspective on game-based and

experiential learning. Researchers can also examine students' emotions and cognition during these processes, so that whether they feel more connected, challenged, or engaged, versus disengaged, affects how students learn. Using phenomenological methods, Liu *et al.* (2025) examined immersive experiences that enable students to comprehend and remember complex knowledge, networked as embodied learning environments. Similarly, phenomenological methodology has been employed by educators to examine and interrogate the affective and social features of collaborative learning technologies with a view to enhancing their practice, whilst also meeting diversity within learner profiles.

An appreciation of students' lived experiences can directly feed into teaching practices, curriculum design, and educational policy. Since phenomenological studies offer authentic, empathetic insights that can lead to more inclusive and responsive classrooms, they focus not on what the teacher argues is happening, but on what the student may experience (Niemi, 2020). For instance, phenomenological studies in education allow researchers to uncover the significant and lived experiences of students who are often invisible in educational settings, offering a deeper perspective on how learners make sense of their academic immersion. Focusing on giving voice to students and their lived experience, this research avenue makes a significant contribution to supporting the evolving process of learner-oriented, experience-based learning practices.

However, phenomenology, a qualitative research approach, is increasingly used in education, particularly in classroom-based research projects that aim to capture the deep and powerful subjective experiences of students and teachers as they act authentically in real learning contexts. Phenomenology is employed by those interested in understanding how students experience and feel about innovations, classroom culture, and teaching because it describes and interprets the essence of lived experience, rather than other methodologies that measure or predict behavior (Creswell & Poth, 2018; Moustakas, 1994).

This is where phenomenological research comes in, helping explicate how students interpret their educational experiences and how these experiences are intertwined with instructors, peers, and content. This is especially true in classrooms. This approach allows researchers to investigate learners' feelings, perceptions, and transformations resulting from specific classroom activities, as well as visible outcomes (van Manen, 1990). For example, investigating students' experiences with educational games, group collaboration, or project-based learning can reveal cognitive and emotional responses that affect engagement and achievement. Phenomenology is also particularly well suited to classroom research because it "brackets" prior assumptions, thereby allowing the participant's voice (and lived experience) to take center stage, a point Sokolowski (2000) highlights. This echoes the growing emphasis on inclusive and learner-centered pedagogies, particularly in diverse educational contexts.

In addition to being important for students, classroom-based phenomenological research is useful for understanding instructors' experiences with curriculum change, instructional innovation, and challenges with student engagement. Avila (2026) and Mohammed and Agyemang (2025) explored the lived experience of educators who adapted the flexible classroom model within inclusive educational contexts. The research finds that in practice, effective implementation is a deep, holistic transformation that goes beyond technical mastery; teachers must be critical agents who interpret and remold pedagogical innovation to refocus efforts on inclusion. It highlights the need for support systems that attend to the emotional task work and shifts in professional identity that accompany such transformation, rather than simply focusing on technical upskilling. By actively considering their own teaching and the affective/emotional and relational aspects of what they do, educators can be intentional in their decisions about what is taught, how it is taught (and who gets access to that teaching), based on both the educator's experiences as well as those of their students.

Action research - in which teachers engage in systematic inquiries into their own practice to improve results — also draws from phenomenological methodologies. This is particularly valuable for exploring how learners engage with novel pedagogical approaches such as game-based learning, immersive activities, and collaborative projects. The aim is not generalizability but to genuinely understand how unique learners respond to specific interventions, thereby providing contextual information that may inform pedagogical change (Niemi, 2020). When classic games like “Snake and Ladder” are repurposed for training a subject, in studies of this nature through the phenomenological lens, we can develop an understanding of how students construct their world, resulting in learning (how motivation varies) and changes among people within the class (how class relationships change). Phenomenological studies, then, offer one tool for classroom-based research, as they can focus on the lived experiences of both students and teachers. This technique gives teachers insight into how their instructional choices look in practice, enabling them to create compassionate, effective, and meaningful instruction. In the evolution of classrooms, phenomenology plays a key role in bridging instructional theory and learning experience.

MATERIALS AND METHODS

Research Design

To explore the lived experiences of Grade 10 learners, the traditional game of Snakes and Ladders is used as a learning tool in Social Studies. This study adopts qualitative phenomenological research. Phenomenology, originating from the philosophical roots of Edmund Husserl and adapted by the likes of van Manen and Moustakas to clarify the essence of human experiences through rich, descriptive inquiry (Moustakas, 1994; van Manen, 1990). It aims to understand how students experience game-

based learning in class, rather than to measure the extent of successful learning. Hence, the qualitative approach is appropriate. Specifically, this study will explore learners' motivation, interactions, understanding, feelings, and perceived significance of using Snake and Ladder to explore Social Studies concepts. These subjective accounts present data that can help educators reflect on the effectiveness of interactive, collaborative alternatives to optimize learner engagement.

In order to achieve transcendental phenomenology as defined by Moustakas (1994), the study will make use of bracketing or *epoche*—whereby researchers consciously set aside their own biases and assumptions, in-depth, semi-structured interviews for collecting rich first-person narratives from selected participants, and thematic analysis to determine shared themes and meanings among the experiences of participants. Phenomenological research aims to deepen understanding of learners' affective and cognitive responses to a non-conventional, active-learning methodology that focuses on lived experience. This insight is crucial for designing more learner-centered and responsive instruction, especially in content areas such as Social Studies, which are often driven by textbooks and lectures (Creswell & Poth, 2018).

Additionally, phenomenology matches the goals of 21st-century pedagogy, which focus on learner agency, motivation, and interaction—often characterized by game-based and/or collaborative learning approaches (Lichtman, 2013). Further, this may contribute to improvements in the curriculum, as qualitative evidence exists on how traditional activities might nurture or stifle educational goals in the Social Studies classroom.

Research Participants

For this investigation, participants were selected specifically from among Grade 10 students who had already worked with the Snake and Ladder game in their Social Studies course. Participants were selected through purposive sampling to ensure they had direct, relevant experiences with the phenomenon under inquiry, a cornerstone of phenomenological research (Creswell & Poth, 2018; Moustakas, 1994). For qualitative phenomenological research, a sample size of 30 students is considered typical. Polkinghorne (1989) indicates that the purpose is to gain depth of insight rather than breadth of coverage. That is a large enough number to tease out common meanings and shared motifs, as well as examine individual differences in experience.

A game-based activity, used as an informal learning strategy, was implemented in the Social Studies subject for a group of 10th-grade students at a public secondary school. Then, participants were chosen from the class. Participants were adults who had participated in an interview to share their experiences, agreed to participate in the study and provide reflections as required, and had completed at least one academic session in class using Snakes and Ladders. Informed consent was obtained from both the parent or guardian and the student before

participation in the study in accordance with ethical research standards for minors. During the inquiry, all participants' confidentiality and anonymity were ensured.

Research Setting

This study was conducted in Bagong Nayon II National High School, a public secondary school administered by the Division of Antipolo City, Department of Education, Region IV-A CALABARZON. It has an innovative, student-centered approach to learning embedded in the classroom and serves a diverse community of junior and senior high students. This activity was conducted in a Grade 10 Social Studies class using the Snake and Ladder game (classic/modified) as instructional material. It was a very active class that prompted students not only to learn passively about Philippine history, government, and current events, but also to engage and collaborate. Afterward, a list of modified educational prompts and curriculum-related questions was created for each round, turning it into a review game that encourages critical thinking and learning.

The activity was designed by the subject teacher and conducted during standard school hours to promote students' engagement in cooperative learning. The room had a shared space for group projects and was equipped with common teaching materials. This context provided an appropriate framework for exploring the effects of gamified techniques on students' involvement and engagement in Social Studies, given their use of traditional games.

Data Collection Instruments

This study used various qualitative data collection instruments to provide a deeper understanding of Grade 10 students' experiences with applying the Snake and Ladder game in Social Studies. The instrument selection followed a phenomenological method, which emphasizes thick, detailed descriptions of participants' experiences (Moustakas, 1994; Creswell & Poth, 2018).

Data were primarily collected through semi-structured in-depth interviews. This enabled a good balance between asking the same question of each participant and tailoring follow-ups to their individual responses. They were open-ended questions designed to elicit richer narratives about the students' thoughts, feelings, challenges, and insights as they played the game. To help students feel comfortable and speak their minds, interviews were conducted in a quiet, pleasant environment for 30 to 45 minutes each (Seidman, 2019).

Focus group discussions (FGDs) were conducted as an alternative method with participants from specific groups, consisting of 5 to 6 students. In these conversations, participants encouraged one another to elaborate on their answers, allowing group perspectives and dynamics to surface that might not have emerged in individual interviews. Krueger and Casey (2015) stated that FGDs were particularly useful for exploring issues related to collaboration, group interaction, and social engagement

in the context of playing games.

When available, we also received student reflective journals or written narratives. These documents gave a reflective lens into learners' experiences, allowing them to reflect on and articulate their thinking beyond the interview context. Reflections were analyzed for recurring themes, metaphors, and affective tonalities to make sense of their game-based learning journey (Van Manen, 1990). All FGDs and interviews were audio-recorded (with permission), transcribed verbatim, and thematically analyzed using phenomenologically inclined coding approaches. Using diverse data sources to triangulate findings contributed to the credibility and depth of the study (Patton, 2015).

Data Collection Procedure

Data collection procedures in this phenomenological study were designed to ensure ethical compliance, participant comfort, and the detailed acquisition of meaningful insights underlying learners' experiences with the Snake and Ladder game in Social Studies. The parts that come next included the process, which was not only systematic but also ethical:

Permissions and Ethical Considerations

Before collecting data, the researcher secured necessary permissions from the principal and the Social Studies teacher of Bagong Nayon II National High School, as well as from the Division of Antipolo City Department of Education. Moreover, ethical clearance was obtained in accordance with standard research protocols. The precautionary steps immediately followed it:

Informed Consent and Assent: For all student participants under 18, parental consent forms were sent home and returned. Moreover, participants were informed of the study objective and procedures, confidentiality policy, and their right to withdraw at any moment; thus, all individuals willingly consented to participate.

Confidentiality: Descriptive data for all participants were kept strictly confidential, as participants were assigned pseudonyms. We then securely stored this data for academic purposes only.

Respect and Anonymity: Participants were informed that their names would not be revealed and that their points of view would be represented authentically and respectfully.

Orientation Session

To provide the participants (Grade 10 learners) with an overview of the study and its importance, clarify what was expected from them during interviews and focus groups, emphasize that their participation would not be mandatory and that their information would remain confidential as well as allow students to ask questions and confirm their willingness to participate in this research, orientation sessions were held for a selected group of Grade 10 learners.

Activities for Data Acquisition

The data collection process was done as follows:

Step 1: Scheduling

The students were scheduled for individual and group interviews at times convenient to them to avoid disrupting regular classes.

Step 2: Semi-structured interviews

Interviews were held in a quiet room available in the school. The sessions lasted 30 to 45 minutes. Audio equipment was also used to record interviews (with the interviewee's consent) to ensure accurate data recording.

Step 3: Focus Group Discussion

Small-group discussions of 5–6 participants were then conducted to examine collaboration and common experiences during the game-based activity. They were also audio-recorded and transcribed for analysis.

Step 4: Collection of Written Reflections

There was also a request for short reflective narratives or some journal entries from participants concerning their experiences with the game.

Step 5: Transcription

All recordings were verbatim transcribed. Transcriptions were screened and validated for accuracy before thematic analysis was performed.

This multi-step process enabled the researcher to collect rich, personal narratives that aligned with the study's phenomenological essence while adhering to ethical and professional research practices.

Data Analysis

To better understand the lived experiences of Grade 10 students who used the Snake and Ladder game as a social studies learning tool, this study employed a phenomenological approach to analyzing the data. To ensure a systematic approach to analyzing qualitative data, the study followed the phenomenological data analysis proposed by Braun and Clarke (2006), which is commonly employed in educational and psychological research.

Thematic analysis is a method in which the researcher remains closely engaged and open, emphasizing description over explanation to reveal the raw meaning of lived experience. As a common qualitative data analysis method, it provides a structured yet flexible approach to finding, analyzing, and interpreting patterns in a dataset. This study delves into Braun and Clarke's six-phase process for thematic analysis: (1) familiarizing with the data; (2) generating initial codes; (3) searching for themes; (4) reviewing themes; (5) defining and naming themes; and (6) producing the report (Sirwan *et al.*, 2025; Lunde *et al.*, 2022).

Data were managed and interpreted using thematic analysis following the principles of Braun and Clarke (2006). Initial open coding was used to find the first meaning categories. The codes were further developed based on frequency, depth, and emotional significance to create major themes and subthemes. To provide a comprehensive overview of the phenomenon, themes were examined for consistency and divergence among

participants. Not only were their descriptive aspects recorded through this method, but the researcher was also able to capture the more emotional, cognitive, and social elements of learners' experiences during gameplay.

Trustworthiness of the Study

To ensure the rigor and quality of this phenomenological study, the research followed Lincoln and Guba's (1985) reliability standards for qualitative research. These standards (credibility, reliability, transferability, and confirmability) guided the processes of data collection, analysis, and design.

Credibility is the extent to which the life experiences of participants as stated in this study are accurate and true (Lincoln & Guba, 1985). The aim was to avoid misinterpretation of the participants' perspectives through member checking (allowing participants to review and confirm the transcribed data and arising themes), prolonged engagement, and persistent observation (the researcher immersed in meetings with participants over several sessions [orientation, interviews, discussions], establishing trust and gathering detailed, organic responses) whereby peer debriefings may provide worth by discussion with other researchers and qualitative experts on emergent insights providing a critical counterpoint to examine presumptions that inform interpretations.

Dependability refers to the extent to which the research process is stable and consistent across contexts or over time. Partially, this was addressed in the study by ensuring a detailed audit trail that captured all aspects of the research design (e.g., how decisions about data collection methods were made) and included analytical notes. This openness allows other researchers to pursue the inquiry further. Also, code-recode procedures were used to assess the consistency of coding and engineering, which is important for the strength of the analysis (i.e., the analysis also examines data across different time periods). Transferability refers to the extent to which a study's results can be applied in other contexts or populations. Transferability was established through a rich description of the research context, participants, and experiences, allowing readers to ascertain whether the findings are transferable to similar educational contexts. Even though this study does not pursue generalizability, this approach was taken. Purposeful sampling was used to select Grade 10 learners with direct experience of the game-based activity, ensuring the insights were relevant to similar classrooms.

Confirmability is about the neutrality and objectivity of the findings. This researcher managed this by keeping a reflective journal to identify and track personal biases, assumptions, and decisions throughout the research process. As described above, detailed records of the research process enabled third-party review and verification of the results. At the same time, regular consultation with research advisers and colleagues kept interpretations anchored in data rather than in researcher bias.

Ethical Considerations

Since core ethical principles of qualitative research were applied in this study, all participants' rights, protection, and dignity were maintained during the research process. Ethical approval was obtained from the relevant authorities prior to data collection, and the following considerations were strictly adhered to.

Written informed consent forms detailing the study's nature, purpose, procedures, and voluntary status were provided to all participants and to their parents or guardians (for minors). Participants were told there would be no payment or adverse consequences if they did not participate in the study or withdrew from it at any time. Consequently, the study was conducted on a completely voluntary basis. No direct or improper coercion was used to recruit participants. Students were assured that their decision to opt in or out would not affect where they stood, the grades they received, or their connection with the teacher and school.

Information was collected predominantly through interviews, and all data have been securely stored and are accessible only to the researcher, ensuring confidentiality. Pseudonyms were used throughout all documentation and reporting to protect the privacy of other participants. Per standards of practice, the paper and any presentations or publications about the study were anonymized using pseudonyms. No personal information, including full names, class sections, and anecdotes, was released.

While interviewing and interacting with participants, the researcher remained attuned to each participant's emotional or comfort level. The questions and activities were carefully designed to avoid any negative psychological or social consequences. In accordance with established norms for conducting educational research with minors, the study was conducted in full respect for the rights and well-being of its participants.

RESULTS AND DISCUSSIONS

Description of Participants

The participants were thirty (30) Grade 10 students purposively sampled from Bagong Nasyon II National High School in the Division of Antipolo City. As a pedagogical tool in Social Studies, all candidates played Snakes and Ladders. The following brief profiles provide context in an attempt to understand their perspectives:

Age Range: The subjects had a mean age of a Grade 10 student, which is 15-16 in the Philippine secondary

education system.

Gender: There was an even distribution of gender across the group, with 17 females and 13 males.

Academic Background: Participants represented a diverse cohort with varying levels of social studies academic achievement. Some had never engaged much with traditional school activities; others were high achievers.

Preferred Learning Style and Environment: Many of these learners reported responding well to interactive, visual learning, but often felt lost during lecture-style classes and struggled to contribute to discussions. This was prior to the game-based intervention.

Game Familiarity: All participants were familiar with the Snake and Ladder game from childhood, but none were aware of its use as a teaching tool. That distinctiveness sparked their interest enough to try the technique themselves.

Energizing Activity: Each student in the classroom played the Snake and Ladder game with enthusiasm to revise and reinforce Social Studies concepts. In this study, their responses and reflections in these interviews served as the primary data source.

By sharing this demographic and contextual background, the researcher aimed to provide a framework for examining how game-based approaches influence motivation, collaborative engagement, and understanding in Social Studies, as it emerges from learners' lived experiences.

Emerging Themes and Subthemes

Presentation of themes with direct quotes

Thematic analysis of the interview transcripts, reflective journals, and optional focus group discussions revealed several main themes and sub-themes. These four themes give an insightful overview of the lived experiences of Grade 10 students who use Snake and Ladder as a pedagogical tool for Social Studies. It was conducted in thematic clusters, and meanings were articulated, and substantial statements were withdrawn in accordance with Braun and Clarke's (2006) methodology.

Here we present the main themes and associated sub-themes, illustrated with direct participant quotes.

This can validate Sugianto's (2023) idea that game-based learning fosters durable motivation to learn, enhances student engagement, and provides an immersive learning experience. However, the study by Jaramillo-Mediavilla *et*

Table 1: Increased Motivation and Engagement

Subtheme	Quote Statement
Subtheme: Learning Became More Enjoyable: Many learners expressed that the use of Snake and Ladder made Social Studies more exciting and less monotonous.	"Masaya at nakatutuwa ang laro dahil simple pero nakatutulong para maalala ang lesson habang naglalaro." – Participant 6
Subtheme: Curiosity and Challenge Sparked Interest: The element of competition and unpredictability in the game helped sustain attention.	"Nakaka-excite! Parang nagko-compete kami, tapos ang saya kapag nakalapag sa ladder. Kinakabahan din kapag malapit sa snake. It's really cool, nagiging masaya ang pagkatuto dahil sa activity na ito." – Participant 12

al. (2024) clearly shows that game-based learning plays a significant role in motivating students by facilitating the acquisition of knowledge, skills, and academic competencies. This research focuses on one specific element within a broader set of capabilities needed for school success that can be enhanced through interactive and playful experiences. These may be cognitive, self-learning, social, or collaborative, among others. This snake-and-ladder strategy can not only facilitate the modernization of educational environments but also

foster student engagement and motivation in ways similar to those of games. Moreover, beyond the question in the tasks, a simple implementation of Snakes and Ladders helps students gain a deeper understanding of the subject matter and develop commitment and a positive attitude toward learning.

This aligns with Vygotsky's (1978) social constructivist theory of learning, in which social interactions play a critical role in students' learning. As a result, social interaction plays a key role in cognitive development,

Table 2: Enhanced Collaboration and Peer Learning

Subtheme	Quote Statement
Subtheme: Teamwork Encouraged Communication: The activity's collaborative format fostered interaction among classmates.	"Mas lumalim ang aming interactions dahil nagpapalitan kami ng aming ideas upang masagot namin ng tama ang mga tanong at the same time sama-sama kaming nag-i-enjoy sa laro." – Participant 9
Subtheme: Learning Through Peer Support: Students noted that listening to peers improved their understanding of concepts.	"May mga time na hindi ko alam ang sagot, at ang groupmates ko ay nagbibigay ng kani-kanilang opinyon at vice versa, nagkakaroon kami ng teamwork upang tumaas ang aming score." – Participant 15

since learning is believed to begin with social interaction (inter-psychological) and then be internalized (intra-psychological). Rather, knowledge is co-constructed through dialogue with "More Knowledgeable Others" (MKOs), cultural instruments, and one another, rather than developed in isolation (McLeod, 2024). On the other hand, this theory applies to differentiated learning, student engagement, and meaningful learning. Differentiated learning applies the constructivist theory to the learning process, accounting for what makes each student an individual. Similarly, the concepts of

scaffolding and ZPD are closely related to various forms of tuition that foster students' abilities and help them reach their full potential (Wibowo, Wangid, & Firdaus, 2025). So the snake-and-ladder enables interactive, learner-centered experiences that are constructed in harmony with constructivist learning theory and thus, promote cognitive as well as affective growth in students. Kolb (1984) described a model of experiential learning that involves reflection on experience. According to the research by Javahery and Bavandi (2026), the experiential learning process led them to a deeper understanding

Table 3: Deepened Understanding of Social Studies Concepts

Subtheme	Quote Statement
Subtheme: Reinforcement of Key Ideas: The game's repetition of content helped learners retain information.	"Ang bahagi ng laro na nakatulong sa akin ay ang mga tanong kung saan kami ang sasagot nang tama para makapaghagis ng dice at maabot ang finish number ng Snakes and Ladders. Habang naglalaro, nagre-review na rin kami. Mas natatandaan ko ang lessons dahil mas active ang utak ko." – Participant 2
Subtheme : Realization of Learning Through Play: Students recognized the game's educational value.	"Natutunan ko na mas nagiging masaya at madali para sa akin ang pag-aaral kapag may halong laro o interaksyon. Napansin ko rin na marami sa aking mga kaklase ay nakikipagtulungan at nagbibigay suporta sa isa't isa." – Participant 11

of the cognitive and affective difficulties students were experiencing, resulting in significant improvements in their teaching practice. They implemented enhanced scaffolding, more learner-centered approaches, and tailored support for language learners. Moreover, the study by Wu, Lin, and Darmawansah (2025) highlighted social constructs derived from experiential learning theory, including improved self-efficacy and motivation, reduced learning anxiety, and significant vocabulary acquisition and retention. Students then wrote reflections on how ELT enhanced their learning experiences (e.g., language skills) and classroom participation, as well as what made

it more competitive than conventional remedial classes. Aligned with this, the present investigation highlights the usefulness of Kolb's ELT in bridging the gap between theory and practice in education by encouraging students to connect their experiences with theoretical knowledge and reflect on them. It can be a great tool to bridge the gap between theory and practice in teacher education by applying the Snakes and Ladders game in the classroom. These examples emphasize the emotional stability, community, and such-like that are built in collaborative, game-based spaces (Gómez-León, 2025). According to Riswanda, Ramdani, and Haryanto (2025), game-based

Table 4: Positive Emotional and Social Experience

Subtheme	Quote Statement
Subtheme: Reduced Stress and Anxiety: Several learners felt more at ease during the game-based session compared to traditional tests.	“Ang Snake and Ladder activity ay napakasaya, nakaka-excite, at nakatutulong para mabawasan ang kaba at magkaroon ng mas makabuluhang pagkatuto. Naging kakaibang paraan ito para ulitin at palalimin ang aking pag-unawa sa paksa. Sana ay marami pang ganitong gawain dahil nakadaragdag ito sa saya at sigla ng klase.” – Participant 4
Subtheme: Sense of Belonging and Inclusion: All students, regardless of ability, felt included.	“Masayang maglaro ng Snakes and Ladders dahil nakatulong ito para mapataas ang confidence ko kahit hindi ako gaanong magaling sa klase. Naramdaman ko na ako ay importante sa grupo. Everyone was involved.” – Participant 17

learning is an innovative approach not only for improving motor skills but also for significantly improving students' social and emotional skills. In contrast, the study by Hsiao *et al.* (2025) found that participants who played board games had better healthcare knowledge than those who used digital games. They also reported positive emotions such as relaxation and pride. Therefore, Snakes and Ladders and other modified board games are practical interventions that can enhance learners' self-concept. In contrast, the Snakes and Ladders- a game-based method of learning- provides safe spaces where achievement experiences can be enabled while facilitating natural peer interactions.

Interpretation of Learner Experiences and Reflections

Looking at these Grade 10 learners in the context of their motivation, engagement, and conceptual understanding, we find that active, collaborative strategies, such as Snake and Ladder, are used in their Social Studies class. The reflections and the qualitative data resulting from interviews and discussions of those reflections support social learning theory, experiential learning, and constructivism as theoretical pillars.

The initial comments from students consistently described the activity as engaging and motivating, suggesting that changing up familiar game formats led them to view Social Studies content in a fun way, moving it away from boring fill-in-the-blank or paper-and-pencil tasks. This aligns with Kolb's (1984) theory of experiential learning, indicating that reflective and practical experiences must be integrated into our plans to deepen understanding. Game-based learning also alleviated some of the fear associated with typical lectures and assessments, allowing many students to fully engage with the material.

In addition, the game's collaborative nature promoted meaningful peer-to-peer interaction and problem-solving. The learners highlighted the value of learning to work together, support one another, and communicate, all working hand in hand towards completing this activity. This is consistent with Vygotsky's (1978) constructivist perspective, which holds that social interaction is a core component of learning. Beyond the content built into the game, this allowed students to learn through new ideas and discussions with their classmates. Furthermore, post-game participants reported a better grasp of concepts and greater retention of information. By linking these

questions to movement and competition, students recalled the content more effectively. This validates Bandura's (1977) social learning theory, which holds that reinforcement, imitation, and observation are the primary mechanisms through which people acquire knowledge and behavior from others.

The observations also showed how freeing it can be to exchange performance anxiety for a supportive, tolerant learning environment. Additionally, students who had previously been passive and aloof during classroom discussions showed more engagement, confidence, and participation. This affective and social aspect of game-based learning then opens up dynamics and inclusivity, as well as a few underlying representations. In particular, implementing Snake and Ladder as a teaching tool in the classroom offers not only extra entertainment for students but also creates an environment that promotes collaborative learning, enhances academic engagement, fosters a positive emotional connection to the content, and encourages collaboration amongst peers. The conclusion is that Snake and Ladder, as a traditional game, can serve as an effective educational tool suitable for the needs and learning styles of 21st-century learners.

CONCLUSION

This research reinforces the idea that Snakes and Ladders in Social Studies is more than a device; it actually reshapes students' experiences with learning, engagement, and participation. The main takeaway is that a simple, traditional game, when purposefully embedded in educational designs, becomes a medium for creative thinking, collaborative problem-solving, participation, and performance. Prior to this, learners were passive participants who became active listeners and speakers, with the confidence to speak out, argue, and participate. Assessment was stripped of its punitive element, and learning became more flexible, with repetition and real-world connections aiding both review and recall, not to mention the opportunity for community or group learning. The findings indicate that low-cost, culturally salient strategies are equally effective in increasing either academic mastery or 21st-century skills.

These insights inspire teachers to implement deliberate, flexible in-class game-based practices that are as relevant and meaningful to students' learning objectives as possible. Being sticky and enriching the experience requires personalizing mechanics and integration of

content. To include more subjects, grades, and longer follow-up periods, the study's recommendations for future research should also include comparisons between traditional and digital forms. Orienting indigenous games within culturally responsive pedagogy. Most importantly, teacher development programs need to equip educators with hands-on strategies for designing, implementing, and assessing effective, situated game-based learning.

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