

Innovative Combination of Dodgeball and Soccer Skills in Developing a Recreational Game

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Abstract

Today, traditional games are important because they hold cultural value, foster social interaction, require physical movement, and impart critical thinking skills needed in a multifaceted, interconnected world. This research focuses on creating a modified recreational game called Likyan-Bola, blending elements of dodgeball and soccer kicking skills to suit the needs and abilities of different groups. The study involved 200 participants from Mindanao State University- General Santos City, including varsity athletes, physical education students, and Bachelor of Physical Education students. The Input-Process-Output (IPO) Model was used for qualitative research design, employing the Successive Approximation Model (SAM). Feedback from participants highlighted the game's positive reception, with themes emerging around the modified game's development, gender inclusivity, and skill competence. Overall, Likyan-Bola was found to be playable, valid, and well-received, suggesting its potential for widespread adoption in physical education classes.

Keywords: Likyan-Bola, Soccer, Dodgeball, Physical Education, Recreational Game

1. Introduction

In today's fast-paced world, recreation not only offers relaxation and enjoyment but also promotes physical and mental well-being. As we seek to maximize these benefits, innovative ideas are constantly emerging to enhance our leisure experiences. From traditional pastimes to cutting-edge technologies, the landscape of recreation is evolving rapidly, revolutionizing how we engage in leisure activities. This exploration delves into various aspects of leisure and entertainment, from immersive virtual experiences to sustainable outdoor initiatives, offering novel ways to unwind, connect with others, and explore our passions. The realm of recreation is brimming with possibilities, pushing the boundaries of creativity and imagination, waiting to be discovered.

Simultaneously, Engels and Freund's (2020) research scrutinizes factors shaping students' enjoyment in physical education, bringing attention to the pivotal roles of group participation, effective communication, and perceived competence. The current inflexibility in physical education classes, resulting in diminished

perceived competence and restricted social engagement, demands a thorough reevaluation of prevailing class structures.

To address this problem, the legislative committee of the Philippine government, strides to integrate traditional games into the physical education curriculum, propelled by Senate Bill 1108 and House Bill 2675, introduces a cultural dimension to formal education (Villar, 2010; Arroyo, 2013). Despite commendable legislative efforts, a substantial gap exists in scholarly exploration regarding the effectiveness and challenges tied to the integration of traditional games into formal education. This study endeavors to pioneer a new recreational game, "*Likyan-Bola*" drawing inspiration from dodgeball. By innovating the game, designing its rules and mechanics, and assessing its acceptance, the research aims to bridge existing gaps. Through this exploration, it aspires to contribute to discussions on inclusive education, cultural relevance, and the evolving landscape of Physical Education. The *Likyan- Bola* serves not just as a recreational game but as a symbol of cultural preservation and innovation in Filipino education.

1.1 Statement of the Problem

The objective of this study is to develop a new game. Specifically, the study aims to answer the steps in designing a new recreational game.

1.2 Objectives of the Study

This study aimed to innovate a new recreational game taken from a one game. Specifically, it aimed to achieve the following:

1. Assess the skills in dodgeball and soccer.
2. Design a recreational game utilizing the skills of dodgeball and soccer..
3. Develop ground rules for the recreational game.

1.3 Significance of the study

The results of this study will be beneficial for the following:

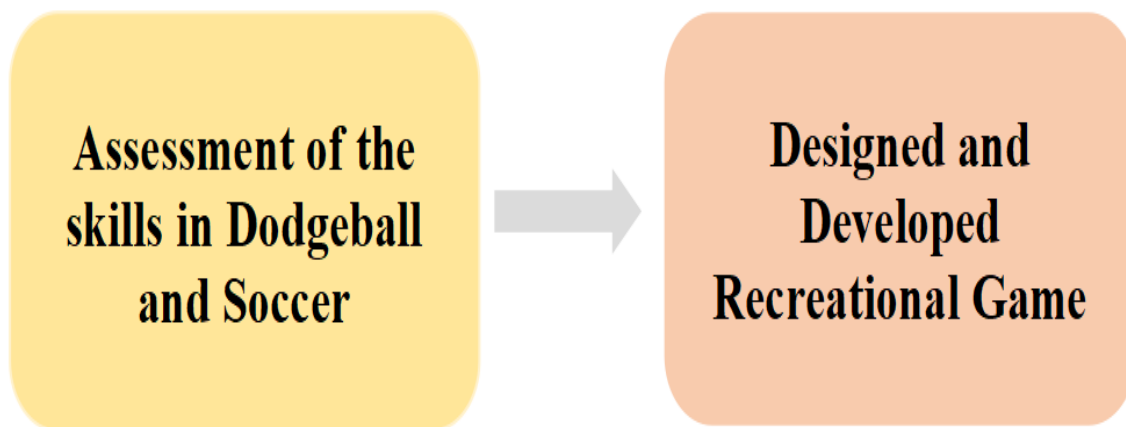
- **School Administrators/Sports Director.** The results of this study will help school administrators and sports directors not only add excitement to the students' leisure activities but also foster a sense of camaraderie and inclusivity within the school community.
- **Game and Sports Innovators.** The results of this study will motivate game and sports innovators to create fresh and exciting experiences that captivate players and spectators alike.
- **Physical Education Teachers.** The results of this study will provide physical education teachers to introduce fresh and engaging activities that capture students' interest and motivation.
- **Sports Equipment Manufacturer.** The study results will give sports equipment manufacturers creating and launching inventive sports equipment that enables them to maintain a competitive edge, appealing to consumers.
- **Students.** The results of the study provide students the opportunity to engage in active learning, promoting physical fitness and movement while having fun.
- **Future Researchers.** The results of this study provide future researchers with a unique platform to explore the psychological, and physical benefits, of understanding insights into human behavior and social dynamics within a recreational context.

1.4. Scope and Limitations of the Study

The research focused on creating and introducing an innovative recreational game, namely *Likyan-Bola*. The focus during the development process includes detailing the game's dimensions, mechanics, rules, and scoring system, as well as specifying the necessary facilities and equipment. To assess the game's

playability, the students of service PE, BPED majors and athletes from Mindanao State University-Gensan (MSU-GSC) who are enrolled in the 2nd Semester of A.Y. 2023-2024 will actively participate in playing the newly devised game during data collection sessions at MSU-GSC, General Santos City. Respondents for the study will be selected using a purposive sampling method. The research methodology includes a researcher-developed survey questionnaire and an instructional design made up of the IV-DV model that leads to the development based on the comments of the students. However, certain limitations are acknowledged in the study. First, there may be constraints related to time, particularly in terms of how quickly respondents can fulfill the researcher's requests. Second, the study acknowledges the importance of information consistency, emphasizing the need for accuracy and reliability in the respondents' feedback.

1.5. Conceptual Framework (IV - DV)



The Independent Variable-Dependent Variable (IV-DV) model is fundamental in research, showing how one factor (IV) affects another (DV). Recent studies highlight its use in various fields, like social sciences, health, and education. For example, Smith and Doe (2023) explored this model in education by looking at how different teaching methods (IV) influence student performance (DV). They found that innovative teaching strategies significantly improve student outcomes, confirming the model's effectiveness in studying cause-and-effect relationships. This study examines how acceptable and adaptable the game is (IV) and how playable it is (DV). The primary aim is to create a new game by combining elements of Dodgeball and Soccer.

2. Method and Material

In this study, the qualitative research design was incorporated. The qualitative descriptive approach, which aims to gather data that describes the experiences from a personal perspective (Kim et al., 2017). To analyze the comments and suggestions provided by validators and the experiences of students while playing *Likyan - Bola* in PE classes by applying fundamental skills in soccer and dodgeball—thematic analysis will be employed.

2.1 Research Participants

This study involved PE teachers, and recreation enthusiasts who validated an innovation game. In the selection of the field experts, below are the criteria:

1. The recreation specialist has significant years engaged in the specific recreational activity.
2. The recreation specialist has demonstrated skills, techniques, and strategies, supported by relevant

certifications or awards.

3. The recreation specialist has a proven ability to teach or coach others in the recreational activity.
4. The recreation specialist has active participation or involvement in the activity at local, regional, or national levels.

Their role is to review the rules and confirm if the game is playable based on the set criteria. Meanwhile, students enrolled in service PE, Bachelor of Physical Education program, and some soccer athletes who actively engaged with and evaluated the innovative recreational game during the 2nd Semester of the academic year 2023- 2024. Importantly, all participants involved are of a legal age, emphasizing the intentional selection of these student groups to ensure a thorough and focused assessment of the game's reception within the university.

2.2 Research Instrument

This study will employ a custom instructional design created by the researchers, utilizing the IV-DV model. The Independent Variable-Dependent Variable (IV-DV) model is foundational in empirical research, delineating how one variable (IV) influences another (DV). Recent studies emphasize its application in diverse fields, such as social sciences, health, and education. For instance, Smith and Doe (2023) demonstrated the IV-DV model's utility in educational research by examining how different teaching methods (IV) impact student performance (DV). To measure opinions on game development, feedback was gathered from various groups at Mindanao State University-General Santos City, including service PE students, BPED students, athletes, sports enthusiasts, traditional games enthusiasts, and sports teachers.

Their comments and suggestions aimed to capture diverse perspectives on game development, allowing respondents to express support or opposition. This research aims to understand student viewpoints and preferences to enhance future game development efforts. The student participants took part in the game's pilot testing on a decagon court after the mechanics and regulations were approved by relevant experts. Following several games, the researcher surveyed the students to assess the game's playability

3. Result and Discussions

3.1 Objective 1: Assess the skills in dodgeball and soccer.

Background of Likyan-Bola

Likyan-Bola, is derived from the two combined words. "*Likyan*" is a condensed term for the Cebuano word "*likayan*," signifying the act of dodging something, particularly an object while "*Bola*" is the Filipino equivalent of the English word "ball," representing a round object commonly used in sports. This game is a new development game that comes from the two combined games dodgeball and soccer. Two teams can play a match consisting of sets and points. The attacker teams (*hambus*) will kick the ball to strike the dodgers (*bangkil*) while the dodgers will dodge the kickball from the attackers. It is an outdoor game that can be played anywhere as long as there is a big surface area and can be played by everybody.

The overall objective of this developing game is to win the match by maintaining more dodgers left to gain points. A secondary objective (and some would say the main objective) is to have fun and get a bit of exercise at the same time!

History and Development

Soccer, tracing its roots to ancient ball games, evolved significantly during the Middle Ages, with various forms played across Europe. It was not until the 19th century that the modern game took shape, primarily in England, where standardized rules were established by institutions like the Football Association (FA).

These rules laid the groundwork for the global spread of soccer, facilitated by the formation of football associations in different countries. With the founding of FIFA in 1904, soccer's international governance took shape, culminating in the prestigious FIFA World Cup.

The sport's popularity surged as it transitioned to professionalism, with leagues and clubs emerging worldwide. Today, soccer stands as the most popular sport globally, with iconic competitions such as the UEFA Champions League captivating audiences worldwide and legendary players like Pelé and Lionel Messi transcending cultural boundaries.

Dodgeball, a beloved playground pastime, traces its roots back to ancient civilizations. Some historians believe it originated in Africa over two hundred years ago, while others suggest it was played by ancient Greeks and Romans. However, modern dodgeball as we know it emerged in the early 20th century in the United States. It gained popularity as a recreational sport in schools and community centers, offering both entertainment and physical activity. Over the years, dodgeball has evolved, with various versions and rules, but its essence remains unchanged—dodging, throwing, and strategizing to eliminate opponents while avoiding being hit yourself. Today, dodgeball is not only a nostalgic childhood memory but also a competitive sport, with organized leagues and tournaments worldwide, showcasing agility, teamwork, and competitive spirit.

Likyan-Bola is a new game that combines elements of dodgeball and soccer. To create a new game by modifying the existing ones, setting rules and mechanics for it, then testing whether it can be played or not. It also wants to provoke thoughts about inclusive education as well as cultural appropriateness in P.E as well looking at how things have changed over time within physical education through such endeavors as these. *Likyan Bola* does more than offer another fun way to pass our time; it represents an example where Filipino culture is both maintained and improved upon through educational processes.

3.2 Objective 2: Design a recreational game utilizing the skills of dodgeball and soccer.

Fundamental Skills

1. Kicking

It refers to the act of striking or propelling something with the foot, often with force or intention. In sports such as soccer or American football, kicking typically involves contacting a ball to move it in a desired direction or towards a specific target. Outside of sports, kicking can also be used metaphorically to describe forcefully rejecting or expelling something or someone.

A. Push Kick

Among the different types of kicks in soccer, this is the most common kick used by players to pass the ball to a teammate. For this kick, the players use the instep of their kicking foot to connect with the centerline of the soccer ball and push it forward to a teammate. Since most push passes are used over short distances, the focus is on accuracy and not on power. As this kick is easy to learn, even younger players can use it effectively.



B. Instep Kick

The instep kick uses the upper portion of the inside foot. However, it is done with much more power and is mainly used for shooting the ball or making long passes. For a right instep kick, the player runs forward and places the supporting foot beside the ball. Then the swinging movement of the kicking leg is used to strike the ball. The upper part of the foot, or the “laces” comes in contact with the ball during the kick. Always keep the ankles locked while using the inside of the foot for kicking. The instep kick in soccer requires a coordinated effort of muscles and bones throughout the body.



C. Volley Kick

In a volley kick, the soccer player hits the ball while it is still in the air. Since it allows the foot to have better contact with the ball, it is an extremely powerful kick. The idea is to anticipate the movement of the ball and plant the non-kicking foot parallel to the spot where the ball will land. Ideally, the kicking foot should hit the center of the ball to keep it on target. Hitting low will make the ball gain too much height while hitting at the top will force it downwards. A half-volley is a way of kicking the ball just after it bounces up from the ground. It is commonly used by goalkeepers during a goal kick and also by midfielders. However, it needs more precision and focus.



2. Catching

Catching is the action of intercepting and holding onto an object that is in motion, usually with one's hands or arms. Beyond sports, catching can refer to capturing or seizing something airborne or moving, whether it is a falling object.



3. Passing

Passing the ball to a teammate" is a fundamental aspect of gameplay. It involves transferring the ball from one player to another on the same team with the intention of advancing the play, maintaining possession, or creating scoring opportunities. Passing requires coordination, communication, and strategy among teammates to outmaneuver opponents and achieve team objectives, such as scoring goals or winning the game.



4. Dodging

Dodging is the act of quickly and skillfully avoiding something, such as an object or an attack, by moving out of its path. It often involves swift and agile movements to evade potential harm or contact. In sports like dodgeball or martial arts, dodging is a fundamental skill used to escape opponents' attempts to hit or tackle.



3.3 Objective 3: Develop ground rules for the recreational game.

Section 1. Definitions of terms

The following terms will be defined operationally and conceptually.

1. Likyan. A short term for the Cebuano word “likayan” which means to dodge something, particularly an object.
2. Bola. A Filipino term for the English word “ball” which means a round object that is used in sports.
3. Hambus. Conceptually, means to strike or to hit "Manghambus" refers to those who strike or attack, so "mga manghambus" translates to attackers.
4. Bangkil. Conceptually, it means to swerve or to dodge quickly. "Bangkilonon" refers to those who dodge or evade swiftly, so "mga bangkilonon" translates to dodgers.

Section 2. Equipment

This is the equipment needed to play Likyan - Bola.

The Ball

Details

- Material – The surface of the ball is coated by a gator skin and the inner of the ball is made of a compressible foam.
- Weight – 20 grams
- Size (Diameter) – 8 inches

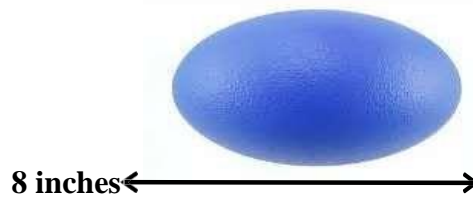


Diagram 1. Ball

Chalk or Stick

Details

Material – chalk (calcium carbonate) / stick (wood)



Diagram 2. Chalk

Tape Measure or Meter stick

Details

Size - measuring tape (60 inches) / meter stick (1 met

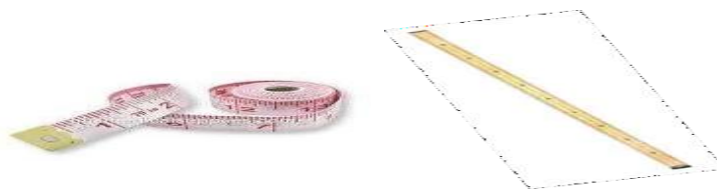


Diagram 3. Tape Measure and Meter Stick

Section 3. Playing Area Dimension

- Details
- Measurements
- Height - 20 meters
- Width - 20 meters
- Side- 2 meters on all sides

20 METERS

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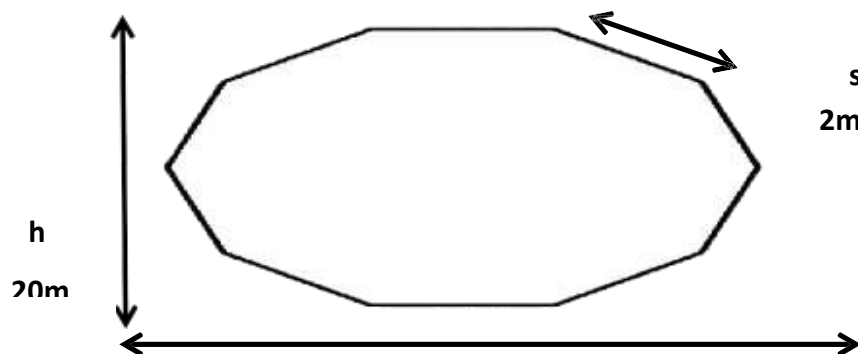


Diagram 4 Court Dimension

Players

- **Hambus**
- **Bangkil**



Section 4. The Game Mechanics

Preparation

- In playing *Likyan-Bola*, a flat ground surface is recommended with a layout of 2 meters per side. The layout's shape will depend on how many players will play for both teams. The shape's sides must be equivalent to the number of players in each team.
- 10 players per team and the shape of the court is with 10 sides
- The players need to divide themselves into 2 teams with equal number of players per team. Maximum of 10 players per team.
- They will do a toss coin to identify who will be the first attacker and the dodger.
- The players can now start the game.

Likyan-Bola can be played by the team. The game can be summarized as follows:

- The game must consist of 20 persons.
- They will be divided into two teams.
- They will have a toss coin to determine the attackers and the dodgers.
- After the toss coin, they will lay out a shape that the sides are equivalent to the number of players per team.
- After finishing the layout, both teams will be placed in their respective positions.
- The attackers will place themselves outside each side of the shape and the dodgers will place themselves inside the shape.
- All players must wear comfortable playing shoes.
- The attackers need to hit all the dodgers to switch sides and become the dodgers.
- If there is 1 dodger left, the attacker has 5 shots to hit the dodger to switch sides.
- If the attackers fail to hit the last dodger with 5 shots (kickball), all the dodgers will go back and they will get 1 **HOME**.
- The only way to score **HOME** is for the last remaining dodger to dodge the 5 shots of attackers.
- The team with the most **HOMES** will be the winner.

Rules for the Attackers

- The attackers are not allowed to use their hands and throw the ball to the dodgers.
- The attackers can only use their hands to catch and pass the ball.
- The attackers can automatically kick the ball from a pass or they can catch it before kicking the ball.
- Attackers only have 5 maximum passes before attacking.
- The attackers must hit all the dodgers for them to switch sides and become the dodgers.
- The attackers must hit the last remaining dodger with only 5 shots (kickball) to switch sides.

Rules for the Dodgers

- If the Dodgers step on the line that player is automatically out of the game.
- The last remaining dodger must dodge 5 shots to score 1 **HOME**.
- If the dodgers score **HOME**, all the dodgers will go back to the game

4. Conclusions and Recommendations

The results of this study affirmed the validity and high playability of the development of the game *Likyan - Bola*, within the defined parameters of the study, specifically in Physical Education classes. Through the effectiveness of the Successive Approximation Model in identifying optimal processes in establishing the development of this modified game. The combined findings show how successful the new game is. It's not just a mix of the two games but it's also a great way to learn and improve different skills like passing, catching, dodging and kicking while having fun. The careful steps taken to make rules and test how playable the game is have paid off. Participants really enjoyed playing it because it keeps the essence of its sports origins while being engaging for everyone involved. The positive feedback we got during the process phase, where participants wanted to learn more about the game and felt like they benefited from it, confirms that *Likyan-Bola* is a hit. In short, this research achieved its goals, resulting in a game that's not only creative but also loved by those who play it. Expanding on its essential, seeking feedback from experts served as one of the goals of the newly developed recreational game. By reaching out to a more diverse range of experts and students, it gathered a broader spectrum of insights and perspectives. This might involve collaborating with individuals from various backgrounds, age groups, and expertise levels, as well as engaging with different educational institutions or community settings. By doing so, we can ensure a more comprehensive understanding of the game's playability across different contexts and demographics. This approach will not only enrich the evaluation process but also enhance the game's overall accessibility and appeal to a wider audience. Through this game that has no proper recreational mechanics, this study will serve as a new avenue to promote an innovation from recreational games. The courts and equipment play a vital role in enhancing these skills. In consideration of the study's conclusions, it is recommended to use a wide space of courts to maximize the use of fundamental skills of soccer. This research study breaks away from traditional routines, revitalizing students' engagement with physical activity. This innovation opens avenues for creativity and experimentation, encouraging students to explore different forms of movement, strategies, and tactics. Consequently, students develop a deeper appreciation for the diversity and versatility of physical activity, fostering a lifelong commitment to health and fitness.

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