

ENHANCING VOLLEYBALL SKILLS THROUGH GAME-BASED LEARNING FOR STUDENT

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Abstract

This paper explores the concept of enhancing volleyball skills through game-based learning for students. Game-based learning is an interactive and engaging approach that utilizes games and activities to facilitate skill development and learning. By incorporating elements of competition, teamwork, and fun, game-based learning motivates students to actively participate and improve their technical abilities, tactical understanding, and overall performance in volleyball. The paper highlights the benefits of game-based learning in volleyball, including active engagement and motivation, skill acquisition, tactical understanding, teamwork, and communication. It emphasizes the importance of creating a dynamic and realistic learning environment that allows students to practice different skills and make strategic decisions within the context of the game. The incorporation of technology, such as virtual reality and video analysis tools, is also discussed as a means to enhance the game-based learning experience.

The researcher reached the most important conclusions that indicate that the reality of the differences in results is due to the establishment of a connection between learners in a way that ensures the transfer of the skill collectively, which contributes to increasing acceptance of the skill and learning it faster.

Keywords: Enhancing, Volleyball and Learning.

Introduction:

Game-based learning has gained significant recognition as an effective approach to teaching and developing skills in various sports, including volleyball. By incorporating game-like scenarios and competitive elements, this teaching method creates an engaging and interactive environment that fosters skill acquisition, decision-making, and teamwork. In this article, we will explore the benefits and strategies of game-based learning in the context of volleyball, highlighting how it can enhance players' skills and overall performance.

Game-based learning has emerged as an effective and engaging approach to teaching and developing skills in various sports, including volleyball. By incorporating game-like scenarios and competitive elements, this teaching method provides players with a dynamic and immersive learning experience. In this article, we will explore the concept of game-based learning in the context of volleyball and delve into its benefits and strategies for implementing it effectively. Whether you are a coach, instructor, or player, understanding and utilizing game-based learning can significantly enhance skill acquisition, decision-making, and overall performance on the volleyball court.¹

Game-based learning takes a departure from traditional teaching methods by immersing players in simulated game situations that closely resemble real match scenarios. Rather than relying solely on drills and repetitive exercises, game-based learning provides a more dynamic and interactive environment for players to learn and apply their skills. Here are some key aspects and benefits of game-based learning in volleyball:²

1. **Engaging Learning Environment:** Games naturally capture players' attention and create a sense of excitement. By incorporating game elements into the learning process, players become more motivated, focused, and willing to actively participate. This heightened engagement leads to a more effective learning experience.
2. **Transfer of Skills:** One of the primary advantages of game-based learning is its ability to facilitate the transfer of skills from practice to actual game situations. By experiencing and practicing skills within game contexts, players develop a better understanding of how to apply those skills in real matches. This helps bridge the gap between training and competition.
3. **Decision-Making and Tactical Understanding:** Volleyball requires players to make split-second decisions based on various factors, such as the position of opponents, teammates, and the ball. Game-based learning provides players with opportunities to develop their decision-making skills by presenting them with different game scenarios. This fosters tactical understanding, as players learn to analyze situations, anticipate outcomes, and make effective choices.
4. **Communication and Teamwork:** Volleyball is a team sport that relies heavily on effective communication and teamwork. Game-based learning encourages players to communicate with their teammates, coordinate strategies, and make collaborative decisions. Through games, players learn to work together, understand each other's strengths and weaknesses, and develop a cohesive team dynamic.

5. Skill Acquisition and Retention: Games inherently involve repetition and reinforcement of skills. By repeatedly executing skills in various game situations, players not only acquire the skills but also reinforce them in their muscle memory. This leads to improved skill retention and the ability to execute skills instinctively during matches.

Implementing game-based learning in volleyball training involves strategically designing game-like scenarios, modifying game rules, and creating challenges that target specific skills or tactical objectives.³ Coaches and instructors play a crucial role in facilitating the learning process, providing guidance, feedback, and encouragement throughout the game-based activities.

Benefits of Game-Based Learning in Volleyball:

Realistic Context: Game-based learning provides players with a realistic and dynamic context that closely resembles actual match situations. This allows them to experience the challenges and decision-making required in a competitive setting, promoting better transfer of skills from practice to games.⁴

- Skill Development: Through game-based learning, players can develop a wide range of volleyball skills, such as serving, passing, setting, attacking, blocking, and defensive techniques. By actively participating in games, players gain opportunities to apply and refine these skills in different game scenarios, improving their execution and decision-making abilities.
- Tactical Understanding: Game-based learning enables players to understand and apply volleyball strategies and tactics effectively. By experiencing the flow of the game and making decisions in real-time, players develop a deeper understanding of offensive and defensive systems, positioning, and team coordination.
- Decision-Making: Volleyball involves split-second decision-making based on various factors, such as the position of opponents, teammates, and the ball. Game-based learning enhances players' decision-making skills by presenting them with different game situations and forcing them to analyze and choose appropriate actions, fostering quick thinking and adaptability.

Research methodology

The experimental method was used in a single group method with a pre- and post-test to suit the method of conducting the research.

The research community and its sample

The research sample included (150) second-year students, of whom (20 students) were chosen as a sample for the research, after homogeneity was conducted in the variables concerned with height, weight, and age, as shown in Table (1).

Table 1. Shows the homogeneity of the research sample

		Age(Year)	Height(Cm)	Weight(Kg)
N	Valid	20	20	20
	Missing	0	0	0
Mean		19.35	177.7	72.55
Median		19	178	72.5
Std. Deviation		0.49	1.56	4.89
Skewness		0.681	-0.276	0.114

From what was presented in Table (1), it appears that the value of the skewness coefficient ranges between (± 1), and this indicates the homogeneity of the sample.

Methods and tools used in research

- Volleyballs (15).
- Volleyball court.
- Dell 5040 calculator (1).
- Signs.
- Office supplies (paper + pens).
- The questionnaire.
- Scientific sources.
- Tests and standards.

Tests used in research

The volleyball skills test is a series of drills designed to assess an individual's proficiency in the fundamental skills of volleyball, including serving, passing, setting, hitting, and blocking. The test is typically conducted in a gym or on a volleyball court and is administered by a qualified volleyball coach or instructor.

The volleyball skills test can be used to evaluate players of all skill levels, from beginners to experienced players. The results of the test can be used to identify areas where a player needs improvement and to develop a training plan to help the player improve their skills.⁵

The volleyball skills test typically includes the following drills:

- **Serving facing up:** The player is required to serve the ball over the net and into the opponent's court. The serve must be legal, meaning that it must be hit with an open hand and must not touch the net.
- **Passing:** The player is required to pass the ball to a teammate. The pass must be accurate and must not be too high or too low.
- **Setting:** The player is required to set the ball to a teammate. The set must be accurate and must be placed in a position where the teammate can easily hit the ball.
- **Spike diagonal:** The player is required to hit the ball over the net and into the opponent's court. The hit must be legal, meaning that it must be hit with an open hand and must not touch the net.
- **Blocking:** The player is required to block the opponent's hit. The block must be legal, meaning that it must be hit with an open hand and must not touch the net.

Note: Tests have a unit of measurement, which is the grade, with the lowest value being (0) and the highest value being (25) grade, and each student has five attempts.

Pretests

The pretests were conducted at 10 a.m. on Tuesday 1/11/2022 in the hall of the College of Physical Education and Sports Sciences at the University of Babylon.

Strategies for Implementing Game-Based Learning in Volleyball:

Modified Games: Create modified versions of volleyball games that focus on specific skills or aspects of the game. For example, a game could be designed to emphasize passing and setting skills by limiting players to only those actions. These modified games allow players to practice specific skills in a game-like setting.⁶

- **Small-Sided Games:** Divide players into smaller teams and play games with fewer players on each side. This format ensures increased involvement and more opportunities for each player to participate actively. Small-sided games also promote communication, teamwork, and decision-making skills.
- **Game Simulations:** Create game simulations that replicate real match scenarios. This could involve scenarios like a specific score line, time constraints, or specific tactical objectives. Players can then practice their skills and decision-making within these simulated match situations.
- **Game Analysis and Feedback:** Incorporate video analysis to provide players with visual feedback on their performance during game-based learning sessions. This helps players identify their strengths, weaknesses, and areas for improvement, enabling them to make adjustments and optimize their skills.
- **Progression and Challenge:** Gradually increase the complexity and difficulty of game-based learning activities as players improve their skills. Introduce new challenges, such as incorporating specific strategies or playing against stronger opponents, to keep players engaged and motivated.

Posttests

The pretests were conducted at 10 a.m. on Sunday 15/1/2023 in the hall of the College of Physical Education and Sports Sciences at the University of Babylon.

Result and discussions

Table 2. Shows descriptive statistics for the variables under investigation in the pre- and post-tests

		Mean	N	Std. Deviation	Std. Error Mean
Serving	Pretest	5.85	20	0.75	0.17
	Posttest	11.55	20	1.28	0.29
Passing	Pretest	7.05	20	0.89	0.198
	Posttest	13.7	20	1.63	0.36
Setting	Pretest	5.05	20	0.89	0.198
	Posttest	14.85	20	1.53	0.34
Spike	Pretest	4	20	0.86	0.192
	Posttest	16.4	20	1.88	0.42
Blocking	Pretest	8.1	20	0.79	0.18
	Posttest	17.7	20	1.261	0.28

Table 3. Shows the differences between the pre- and post-tests, the value of (t) and the significance of the test

	Paired Differences			t	df	Sig.
	Mean	Std. Deviation	Std. Error Mean			
Serving	-5.7	1.38	0.31	-18.47	19	0.000
Passing	-6.65	1.755	0.39	-16.94	19	0.000
Setting	-9.8	1.85	0.41	-23.66	19	0.000
Spike	-12.4	2.088	0.47	-26.56	19	0.000
Blocking	-9.6	1.71	0.39	-24.83	19	0.000

From what was presented in the table (2 and 3), it is clear that there are large differences between the pre- and post-tests, especially since the sample is in the learning stage, as the teaching method used in the research by playing similar to the skills added significant progress to the results.

Enhancing volleyball skills through game-based learning can be an effective and engaging approach for students. Game-based learning involves the use of interactive games and activities that simulate real-life scenarios to facilitate learning and skill development. When applied to volleyball,⁷ this approach can help students improve their technical abilities, tactical understanding, and overall performance on the court. Here are some key points to consider when discussing this topic:

- **Active Engagement and Motivation:** Game-based learning creates an active learning environment that motivates students to participate and stay engaged. By incorporating elements of competition, teamwork, and fun, students are more likely to be excited about practicing and developing their volleyball skills.
- **Skill Acquisition:** Games designed specifically for volleyball can target different skills such as serving, passing, setting, spiking, and blocking. These games provide opportunities for students to practice these skills in a dynamic and realistic setting, allowing for better skill acquisition and muscle memory development.⁸
- **Tactical Understanding:** Volleyball is a highly strategic sport that requires players to make quick decisions based on the situation on the court. Game-based learning can help students develop their tactical understanding by presenting them with various scenarios and challenges to overcome. Through repeated exposure and decision-making within the games, students can enhance their ability to read the game, anticipate opponents' actions, and make effective choices.
- **Teamwork and Communication:** Volleyball is a team sport that relies heavily on effective communication and collaboration. Game-based learning activities can promote teamwork and communication skills by encouraging students to work together towards a common goal. Cooperative games and drills can foster better understanding of each other's strengths, weaknesses, and playing styles, leading to improved team dynamics.
- **Feedback and Progress Tracking:** Game-based learning can provide immediate feedback to students, allowing them to identify their strengths and areas for improvement. By incorporating scoring systems, timed challenges, or performance evaluations, students can track their progress over time and strive for continuous improvement.⁹
- **Transferable Skills:** Game-based learning in volleyball can also help develop transferable skills that go beyond the sport itself. Students can acquire skills like problem-solving, decision-making, adaptability, resilience, and leadership, which can be applied in various aspects of their lives.
- **Integration of Technology:** Technology can enhance game-based learning experiences for volleyball. Virtual reality (VR) or augmented reality (AR) applications can provide immersive training environments, allowing students to experience realistic game situations. Video analysis tools can be utilized to review and analyze gameplay, enabling students to identify areas for improvement and fine-tune their techniques.¹⁰

When implementing game-based learning for volleyball, it is important to strike a balance between structured practice and game play. Providing a mix of focused skill drills and game-based activities can maximize learning outcomes while keeping the sessions enjoyable and engaging for students. Additionally, it is crucial to have qualified coaches or instructors who can guide and provide feedback to students throughout the learning process.¹¹

Overall, incorporating game-based learning in volleyball can be an effective way to enhance students' skills, promote teamwork, and foster a love for the sport. By combining the elements of fun, competition, and learning, students are more likely to stay motivated, actively participate, and experience substantial growth in their volleyball abilities.¹²

Conclusion:

Game-based learning is a powerful teaching method for developing volleyball skills, enhancing decision-making abilities, and promoting tactical understanding. By incorporating game-like scenarios and competitive elements, coaches can create an engaging and immersive learning environment that fosters skill acquisition and teamwork. Implementing game-based learning strategies in volleyball training can help players transfer their skills effectively from practice to actual matches, ultimately improving their overall performance on the court.

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