

# Evaluation of an intervention program for the initiation to basketball aimed at teaching the game's rules

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## *EVALUATION OF AN INTERVENTION PROGRAM FOR THE INITIATION TO BASKETBALL AIMED AT TEACHING THE GAME'S RULES*

KEY WORDS: Rules, Basketball, Initiation, Intervention program, Assessment.

ABSTRACT: The rules of a game determine the technical and tactical skills necessary for the game, such as in basketball. An intervention program was designed that aimed to teach the rules that were considered to be the most important for the initiation to basketball and to teach the players the technical and tactical skills from these rules. The objective of the present study was to develop and assess an intervention program based on the coach's perceptions of the program.

The study's sample was a mini-basketball team of 14 players and the team's coach. The program lasted 8 months and had three weekly practice sessions. The instruments utilized for data collection were the daily training reflections, action research cycles, and the audio recordings. The data were analyzed qualitatively. The coding was done by the research team, and after several trial sessions, a Kappa index of  $K=.78$  was achieved, which assured inter-coder reliability.

Among the results, it should be highlighted that the rules were the backbone of the program. As the program progressed, the players better understood their use. Likewise, they understood the relationship between the technical and tactical skills and the rules, fostering their involvement in the learning process and their familiarization with the game. In conclusion, the experience of teaching basketball initiation through familiarizing players with the rules was positive due to the cognitive involvement of the players in the learning process.

The process of initiation to basketball has been approached from various perspectives. However, there are few studies that approach it from the knowledge of the rules of the game, despite the importance that many authors place on this aspect (Ferreira, Ibáñez and Sampaio, 2009; Ortega, Alarcón and Piñar, 2012). The rules determine the technical and tactical skills of a game, such as basketball (Hernández, 1994). Equipped with data from previous studies (Vizcaíno, Almagro, Rebollo and Sáenz-López, 2012; Vizcaíno, Conde, Rebollo and Sáenz-López, 2012), a program was designed that was based on the teaching of the game's rules.

The aim of the present study focused on developing and evaluating an intervention program, while seeking efficiency in the learning of basketball by teaching the rules.

## Method

This study was conducted within the interpretive paradigm (Colás and Buendía, 1998), and it utilized a qualitative methodology that was based on a case study which focused on the coach (Thomas and Nelson, 2007). The coach was a physical education teacher who was licensed in psychopedagogy and held the highest basketball coaching certification in Spain. She had 10 years of teaching experience and 18 years of coaching experience at the initiation level. The team was composed of 14 players

between the ages of 6 and 8 years. Data collection was during a season lasting 8 months with 3 weekly training sessions of one hour each. The instruments that were utilized included the coach's daily reflections after each practice. There were six action research cycles which included a pre-interview, observation of the practice, and a post-interview. The audio recordings of the six observed practices were analyzed. The daily reflections, the interviews, and the audio recordings were transcribed and coded. The codes were predetermined and they were grouped into four dimensions: Rules (with the codes, rules, and relationships between the rules and technical and tactical skills), Learning of content and objectives (technical and tactical content and methodology), Initial information (explanation, questions, and resources), and Feedback (interrogative, affective, descriptive, evaluative, and prescriptive). Codes were assigned to the transcribed texts with the MXQDA 2010 program. This allowed for the recovery of the texts by code and by frequency. To assure greater reliability, the coding was carried out by a team of experts (Flick, 2007). After various training sessions, a reliability  $>80\%$  (Goetz and LeCompte, 1988) was reached. Likewise, Cohen's Kappa (1960) was calculated through SPSS 20, by analyzing the association between the codes, taken two by two (Gorospe, Hernández, Anguera and Martínez de Santos, 2005). A mean of  $K=.78$  was calculated, which demonstrates a high degree of agreement (Landis and Koch, 1977).

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## Results

The results are presented by triangulating the data from the three instruments for each of the analyzed dimensions.

### Rules Dimension.

The rules constituted the backbone of the sessions (daily reflections) and there was an attempt to have the players reflect and cognitively participate in their learning process (action research cycles, or ARC), through the questions posed (audio recordings). The players understood the conceptual meaning of the rules well (daily reflections and ARC). The difficulty appeared when applying the rules to a real game situation. Throughout the program, the players were able to identify violations as carried out by themselves and others and, thus, participated reflexively in the learning process. This involves greater motivation for the players (ARC). The intent was for the players to realize what technical and tactical skills they can execute to avoid violations and, at the same time, intelligently use these actions. In this way, the players reflected on the rules while they likewise built their particular technical and tactical repertoire (daily reflections). This process favored the cognitive and creative involvement of the players.

### Learning Dimension, content and objectives.

The technical and tactical skills (TTS) were worked on according to the previously selected rules: double dribbling, travelling, personal fouls, and playing area (daily reflections). As the season went on, new tasks and TTS were incorporated at a level that was adapted to the capabilities of the players (ARC). The primary methodology utilized was motivation, through the design of significant and fun learning situations (daily reflections), as well as a lot of practice time (ARC). The teaching styles that were employed fostered the players' search for answers through guided discovery and comprehensive activities (daily reflections). This methodology facilitated cognitive involvement through reflection and problem solving (ARC).

### Initial Information Dimension

The sessions began with the presentation of the rule that was scheduled to be worked on. The players were asked about their previous knowledge of the rule. Thus, sometimes the players were the ones who explained the rules (daily reflections). Other times, it was necessary to stop and discuss small details to emphasize new concepts that emerged (ARC). The initial information offered to the players was characterized by being brief and simple (daily reflections), and metaphors were used to facilitate the understanding of TTS (daily reflections and audio). Some examples of metaphors that were utilized were "Mr. Traveller", "Mr. Double-dribbler", or "the box", referring to the 4 lines that comprise the sidelines and baselines. The general explanation ended by posing a question to the players to assure that they understood what was discussed (audio).

### Feedback Dimension

The most frequent feedback was interrogative and individual

(daily reflections and ARC), since they were the ones that fostered the involvement of the player's cognitive capability (ARC). This type of feedback facilitated the understanding of the relationship between the TTS and the rules (ARC). Likewise, affective feedback was utilized often (ARC), though descriptive feedback was used less frequently. Feedback was applied in a flexible and individualized manner, especially with those players who had more difficulty in learning (daily reflections).

## Discussion

The objective was to develop and evaluate an intervention program through the teaching of the rules. The authors concur with Hernández (1994) in that the rules constitute the nature of the sport; thus, our intent was for these rules to be the central focus of the various practice sessions' objectives. All of this was an attempt to get the players to apply the fundamental rules to their practical knowledge of the game in addition to simply becoming familiar with them. In this way, the formation of intelligent players who are capable of reflecting and making good decisions was facilitated (Cárdenas and Alarcón, 2010). The primary objective of the intervention program was to teach the TTS of basketball from the previously selected 4 rules, which are the basic rules for the initiation to basketball (travelling, double dribbling, personal fouls, and the playing area). Once the rules were selected, the following step was to organize the TTS that are related to each one. The tasks were adapted to the players' capabilities (Carrillo and Rodríguez, 2004; Piñar, 2005). The results demonstrated that the players understood the rules, and during the program they reflected on their application and their relationship with the TTA that they were learning.

Motivation was the primary methodological resource that was employed in the sessions. Thus, significant learning situations were utilized that provided players with a high amount of participatory time (Giménez and Sáenz-López, 1999; Cárdenas and Piñar, 2009; López, 2009). In the practice sessions, the teaching styles related to problem solving and guided discovery were primarily utilized, which facilitated a greater cognitive involvement of the players (Pieron, 1988; Sáenz- López, 1997). One aspect that was utilized throughout the entire learning process was the use of metaphors to facilitate the understanding of the rules.

Regarding the initial information, the explanation of the rules was carried out by posing questions to foster the players' reflection (López, 2009). Based on their knowledge, the players occasionally explained the rules, and thus achieved a greater cognitive involvement in the learning process (Cárdenas and Alarcón, 2010). The information presented was brief and simple (Sáenz-López, 1997; Sánchez Bañuelos, 2002). In accordance with authors such as Pieron (1988), the most frequently used type of feedback was interrogative and affective, as it fostered the players' reflection and motivation.

In conclusion, the experience of teaching the initiation to basketball through an explanation of the rules was positive because of the players' cognitive involvement in the learning process.

## EVALUACIÓN DE UN PROGRAMA DE INTERVENCIÓN DE INICIACIÓN AL BALONCESTO A TRAVÉS DE LA ENSEÑANZA DE LAS REGLAS

**PALABRAS CLAVE:** Reglas, baloncesto, iniciación, programas de intervención, evaluación.

**RESUMEN:** Las reglas condicionan los aspectos técnicos y tácticos del juego, como el baloncesto. Se diseñó un programa de intervención basado en la enseñanza de las reglas consideradas más importantes para la iniciación y, a partir de éstas, el aprendizaje de los medios técnicos y tácticos. El objetivo del presente trabajo se centró en el desarrollo y evaluación del programa de intervención a través de la percepción de la entrenadora.

La muestra del estudio fue un equipo de 14 jugadores de minibasket y su entrenadora. El programa duró 8 meses con tres entrenamientos semanales. Los instrumentos utilizados para la recogida de datos han sido los Diarios de entrenamiento, Ciclos de Supervisión y Ciclos de Audio. Los datos fueron analizados cualitativamente. La codificación fue realizada por el equipo de investigación y tras varios entrenamientos se alcanzó un índice Kappa de  $K=.78$ , lo que garantizó la fiabilidad inter-codificadores.

Entre los resultados, se destaca que las reglas pueden suponer el eje vertebrador de la programación. A medida que avanzó el programa, los jugadores fueron entendiendo su utilidad. Asimismo, comprendieron la relación entre los aspectos técnico-tácticos y las reglas fomentando su implicación en el proceso de aprendizaje y la familiarización con el juego. A modo de conclusión, la experiencia de enseñar la iniciación al baloncesto a través de las reglas ha sido positiva por la implicación cognitiva de los jugadores en el proceso de aprendizaje.

## References

- Cárdenas, D. and Alarcón, F. (2010). Conocer el juego en baloncesto para jugar de forma inteligente. *Revista digital Wanceulen E.F. Digital*, 6, 24-38.
- Cárdenas, D. and Piñar, M.I. (2009). Necesidades formativas para la competición en la iniciación al baloncesto. In C. Jiménez and G. Ortega (Coords), *Táctica y Técnica en la iniciación al baloncesto* (pp. 101-115). Sevilla: Wanceulen.
- Carrillo, A. and Rodríguez, J. (2004). *El básquet a su medida. Escuela de básquet de 6 a 8 años*. Barcelona: Inde.
- Cohen, J. (1960). A coefficient of agreement for nominal scales. *Educational and Psychological Measurement*, 20, 37-46.
- Colás, M. P. and Buendía, L. (1998). *Investigación Educativa*. Sevilla: Alfar.
- Ferreira, A. P., Ibáñez, S. J. and Sampaio, J. (2009). Las reglas y la casualidad en baloncesto: Una aproximación histórica. *Retos, nuevas tendencias en Educación Física, Deporte y Recreación*, 15, 9-13.
- Flick, U. (2007). *Introducción a la investigación cualitativa (2ª ed.)*. Madrid: Morata.
- Giménez, F. J. and Sáenz-López, P. (1999). *Aspectos teóricos y prácticos de la iniciación al Baloncesto*. Huelva: Diputación de Huelva.
- Goetz, J. P. and LeCompte, M. D. (1988). *Etnografía y diseño cualitativo en investigación educativa*. Madrid: Morata.
- Gorospe, G., Hernández, A., Anguera, M. T. and Martínez de Santos, R. (2005). Desarrollo y optimización de una herramienta observacional en el tenis de individuales. *Psicothema* 17(1), 123-127.
- Hernández, J. (1994). *Fundamentos del deporte. Análisis de las estructuras del juego deportivo*. Barcelona: Inde.
- Landis, J.R. and Koch, G.G. (1977). The measurement of observer agreement for categorical data. *Biometrics* 33(1), 159-174.
- López, C. (2009). *Iniciación al baloncesto. Consideraciones para una enseñanza eficaz*. Barcelona: Inde.
- Ortega, E., Alarcón, F. and Piñar, M.J. (2012). Modificaciones reglamentarias en baloncesto de formación: Un nuevo equipamiento, una nueva perspectiva. In A. Antúnez, S. Ibáñez (coords.), *El camino hacia la excelencia en baloncesto* (pp.135-159). Sevilla: Wanceulen.
- Pieron, P. (1988). *Didáctica de las actividades físicas y deportivas*. Madrid: Gymnos.
- Piñar, M. I. (2005). *Incidencia del cambio de un conjunto de reglas de juego sobre algunas de las variables que determinan el proceso de formación de los jugadores de minibasket (9-11 años)*. Dissertation. University of Granada.
- Sáenz-López, P. (1997). *Educación Física y su Didáctica*. Sevilla: Wanceulen.
- Sánchez Bañuelos, F. (1986). *Didáctica de la Educación Física y el Deporte*. Madrid: Gymnos.
- Thomas, J. R. and Nelson, J. K. (2007). *Métodos de Investigación en actividad física*. Champaign, IL: Human Kinetics.
- Vizcaíno, C., Almagro, B. J., Rebollo, J. A. and Sáenz-López, P. (2013). Valoración de entrenadores y árbitros de la importancia de las reglas en la iniciación al baloncesto. *Revista de Psicología del Deporte*, 22(1), 293-297.
- Vizcaíno, C., Conde, C., Sáenz-López, P. and Rebollo, J. A. (2013). Opinión de árbitros, entrenadores y expertos sobre la utilización de las reglas en el proceso de enseñanza- aprendizaje del minibasket. *Revista de Psicología del Deporte*, 22(1), 289-292.