

# Incorporating a game-based pedagogy: designing rich learning environments

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The understanding of a game-based pedagogy within the context of physical education (PE) and youth sports is necessary to promote teachers and coaches insights in how to teach meaningful games. In general, the central purpose of well-known game based approaches such as Teaching Games for Understanding and Game Sense, is to develop more skillful game play and thereby maximizing player learning and enjoyment. To achieve this, an important pedagogical principle is the design of rich learning environments that include sufficient learning opportunities for players. When implementing a game-based pedagogy, teachers and coaches should have knowledge and skills to consistently adjust the game situation to the skill-level of players. However, it remains relatively unclear which modifications (i.e., adjusting number of players, field sizes, goals, equipment and rules) are appropriate and what teaching strategies (e.g., prompts, debates, questions) are accurate when making teaching decisions, especially because each practice must be considered as specific and unique. In other words, a pedagogical practice does not automatically inform what learning environment could be beneficial for learners in small sided games. Instead, PE teachers and coaches tend to incorporate fixed game configurations within their context.

This presentation focuses on the exploration of several didactical elements that add to knowledge and understanding of designing rich games in the teaching practice. Therefore, several principles of a game-based pedagogy will be discussed. Specifically, attention will be paid to an observation procedure of game play in practice. With use of a digital application, game play is analyzed on the basis of either an existing balance or imbalance between offense and defense. This observation tool follows four pedagogical steps that is called *Game Balance Analysis* (Koekoek, Van der Kamp, Walinga, & Van Hilvoorde, 2014; Koekoek, Walinga, & Van Hilvoorde, 2017). The tool is originated from several theoretical frameworks for games teaching such as situated learning, non linear pedagogy, and ecological dynamics (e.g., Tan, Chow, & Davids, 2012). These frameworks indicate that a didactical approach of designing games may be a valuable tool to incorporate in a game based pedagogy. This presentation highlights the possible links between concepts and practical implications.

## References

- Koekoek, J., Van der Kamp, J., Walinga, W., & Van Hilvoorde, I. (2014). Dutch elite youth soccer players perceptions of a TGfU-modified game practice. *Agora para la educación física y el deporte*, 16(3), 232-254.
- Koekoek, J., Walinga, W., & Van Hilvoorde, I. M. (2017). Improving Game Based Pedagogy by Technology. Game Balance Analysis and Digital Video Tagging Within a TGfU Setting. In A. Bund, & C. Scheuer (Eds.), *Changes in Childhood and Adolescence: Current Challenges for Physical Education, Proceedings of the 12th FIEP European Congress* Logos Verlag Berlin GmbH.
- Tan, C. W. K., Chow, J. Y., & Davids, K. (2012). 'How does TGfU work?': examining the relationship between learning design in TGfU and a nonlinear pedagogy. *Physical education and Sport Pedagogy*, 17(4), 331-348.