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Game Understanding and Game Performance in Badminton

Development and Validation of Assessment Instruments and Their Application to Games Teaching and Coaching

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ABSTRACT

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Previous research in game settings in Finland has mainly focused on perfecting the technical aspects of game performance, whereas studying and developing game understanding as well as the teaching of games has gained far less attention. Therefore, the primary purpose of the present study was first to develop two valid assessment instruments to evaluate game understanding and game performance in badminton, and second, to apply the developed instruments to different age and experience levels. The third purpose was to set up an intervention study in order to study the effects of two types of instruction on game understanding and game performance of physical education students.

The participants in these studies were primary and secondary school children at different age levels (9, 12 and 14 years of age), junior badminton players (14 years of age) and physical education students in a teacher-training program. Multiple measures of knowledge, game understanding, skill and game performance were used to evaluate the various aspects of game performance.

The results of the first and second validation studies show that the instruments developed for the purposes of this project have shown themselves to be valid indicators of game performance. The third study, comparing experts and novices, clearly showed that skill, game play and cognitive components all differentiated experts from novices. The findings of the fourth study revealed that the strategy-oriented group, receiving skill instruction and video-based strategy instruction, was able to improve its badminton knowledge, game understanding and serving skill, whereas the traditional group, receiving only skill instruction, only improved its badminton serving skill.

In all, the findings of this study further confirmed the importance of cognitive abilities in game performance and suggest that the teaching of games should be reconsidered in order to produce both skillful and intelligent players.

Keywords: game understanding, game performance, badminton, assessment, validation, experience, intervention

1 INTRODUCTION

To play games without knowing "what to do and when" is difficult, if not impossible. Separate skills in different games can be learned and performed in isolation of the game, but in order to perform these skills in a game situation a player must use his/her cognitive skills to decide "what and when to perform". For this reason it could be argued that to be a successful games player requires more than just skillfulness, and therefore, the present investigation focuses mainly on these tactical aspects of game performance and pays less attention to aspects related to motor skill.

The practice of motor skills is crucial especially in low-strategy sports where executing the skill is the major determinant of success. In high-strategy sports, on the other hand, an athlete must also learn to adjust to the complex game situations in which response selection and decision-making must be learned (Thomas, 1994). Tactical awareness plays an essential role in game understanding. Bunker and Thorpe (1986) have indicated that the uniqueness of games is the decision-making process that precedes the execution aspect of performance in a game. They also contend that each game situation poses a problem and that this element of games lies within the cognitive area of learning.

Top-level badminton offers a good example of a high-strategy sport in which the highest levels of both cognitive and motor skills are required. During the game highly trained players are bound to solve hundreds of tactical situations appearing in a single match and in all the situations decisions must be made quickly and accurately. Nevertheless, badminton and its modified versions can also be considered suitable games for beginners. The racquets are light and easy to handle, the basic skills are quite easy to acquire and the main rules and basic tactical principles are simpler than for example in invasion games. Therefore, badminton seemed to be an appropriate game for studying game understanding and game performance at different age and experience levels.

In other countries physical education teachers have long been concerned with issues related to how to best teach sport and games to children. Many