Chapter 42
Player–Driven Video Analysis to Enhance Reflective Soccer Practice in Talent Development

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ABSTRACT

In the present article, we investigate the introduction of a cloud-based video analysis platform called Player Universe (PU). Video analysis is not a new performance-enhancing element in sports, but PU is innovative in how it facilitates reflective learning. Video analysis is executed in the PU platform by involving the players in the analysis process, in the sense that they are encouraged to tag game actions in video-documented soccer matches. Following this, players can get virtual feedback from their coach. Findings show that PU can improve youth soccer players' reflection skills through consistent video analyses and tagging; coaches are important as role models and providers of feedback; and that the use of the platform primarily stimulated deliberate practice activities. PU can be seen as a source of inspiration for soccer players and clubs as to how analytical platforms can motivate and enhance reflective learning for better in-game performance.

INTRODUCTION

In sports, the purpose of talent development is to help young athletes make a smooth transition to the elite level and unfold their potential (Stambulova, Alfermann, Statler, & Côté, 2009). It has become "big business" and many soccer clubs invest a huge amount of resources in selecting and developing talent (Middlemas & Harwood, 2017). If a player reaches a high level of expertise at a young age, he might potentially make a lot of money himself and the club will also gain a bottom-line profit.

Talent development research has evolved radically over the years. The holistic ecological approach (Henriksen, 2010; Henriksen, Stambulova, & Roessler, 2010a), which is a more recent approach, proposes a shift in research attention from the individual athletes towards the broader developmental context or environment in which they develop. From this perspective, a talent development environment is defined as a dynamic system comprising a micro-level, where athletic and personal development take place, a macro-level, which is the larger context in which these surroundings are embedded, and the organizational culture of the sports club or team, as well as the interrelationships between these elements (Henriksen, 2010). Previous studies have shown that a variety of different methods is conducive to efficient talent development, such as integrated and holistic strategies, role models, specified expectations, training programs, informal athlete-coach relationships and ownership (Martindale et al., 2007; Middlemas & Harwood, 2017). Research has shown that good learning skills, self-awareness and reflection are pre-requisites for such accelerated learning (Larsen et al., 2012).

The desire to maximize learning within youth soccer has led to the widespread use of video-based performance analysis by coaches and athletes within the soccer environment (Drust, 2010). Specific methods include player trajectory extraction, content retrieval and indexing, highlight detection, 3D reconstruction of the soccer match, tactical analysis, statistical evaluations, etc. (Manafifard et al., 2017). The aims of using analytical and statistical tools are mainly to support coaching decisions and guide player's development and player in-game decision making and targeted development. These supportive tools seem not to be a "one-size-fits-all" learning approach or as simple as is sometimes assumed (Stratton et al., 2004).

Integrated tools like these aims to strengthen overall game intelligence. Video clips with encoded information on specific game elements are a less expensive option and may serve for reflection and support feedback (Kelly, 2017).

It is also known that learning through understanding, such as that practiced in Teaching Game for Understanding (TGfU), and the reflective practice in line with this concept facilitate learning and, along with the practice of feedback used as part of TGfU, are supportive of implicate decision-making (Kelly, 2017). Reflection involves self-awareness, especially if it is conceptualized in different ways and contains multiple levels. As such, reflection facilitates the deduction of practical and meaningful insights and embraces looking back and mirroring one's own actions, thereby understanding implicate actions (Kelly, 2017). Feedback between players and coaches is crucial in the learning process due to the improvement of skill performance, the increased motivation, and the players' positive self-concept. This is especially true if the coach-athlete relationship is based on high amounts of feedback, instruction, and encouragement. Furthermore, this should be delivered in a positive manner, and divergent questioning will support the players' cognitive development, awareness, and problem-solving skills (Kelly, 2017).

The complexity of youth talent development in soccer poses a number of challenges concerning psychological factors that influence the video feedback (VFB) and in-game performance. A number of recent studies have begun to shed light on the ways in which elite team sports coaches and athletes interact within

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