Exploring The Role of Mobile Phone Technology in Elite Athlete Assessment and Development

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Type: Professional Practice
Category: K: Elite sport organization and management for world class performance

Abstract

Aim of Paper
There has been increased availability, adoption and use of mobile phone applications in medicine, health and sport in particular. Utilizing both qualitative and quantitative data from players and coaches this paper explores how mobile phone applications are utilised as a platform to assist in the assessment and development of elite athletes. is an ongoing process involving the systematic evaluation of their anthropometric, physiological, psychological and sociological characteristics. Utilising qualitative data, this paper explores the benefits and problems of utilising mobile phone applications as a platform in which coaches and managers assess and develop elite athletes. This paper also evaluates the use of mobile phones as a platform to facilitate personalised coach feedback to athletes concerning aspects of their performance.
Practice Description
Applications have transformed mobile phones into multifunctional devices that are an ideal platform to support individualised athlete training, skill assessment and coach feedback (Kranz et al., 2013). While numerous medical and health-related mobile phone application exist (Boulos, et al., 2014) Metrifit, as an elite athlete mobile phone assessment platform, facilitates the assessment and development of key aspects of an athleteathlete's performances. Metrifit is a coach driven, player centric platform that assists in the collection and analysis of key player data. In particular, Metrifit serves as a coaching tool to plan, monitor and record key performances indicators during training such as This incorporates the monitoring of an athlete's lifestyle habits and significant changes in their behaviour such as readiness to train, training overloads and burnout. The management and tracking of injuries, and their rehabilitation, is a key aspect of the platform. Metrifit is designed to facilitate speedier, more reliably informed and proactive decision making through the generation of specific reports on injuries, training loads,

mental state and game related statistics. In addition to utilising video analysis and message boardsshort, this application allows coaches to identify trends, monitor performance and provide appropriate solutions to enhance athlete performance. Metrifit has been adopted and utilised by elite sports teams and organisations such as; Crystal Palace FC, Scottish Football Association, Welsh Football Association, Swim Ireland, Cycling Ireland, Lincoln University in new Zealand, University of Tennesse and Queens University Belfasthas been adopted by a number of English Premier League football clubs, English Premier League rugby clubs and Olympic Athletes. Because medical and health-related applications have deficiencies and limits and, in response to calls for further research concerning the effectiveness of mobile Smartphone applications (Boulos et al., 2014), , a number of heuristics were identified to explore aspects of mobile phone applications from both coach and athlete perspectives. More specifically, quantitative data gathered fromfocus groups examined elite level coaches and athletes explored their perceptions of Metrifit in terms of its quality of experience and quality of service (Wac et al., 2011). Related to these two dimensions, additional questions were posed in focus groups concerning Metrifit's mobile phone applications' utility, usability and instructional quality.

Context Description

Traditionally, coaches and managers have subjectively assessed and recruited professional football players based on their intuition and gut feeling (Christensen, 2009). However, the collection and dissemination of appropriate performance related data facilitates a more rational, scientific method of athlete assessment and development. Moreover, individual and personalised coach feedback facilitates the improvement of sport skill performance (Jones et al., 2010) and increases the long-term motivation of athletes (Kranz et al., 2013: 206). In this regard, Metrifit facilitates an athlete centered philosophy that empowers players to make choices, encourages critical thinking and game sense knowledge which assists in improving athletes decision making capabilities. There has been increased availability of mobile phone applications in general and in medicine, health and sport in particular (Boulos, et al., 2014). As this paper will identify, an essential feature of Metrifit is its ability to facilitate qualitative, precise and individualised focussed coach feedback. More specifically, such coach feedback incorporating volves individualised messaging, group forums and discussion.

Implications and learning

The implications for professional football clubs and managers in general and elite level coaches and elite athletes in particular are clear. Based on the data collected, mMobile phone applications, such as Metrifit, assist coaches and managers in planning, executing and assessing athlete performances in a more rational scientific method. Moreover, while aAthletes also have access to immediate personalised coach feedback. In this regard, mobile phone applications could serve as a useful platform in alleviating the uncertainty surrounding the assessment and development of elite level athletes. However, based on the data collected

a number of concerns were identified. Data from players identified the timeliness of data input, and perceived pressures from coaches to input appropriate data. Athletes also identified the quality and appropriateness of some of the coaches' feedback. Related to this was a recurring theme from coaches concerning the accuracy and trustworthiness of the player inputted data which, may impact their assessment and subsequent player selection issues.

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EASM 2014