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Soccer Players Skill Development with Multimedia Aid: Future Prospects

Mazin Al-Asadi

Center for Instructional Technology and Multimedia, Universiti Sains Malaysia, Malaysia

Abstract The current advancement in representing complex tactics in sport field led coaches to consider multiple visual aids for developing soccer players' skills. Meanwhile, the utilization of multimedia tools can offer a flexible way for players to understand the actions for the taught skills. With this in mind, a deeper insights about the use of multimedia tools in sport education is presented in this paper. This paper also offers some future prospects about the use of multimedia tools in aiding players' learning of tactics. These prospects can help guide future researchers to the potential of multimedia aid in the field of sport in general and soccer in particular. Soccer players can also benefit from the constant use of multimedia tools in learning about the tactical and technical skills.

Keywords Multimedia tools, Learning tactics, Motor skills, Soccer skills development

1. Introduction

It is evident from the literature that soccer players in their early learning may face a number of challenges to understand the ways for developing their skills. Furthermore, soccer players perform numerous activities in the field (Rampinini et al., 2007), which sometimes are found to be associated with the learning level of player and motivation to develop own skills. On the other hand, the use of multimedia tools for adolescent's skills development in the domain of sport typically consists of acquiring the necessary skills to learn effectively by engaging in a learning task (Danish & Nellen, 1997; Larson, 2000). A new player may possibly possess capabilities; defined as an inherited, somewhat enduring, stable trait of the individual that underlie or maybe support unique variations of motor as well as cognitive routines or knowledge (Jones & Lavallee, 2009). When novice soccer players possess the best abilities, then what exactly is considered critical is their degree of skill in the field. Skill describes ones proficiency in a particular situation; which is usually easily changed from one player to another for the aim of enhancing capability to perform a unique activity (Holt, Tink, Mandigo, & Fox, 2008).

Previous studies addressed the main concern of football practitioners as well as researchers about understanding the actual science behind the development of motor skills which may improve and develop experienced novice players through other learning means. In accordance with traditional sights of learning (Martindale, Collins, & Daubney, 2005), players must understand and execute different activities in accordance to their level of skills in order to master a skill, which are divided into technical and tactical skills (Baker & Horton, 2004). This is because, the constant utilization of multimedia tools can aid the development of soccer's skills in the sport field which has been reported to receive less attention lately. Therefore, the researcher in this study suggests investigating the effect of multimedia tools on soccer players' skill development and to understand the basic pattern involving strategic and physical movements. This is actually considered as the novice phase, where performance within this stage is characterised by the level of accuracy players achieve to consciously concentrate on the movement (Ericsson & Crutcher, 2014). After some period of practice, soccer players can further develop their skills when they find differences in their movement accuracy and control of the ball actions instantly. This could result in better performance and foresee the opposition actions in a game play.

Meanwhile, the use of multimedia videos can help players to be prepared for any potential anticipation by guiding them through the steps needed to perform a particular skill. This is believed to be necessary for increasing players' motivation to perform better and concrete learning capacity. Player's movements are generally performed with different levels of accuracy which usually characterized by number of errors player experience in a game play (Toner, Montero, & Moran, 2010). From the coach's point of view, it is important to know how soccer players can develop technical and tactical skills in order to achieve excellence in a sport. As a result, what any soccer player attends to is essential in developing athletes.

* Corresponding author:
mazenabedstar@yahoo.com (Mazin Al-Asadi)
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2. Multimedia Use in the Development of Soccer Player Skills

Leser, Baca, and Uhlig (2011) have examiner the potential impact of multimedia technology on learning in the field of sport motor skill acquisition. They explored the consequences of using multimedia tools in adding students' learning of sports in a university soccer class. The results driven by students from using multimedia technology in the experimental group were compared with the one received by students in the control group. The result showed that majority of players in the experimental group processed a positive agreement in the usability and assistance of multimedia for the sports practical course. Considering the reviewed conditions, it can be concluded that the use of multimedia content doesn't affect the learning effects. Other schools like Ives, Straub, and Shelley (2002) stated the importance of using multimedia video in psychosocial interventions in order to show the main steps for improving one's communication skills, document behaviors, and as a feedback tool for behavior modification strategies. This was viewed to be an important part in sport psychology along with other editing expertise. They also expressed the potential of up-to-date digital video systems to help overcome some problems related to players training in the field. Khacharem, Zoudji, Kalyuga, and Ripoll (2013) investigated the potential of visual presentation type in promoting the tactical learning of a soccer playing system. They found that two static visualization enabled novice players than the dynamic visualization did. They also stated that less experienced players found the static-with-tracing presentation to help them trace the actions. Lin, Swan, and Kratcoski (2008) concluded some ways in which soccer players can construct knowledge and create multimedia representations of their learning when afforded ready access to a variety of digital devices. Schweizer, Plessner, Kahlert, and Brand (2011) described and introduced the video-based online training-tool for improving soccer referees' decisions. They found that such tool enabled soccer referees to effectively manage and decide the actions in the field. Based on these studies, it can be concluded that soccer players found multimedia tools to provide the necessary presentation of the action. In addition, soccer players were also found to benefit from the use of video in offering a detailed explanation of the steps required from players to perform in a field. After all, some major prospects were addressed by the researcher as described in the next section.

3. Prospects

My personal review of the literature revealed that multimedia aid can foster players' mental skills training which is believed to act as the main dimension that soccer players need to prevail through a variety of mental issues such as concentration, pressure, low self-esteem, stress and tension, as well as emotion and active engagement. It is evident that soccer players may consider multimedia tools to offer them with the antecedents for building their skills especially when it comes to learn about the actions needed to perform a certain skill. This is somehow devoted to the conceptualization of one's mental model to process information which may shift from one display to another. On the other hand, the constant use of multimedia tools to learn about soccer skills would enable players to perform to maximum ability. Weinberg and Gould (1999) for example stated some of these techniques which are believed to help put soccer players into the right frame of mind include arousal regulation, imagery, self-confidence, goal setting, and concentration. Meanwhile, there are some misconception about the use of dynamic representation in creating sort of confusions among players when attempting to understand certain movements. This can be due to cognitive and non-cognitive related aspects especially with the modality technological tools to increase and enhance their performance. Such tools can be used to form the basis for players to be able to perform well in the field. Chisamore, Katz, Paskevich, and Kopp (2004) introduced the role of technology utilization in improving players' self-confidence/ self-efficacy as well as overall athletic performance. This was achieved by merging between aspects related to sport psychology, technology, and proper instructional design.

With this in mind, multimedia-assisted teaching and learning have proven to offer effective forms of education. The use of learning materials in sport field with the multimedia aid has also shown to provide a wider views about the ways for performing a skill that include motor skills. The current formation of multimedia materials and learning environments is formed by taking into consideration the main aspects of technical and tactical skills. Baca, Dabnichki, Heller, and Kornfeind (2009) provided a rich analysis of using different tools in sport education. They concluded the needs for improving user-friendliness and standardisation of measurement and transmission protocols. Such concerns can be overcomes by using manifold animations and video sequences to assist players to comprehend sports motions and technical/tactical actions.

Video may also be used to help enhance coaching skills other than leadership and communication. Gould, Damarjian, and Medbery (1999) stated that junior coaches use minimal mental training practices with their athletes, and advised that video could be embedded into the current teaching to help coaches in their training of their mental skills. Moreover, it is also assumed that sport psychologists can benefit from segmentation principles in making own player- and team-specific mental training videos and can instruct coaches how to use the videos to train players. This is because videos can contain several components that are presented in certain way for learners to process the information using different channels. Such process can help players build positive behavior, building motivation, and for training skill rehearsal imagery. Halliwell (1990), for example, described the use of player highlight videos to provide motivation and confidence.

Chisamore et al. (2004) also stated that multimedia tools can help provide athlete with the mental tools necessary to build, maintain or regain confidence can aid the athlete in achieving peak, or optimal performance. Many of the procedures and practices in mental training involve technology. This technology, ranges from digital video and audiotapes, to simulations and virtual reality. In this article the authors review the areas of sport efficacy and sport technology as they relate to athlete performance. The Visualization Multimedia Design Model (VMDM) is then introduced as a theoretical base for designing personalized technological mental training tools. These tools can be used by elite level athletes to help them mentally prepare for competition and peak athletic performance.

Al-Asadi and Umar (2016) proposed some suggestions related to the utilization of multimedia elements to learn soccer skills. These are 1) embedding the characteristics of a skill by coordinating the movement of an actions; 2) increase players' control of the presentation by isolating the skill into segments; 3) consider more than one multimedia elements when introducing complex learning activity; and 4) ensure a reasonable length of media when describing the tactical skills which involves more attention by players to understand the constant actions among group of players.

Yu (2013) introduced the assumption related to the usefulness of multimedia courseware application for learning football as a way for overcoming the limited time and unsystematic problems during the football theory teaching process. The author found that multimedia courseware provide non-intuitive explanation in technical and tactical teaching part, and solves unity and regulatory issues of the technical movement in practice teaching class in which utilizing multimedia teaching is not only related to teaching methods and transformation of teaching methods, but also affects the teaching mode and the development of teaching theory.

Despite these, Middlemas (2014) reported the needs for deeper research to conceptualize the role of video technology in developing players, coaches and practitioners skills of football. Drawing from a wide range of scientific disciplines, the term 'video-based practice' was considered to represent the overall activities and processes surrounding video delivery in youth football settings. The author found that psychological factors drivn by the video-based practice in youth football helped players to learn effectivelly, and suggest that the skill and expertise of the Sport Psychologist may add significant value to video-based practice alongside the coach and performance analysis practitioner.

4. Conclusions

This article addressed the key studies in the field of sport education with emphasis on soccer players' skill development using the multimedia aid. It also highlights the role of multimedia-assisted video in promoting players' learning of the tactical and technical skills. The main prospects driven from this article concerned about the potential of multimedia video in helping players and coaches build their mental training to actively reflect the knowledge taught into the field. It also reports on some facts related to the multimedia utilization in promoting players' motivation by engaging them in cognitively balanced activities.

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