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Individual innovativeness and sport innovation: A systematic analysis

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Abstract

This study aims to examine the importance of individual innovativeness and innovative approaches in sports in different dimensions. The concept of individual innovativeness, which is expressed as individuals' willingness to innovate, their ability to internalize and apply innovation, their positive behaviors regarding innovation and the benefits of innovation, has been examined. In addition, it is important to follow current and technological innovative developments in sports together with the changing and developing sports culture today. Sport organizations continue to adapt, renew and develop themselves through creative and novel ideas. The various strategies for innovation applied by sport organizations hold the potential to radically change how we play, view and organize sport. In sport organizations, competitive advantages are often created through innovation. In this way, strategy and innovation are inherently linked within sports. Examples of strategic innovations in modern sport include the development of the race runner bike and the introduction of the fiberglass pole in Olympic high jumping. Other examples of strategic innovation include the increasing use of new technologies in sport, such as sensor monitoring in martial arts refereeing.

Keywords: Individual innovativeness, sports innovation, sports technology

1. Introduction

The phenomenon of individual innovation is closely related to the phenomena of innovation and innovativeness. Because the individual is at the center of innovation. From this perspective, it is important to explain the concepts of innovation and innovativeness in order to better understand the concept of individual innovativeness (Yeğin, 2017) ^[33].

Innovation and entrepreneurship are needed in sport in order to deal with uncertainties but also integrate new societal advancements (Andersen & Ronglan, 2015) ^[2]. Sport innovation requires a system approach due to the need to get input from multiple stakeholders. Increasingly sport innovation requires the feedback from different entities in order to gain acceptance in the marketplace (Ratten, 2019) ^[23]. This means rather than being a one-off planned event, sport innovation develops over time based on the collective input of a group of individuals. The interactions of these individuals facilitate a dynamic process that evolves over time. Sport innovations are shaped by the sharing and dissemination of knowledge from multiple sources (Ratten & Babiak, 2010) ^[24]. Based on this, the aim of this study is to examine the importance of individual innovativeness and innovative approaches in sports in different dimensions.

2. Review of literature

2.1 The concept of innovativeness

Rogers (1995) ^[26] defined innovation as the adaptation of an individual or group to new ideas before other members of their system. Braak (2001) ^[5], defined innovativeness as a tendency towards something new or a reaction to innovations in a particular field. Goldsmith ve Foxall (2003) ^[11], defined innovativeness as interindividual differences in how people respond to new things and the effects of these things on their success or failure. The concept of individual innovativeness also stands out as an important classification for determining the innovativeness levels and categories of individuals (Alan & Yeloğlu, 2013) ^[1].

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2.2 Individual innovativeness characteristics and categories

The concept of individual innovativeness is defined as adopting, developing or implementing an innovation (Yuan & Woodman, 2010) [34]. The concept of individual innovativeness is an important subject that attracts the attention of researchers from many disciplines and is examined from various perspectives, together with the rapidly changing dynamics of our age. Researchers have developed various approaches to understand this concept. Behavioral, general personality trait and specific personality area trait stand out among these approaches (Goldsmith & Foxall, 2003) [11]. The behavioral approach analyzes individuals' behavior in adopting or rejecting a particular innovation (Rogers, 1963) [25]. According to this approach, the innovation process is examined through the stages of adoption, and individuals' responses to innovations are evaluated based on their behaviors in this process. The general personality trait approach evaluates innovation depending on the general personality traits of the individual (Yuan & Woodman, 2010) [34]. According to this approach, individuals' attitudes towards innovations are based on their personality traits and general behavioral patterns. For example, it has been observed that individuals with a high risk-taking tendency are more open.

The specific personality domain trait approach evaluates the tendency of individuals to be innovative in a particular subject or area (Goldsmith & Foxall, 2003) [11]. According to this approach, individuals' interests and areas of expertise affect their level of innovation. For example, an individual who specializes in technology is expected to be more prone to innovation in this area (Lee & Chue, 2013) [17].

Sport organizations continue to adapt, renew and develop themselves through creative and novel ideas. The various strategies for innovation applied by sport organizations hold the potential to radically change how we play, view and organize sport. In other words, through strategy and innovation modern sport is. Strategy can here be thought of as patterns of actions employed by managers to position an organization for competitive advantage (Shilbury, 2011) [29]. In sport organizations, competitive advantages are often created through innovation. In this way, strategy and innovation are inherently linked within sports. Examples of strategic innovations in modern sport include the development of the race runner bike and the introduction of the fiberglass pole in Olympic high jumping (Balmer, Pleasence & Nevill, 2012) [4]. Other examples of strategic innovation includes the increasing use of new technologies in sport, such as sensor monitoring in martial arts refereeing (Chi & Res, 2005) [6] or performance monitoring (Liebermann, Katz, Hughes, Bartlett, McClements & Franks, 2002) [18].

2.3 Individual innovativeness and entrepreneurship

Individual innovativeness can take the role of an instigator, team member, collaborator, supporter or other function depending on the nature of the input. This means it is useful to consider individuals in the process of creating or nurturing sport-related innovation and entrepreneurship. Individual innovativeness behavior can be expected to influence innovation outcomes at the company level. In their comprehensive level-of-analysis framework that reviews literature on individual, team, organizational, and multilevel innovation, Anderson (2014) [3]. Individual innovation is a multistage process that encompasses the recognition of problems and the generation of ideas or solutions, the seeking of sponsorship for the idea, coalition building to support it, and the completion of the idea (e.g. producing a prototype, a

model, a process), (Scott and Bruce, 1994) [27].

3. Innovation types in sport

The eight aspects of sport innovation identified in the reviewed literature are here categorized as five different types of innovation in sport:

- Social.
- Technological.
- Commercial.
- Community-based.
- Organizational.

Social innovation arises when sport organizations, groups or individuals (such as athletes and coaches) are faced with social issues that requires new and creative solutions. In this way, social innovation encourages solutions to complex social issues in sport contexts. Organizations and individuals are involved in social innovation by contributing to society in a positive manner through sport. Social innovations are often complex and time-consuming processes. The use of martial art as a tool to achieve gender and development objectives in Uganda through the global 'Girl Effect' campaign is an example of social innovation in sport (Hayhurst, 2014) [13].

Technological innovation occurs through advances in technology (Pinch & Henry, 1999) [21]. Advances in modern technology over the past decade have innovated the way people participate in sport in a number of ways. In the reviewed literature, most studies dealing with technological sport innovations are related to advances in performance enhancement (Johnson, 2010) [16], sport medicine (Ellis, Briggs, & Philippon, 2011) [7], improvements in measuring athletic performance (Sheridan, 2007) [28], rehabilitation (van der Woude, de Groot, & Janssen, 2006) [31] and new adaptations to sporting equipment. New and improved sport equipment and athletic gear can change and improve how existing sports are practiced (Balmer, 2012) [4]. In other words, they can contribute to large-scale institutional changes in sport. However, technological innovation also affects how people participate in sport in other ways. For instance, the use of the internet has created a completely new way of participating in sport through e-sport, fantasy sport leagues, and online betting (Ratten & Ferreira, 2016) [20].

Commercial innovation appears when businesses are involved in creating change in sport. These sport-based innovations can be product innovations (Fuller, Jawecki, & Muhlbacher, 2007) [9]. Commercial innovations by large international corporations involved in sport often relate to the way sport products and processes are marketed (Fredberg & Piller, 2011) [8]. In professional sport, commercial innovation occurs through risk-filled activities involving market capitalization, competition, credibility and business activities (Goldsby, Kuratko, & Bishop, 2005) [10]. Community-based innovation involves social responsibility and entrepreneurship in which individuals and sports organizations partner with local community groups to encourage working towards a common goal (Hoerber, Doherty, Hoerber, & Wolfe, 2015) [15]. This can often be related to social issues and social sport innovations.

Organizational innovation occurs when sports organizations and government institutions pursue projects of institutional change (Miragaia & Ferreira, 2016) [20]. Many international sport organizations engage in innovation initiatives (Winand & Hoerber, 2016) [32]. Examples of sports organizations that are involved in innovation are the International Olympic Committee (IOC) and Federation Internationale de Football Association (FIFA).

3.1 Dynamic aspects of sport innovation

Technological sport innovation involves the creation and improvement of sport equipment and can be linked to elite sports and performance enhancement, for instance, through new ways of monitoring and measuring athletic performance (Loy, 1968) ^[19]. Examples of technological sport innovations include the introduction of clap skates in speed skating, bench shirts in powerlifting, polyurethane swimsuits in competitive swimming (Balmer *et al.*, 2012) ^[4] or wearable force sensors in martial arts (Chi, E.H., & Res, P.A. 2005) ^[6].

In the last decade, there has been growing interest in innovation and entrepreneurship in sport studies, particularly within sport management research (Ratten & Ferreira, 2016) ^[22]. Both innovation and entrepreneurship can be said to play vital roles in sport development, but it is somewhat unclear how, to what degree, and in what ways these concepts are considered when developing sport, locally, regionally or nationally. While people may choose to participate in sport for a number of reasons such as fun, leisure, fitness or socializing with friends, an inherent ambition and part of the ethos of modern elite sport, is to improve performance (Guttman, 2004) ^[12]. Athletes strive for new records, new championships and new victories. Hence, elite sport has a 'natural drive' to innovate. In elite sport, the high degree of competitiveness can act as an innovation driver (Balmer, Pleasence & Nevill, 2012) ^[4]. Historically, the joy of play has also been a driver for sport innovation, especially in terms of the development of new sports and leisure activities. Lifestyle and adventure sports represent such sport innovations, emerging with a strong connection to the current cultural needs of groups and individuals. In other words, while sport innovation as an analytical and theoretical framework might be relatively new, the innovation phenomenon is nothing new to sport. Rather, innovation represents new ideas and changes to sport organizations, coaching, sport events, performance and new competitive advantages. In recent years, market and commercialism has also fueled innovations in sport (Hillairet, Richard, & Bouchet, 2009) ^[14].

4. Discussions and Conclusions

Innovative individuals are generally the first to adopt innovations within their social environment and display leadership qualities. Innovative individuals know how to take risks when necessary and act courageously. In addition, they are individuals who have an entrepreneurial spirit and are eager to experience different things. They can cope with the uncertainty that the innovations they desire may bring. They can accept innovations without the condition of success. They play a role in bringing new ideas to their environment. In addition, innovative individuals are also well-educated, enterprising, able to use technology well, curious, friendly and have advanced perception skills (Rogers, 1995) ^[26].

Innovation plays a vital role in the development of sport. Through new ideas, change and technological advancement innovation shapes how sport is played and organized. The aim of this article has been to develop a typology of sport innovation. By better understanding the diversity of sport innovation, researchers, sport policy makers and other professionals can strengthen their ability to develop appropriate solutions to complex problems in sport today. Sport entails complex social interactions between individuals, groups and organizations from all areas of the world. In order to understand change and renewal in sport, an innovation perspective can be fruitful.

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