A Model for Eliciting Expert Knowledge into Sports-Specific Knowledge Management Systems

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Abstract

Grounded on literature reviews from knowledge management, information system, marketing, organization science and sports management strategy, the paper proposes a way to build sports-specific knowledge management systems based on expert knowledge to improve strategic decision-making. Previous research showed sports teams had complex management systems, decisions needing to be made not only on sports-related knowledge. The hallmark of the study is that it emphasizes laying out the premises of knowledge acquisition, knowledge transfer, and knowledge sharing in sports, in order to discuss a model for helping teams to use wider expert knowledge in their management. Results show that team competitivity is strongly related to employing specialized knowledge.

Keywords: *knowledge management systems, expert knowledge, sports management, knowledge acquisition, knowledge transfer, knowledge sharing.*

JEL classification: D83, M10, M20

Introduction

The position of sports coaches as prime sources of knowledge and competencies within the sports clubs is losing weight. Training the team and aligning it on the field may have been, for long time, the most important aspects of achieving sporting success. However, increased competitive pressure, both from other sports teams, as well as by other entertainment industries, competing for drawing the attention of fans, have changed the nature of success.

Thanks also to massive changes that impacted mass-media consumption sice the 1980s (Stavre, 2013), professional team sports have become a business bigger than ever (Yang, Sonmez, 2005). Success, nowadays, depends no longer only on athletic fitness and game understanding, but also on the team's market and business orientation. Therefore, team management needs to possess multidisciplinary knowledge and to adapt to changes (Năstase et al., 2012, 2013). Decision-makers are encouraged to respond to changes through a knowledge-based approach, according to which the quality and quantity of information produced will determine the quality of decision-making and, hence, of the whole organizational performance (Enăchescu, Damasaru, 2013; Năstase, 2009; Pop et al., 2012).

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Martens (1987), for example, encouraged sports clubs to embark on a "process of knowledge" if they wanted to be successful. Adopting knowledge management as a way of running the show would be the solution, but this would require sports teams to open up to types of knowledge other than the core, sports knowledge. Such an issue may pose challenges, as sports teams are less used to knowledge management processes compared to business organizations. This paper aims to discuss the issue of knowledge management implementation in sports organizations.

1. Literature Review

Knowledge management is a discipline drawing increasingly more attention from service-based organizations (Chen et al., 2012; Sulaiman et al., 2011; Wang, Cheung, 2013). While many businesses have understood the positive effects specialized knowledge has on organizational performance (Junkfunk, 2007), service providers have mostly delayed the transition to knowledge management. However, over the last couple of decades, service organizations have started to implement knowledge management in their management structures with the aim of leveraging wider knowledge that could be used to drive innovation and increase competitivity (Schlegelmilch, Chini, 2003; Storey, Kelly, 2002). Relationship marketing practicioners observed that single relationships with end users were not enough anymore to maintain competitivity, and that service providers needed to build networks of relationships (Gummesson, 2006). Partners in the networks were to be used to create additional knowledge (Roja, Năstase, 2012). Therefore, knowledge engineering has been put in place in order to respond to a shortage of qualified knowledge service organizations required next to their core competencies (Wagner et al., 2002). Johannsen and Alty (1991) define knowledge engineering as the process of building knowledge management systems.

Knowledge management systems are environments allowing organizations to integrate expert knowledge with core competencies (Webb, 1996). The role of knowledge management systems is to collect interdisciplinary information and knowledge either from outside or from within the organization and let their sharing take place in the organization (Liebowitz, Megbolugbe, 2003). Knowledge management systems prove useful for both organizations needing extra knowledge and organizations that, during their daily routines, come into contact with vast amounts of knowledge which they have to organize and diffuse so as to make the best possible use of it (Gottschalk, 2006).

Of particular importance in literature has been the symbiosis between knowledge management systems and expert knowledge (Becerra-Fernandez, 2000). Knowledge Management Systems are built by eliciting knowledge from human experts, also called domain experts (Alonso et al., 2012; Schmidt, Wetter, 1998). Domain experts are people who possess vast and specialized knowledge in a particular discipline. The knowledge domain experts have can prove useful for solving organizational problems or meeting organizational goals. Knowledge management systems facilitate organizational access to specialized knowledge by

encouraging organizations to get in touch and collaborate with domain experts from whom to obtain the various types of qualified knowledge needed for a proper management (Esfahani, Kellet, 1988). The success of the knowledge management system, and, subsequently, of the entire management of the organization, will depend on the quality of the knowledge base, hence the quality of the experts from whom knowledge is educed (Doyle, 1988; Montazemi, Chan, 1990). Figure 1 shows the architecture of the core knowledge and the domain experts surrounding it.

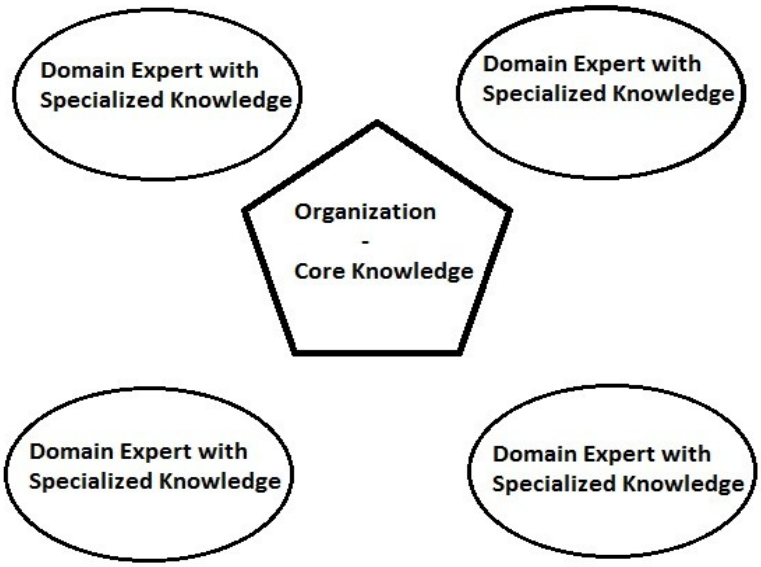

Figure 1. The architecture of core knowledge and specialized knowledge
(**Source**: Own drawing)

Organizations striving to put in place a management system need to use several knowledge management functions (Johannsen, Alty, 1991). The Knowledge Acquisition function, which assumes that expert knowledge is extracted from its owners and classified within particular topic-related networks, is a critical and the most resource-consuming phase in building knowledge management systems (Boose, 1988, 1989; Buntine, 1989; Chen, Rao, 2008; Owrang, Grupe, 1997). The management has to have a clear vision of what types of expert knowledge need to be collected and integrated with the already existing core knowledge in order to produce the desired results. Hence, management needs first of all to define the organizational problem having to be solved and decide what knowledge is relevant in the domain of interest (Johannsen, Alty, 1991). Selecting the right domain experts with whom to cooperate, building proper expert networks and gathering the right types of knowledge in respect to the organizational goals are determinant tasks for success. Not least important are the Knowledge Sharing and the Knowledge Transfer functions, which emerge as aftermaths of knowledge

acquisition. Knowledge Sharing helps diffuse and integrate expert knowledge with other sources of knowledge within the organization (Sicard et al., 2011), while Knowledge Transfer helps management effectively transfer knowledge gathered from domain experts onto the own organizational practices (Li, Hsieh, 2009). Figure 2 shows the process of acquiring, transfering and sharing knowledge into an organization.

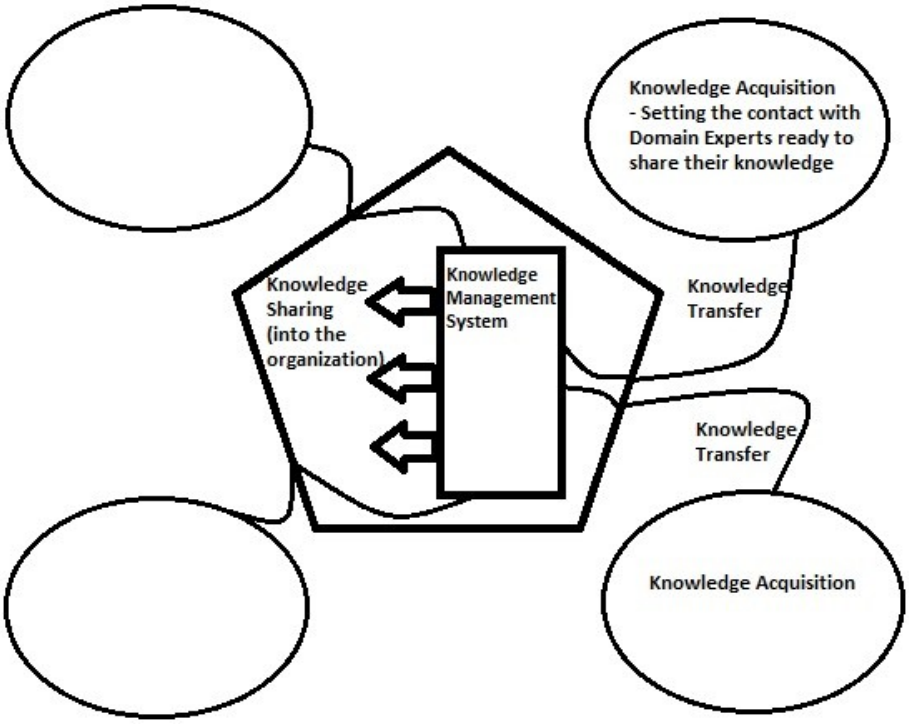

Figure 2. The Process of Acquiring, Transfering and Sharing Knowledge into an Organization
(**Source**: Own drawing)

1.1 Knowledge Management Systems and Expert Knowledge in Sports

In real life cases, sports teams' coaches and managers still continue to put a high emphasis on „playing well" (Grehaigne, Godbout, Bouthier, 2001). A good play of a sports team is a function of several factors such as possessing the necessary motor skills, having a right understanding of the game, choosing the right game strategy and tactics and applying them efficiently and continuously during the match (Grehaigne, Godbout, 1995; Grehaigne, Godbout, Bouthier, 2001). Flores and O'Connor believe that playing well is a desired, but not guaranteed consequence of determining the general approach to the game „so that the alignments, plays, and skills required can be designed and practiced" (2006, p. 11). These types of information could be classified as game knowledge, which,

next to coaching knowledge, belongs to the core knowledge/competencies of the team: the sports knowledge. While game knowledge, could be argued, belongs to athletes, coaching knowledge is descirbed by Hellison (1995) as the sum of pieces of knowledge that a coach has on game tactics, techniques and physical education. More precisely, coaching knowledge refers to the pedagogical, physical, psychological or medical knowledge needed for conducting training sessions and preparing matches.

Coaching knowledge is strictly related to the sporting display produced in training or on the field, during a match. Accordingly, coaching knowledge is often described as „tactical knowledge", although, as has been seen in Hellison's (1995) definition, tactics are part of the coaching knowledge. Training units and matches would not be successfully prepared and performed without coaching and game knowledge.

However, sports teams are organizations with dynamic management systems and complex goals (De Knop et al., 2004; Kokko et al., 2009). Due to the fact that they are actors on a highly competitive entertainment market, characterized by the elusiveness of fans who threaten not to follow the matches of their beloved teams anymore if the quality of the offering produced by athletes does not match their expectations (Bridgewater, 2010), sports teams are increasingly being managed as entertainment businesses in order to maintain contact with fans (Lago et al., 2006; Zimbalist, 2003). To be competitive on such an entertainment market, where rival offerings come not only from rival sports teams, but also from brands providing customers with value propositions ment to help them fill their leisure time (i.e.: cinemas, video games, libraries, public parcs, social networks, concerts, theatres etc.), sports teams need to acces and use expert knowledge, in order to build competitive advantages by increasing the attractivity of the offering brought onto the market (Martens, 1987). Expert knowledge in sports can be described as knowledge – other than the sports knowledge – necessary for properly managing a team. Expert knowledge helps teams reconfigure their tasks in order to improve efficiency.

Therefore, authors have noted that coaching knowledge is not enough anymore to make a sports team successful (Liu et al., 1998; Weinberg, McDermott, 2002). On- and off-field efficiency is also a result of re-examinating the team's management. Placing more emphasis on non-sporting knowledge helps build competitive advantages. Hence, researchers claim that the long-term development of a sports team can't be achieved by a coach who is restricted, mainly, to the training ground. Literature indicates that a team that wants to be successful has to master a range of other types of knowledge than just sports knowledge, hence, to adopt sources of knowledge that can bring additional value (Bloom and Salmela, 2000; Cote, 1998; Cushion, Armour & Jones, 2003; Jones et al., 2004; Vallee & Bloom, 2005).

1.2 Expert Business Knowledge in Sports

The type of expert knowledge that has prevailed in team sports over the last half century is business knowledge. During this time, athletic success and market success of teams have become strongly dependent on business skills and market orientation. Smith (2008) goes even so far as to consider that managerial and business knowledge are the essential pieces of knowledge managers need in order to make their teams competitive.

Expert business knowledge may consist of entrepreneurial knowledge, marketing knowledge, human resources knowledge, accounting knowledge, finances knowledge etc., and can help teams in:

- building a stronger sports brand;
- advertising matches and other sports-related offerings to the public;
- creating a one of a kind entertainment experience which to top the offerings of rival entertainments;
- finding and accessing new revenue streams;
- reducing administrative costs;
- improving the recruitment of playing talent;
- negociationg player contracts and wages;
- negociating and managing commercial partnerships and relationships with key stakeholders such as broadcasters, sponsors and business partners.

Expert business knowledge leverages competencies that game and coaching knowledge lack. This reinforces Smith's (2008) opinion: business knowledge helps decision-makers understand the business environment that their sports team is part of, while it also gives them the opportunity to build relationships with a vast amount of stakeholders which could bring in their capital in order to help the team achieve success. Therefore, business knowledge is pivotal to the success of a sports team, as it allows the latter one unleash relationship marketing competencies. While only limited to athletic settings, game and coaching knowledge would not set marketing practices in place, which would leave the team enclosed, without contact to its wider environment. Table 1 shows some of the several types of knowledge needed to properly run a sports organization.

Table 1. Types of knowledge needed to properly run a sports organization

Type of Knowledge	**Information mastered**
SPORTS KNOWLEDGE	
Game Knowledge	Field alignment, game plays, motor skills (Flores, O'Connor, 2006)
Coaching Knowledge	Game tactics, play techniques, physical education (Hellison, 1995)
EXPERT KNOWLEDGE	Entrepreneurship, marketing, management, finances, accounting etc.

2. A model of acquiring expert knowledge for the sports team

Sports coaching has received considerable attention in literature (Gilbert, Trudel, 2004; Roşca, 2010). Squires (1999) believes that the coach is the most suitable person to apply methods to help the sports team develop. However, the methods possessed by a coach are often limited to coaching knowledge. Letting a coach run a club by his or her own may restrict the amount of knowledge in the club.

Therefore, an issue of debate that has arised over the years is whether coaches should have full control of the team or should they be aided by managers who hold specific positions in the hierarchy? One the one hand side, several authors have emphasized that coaches must be life-long learners and strive for continuous self-improvement (Anderson & Gill, 1983; Erickson et al., 2007; Schinke et al., 1995). Self-improvement, in this case, would involve enlarging general knowledge by accumulating different types of expert knowledge. As much attention is granted in literature to the knowledge a coach has to possess and to his obligation of continuous improvement, it can be mentioned that the duties of a coach are wider than they appear. Reaching this level of complexity, a differentiation between „coach" and „manager" has to be done, as the coach continues to be restricted to the relationship with athletes. An attempt of differentiation was done by Gould (1987), who indicated that coaches have to fulfill multiple managerial roles, such as strategist, motivator or pedagogue. Still, a coach directs his strategy, motivation and pedagogy skills towards the football game and the football team, but has no reach towards the wider football club. As an institution higher than a team, the club is run by a manager, who may appoint a coach and delegate him specific tasks, or who may choose to run himself the coaching of players.

Hence, there are two ways of creating managerial roles in order to let expert knowledge flow into a sports club: adding functions in the hierarchical structure or having a joint manager-coach function. Adding functions to the hierarchy would correspond to the „continental" model of sports club management, where the coach is aided by one general manager and/or other several function-managers brought to the clubs alongside him. This model of knowledge creation is often met at the European sports clubs. The coach maintains his/her's core attributions of preparing the athletes and the upcoming matches, while the manager takes over the managerial and business issues of the club. While taking over managerial issues, the manager may be the person who holds the vision of development and who sets the corresponding mission. In such a case, the coach would have to adapt to the strategy of the manager. Practically, the manager runs the club, while the coach is responsible of what happens in training and during matches. Often, though, coach and manager cooperate to produce further knowledge and value – the decisions of the manager are not unknown to the coach, who often has his say.

The other way involves a joint manager-coach function. In most of the cases, this function is created through the self-improvement of the coach, who adds

specialized knowledge to his coaching knowledge. Such a case would correspond to the „insular" model of management, often met in Great Britain, where coaches are managers as well, doing both of the jobs.

Overall, implementing knowledge management systems in sports teams is the task of managers, whether they are also coaches or they hold separate functions. Hence, so as to let specialized knowledge flow in, sports teams have to adapt their hierarchies in order to allow the existence of a managerial role. Many sports teams let managers complete the task of building knowledge management systems due to their wider connections to the extra-sporting environment as compared to coaches. Thanks to their relationship equity, managers have acces to sponsors, business partners, and other key stakeholders that may serve in fulfilling a team's objectives. Accessing, transferring and sharing expert knowledge would allow running the team on wider prerequisites: whenever sporting knowledge fails to deliver the desired results, expert knowledge may help restore the situation. For example, business knowledge may help in making the team attractive to the public, even when sporting performances are low; using marketing strategies and tactiques can help in building an attractive team brand, which to keep fans engaged when on-pitch results can't satisfy them.

Conclusions

In order to be competitive in the highly pressurized environment from nowadays (Drămnescu, 2013), sports teams need to create a knowledge management environment and access widespread knowledge capital (Roşca, 2010). Strategic decision-making in modern sports uses fundamental knowledge in the coaching domain, combined with expert knowledge, mainly focused on business management knowledge. Therefore, a source of competitive advantage for sports teams is the ability of acquiring, integrating and using expert knowledge. Knowledge management systems helps sports teams bring complementary sources of knowledge into the organization, else unobtainable if the teams only concentrated on their core, athletic knowledge (Gaines, 1989). As Wang and Lu (2010) note, using multiple types of knowledge can have a positive influence on organizational rendition. The positive influence is due to the fact that Knowledge Management Systems „are designed to solve problems of different kinds using a knowledge-based approach where the knowledge is represented in an explicit manner" (Johannsen, Alty, 1991, p. 97). Hence, teams may find it useful to learn that sports-related problems (defeats, conflicts etc.) can be lessend or even prevented through making use of other several types of knowledge, like for example managerial or marketing knowledge (Roşca, 2011; Wang, Lu, 2010).

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