



Original Research

Qualitative Analysis of Factors Relating to the Application of VAR Technology in the Development of Iran Football Premier League Competitions

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ABSTRACT

The purpose of the present study is to express the practical strategies for using the technology of VAR and its positive results in the development of the Premier Football League by identifying the intervening factors. The research method is qualitative and it is based on Grounded theory in terms of essence of the subject and objectives of the research. The Participants in Research consisted of 25 football experts and sampling continues until theoretical saturation is achieved. In the final model, which its form is based on coding and data analysis; causal conditions (refereeing weaknesses, growth and development of quality of holding events, opportunities to create productivity in football) attract attention to the axial phenomenon (application of VAR in the development of premier league) and strategies for its use (educational development, cultural development, managerial development, structural development, Advertising development, financial development, executive development, supportive development) in terms of interfering factors (economic factors, management factors, legal factors, structural factors, cognitive factors, organizational factors, executive factors, media factors, social factors) and existing contexts (specialized human power, supports and interactions, modeling ,motivation, football fringes) in research have positive consequences (development of refereeing, development of events quality, Improve the productivity of the football federation).Therefore, according to the contextual conditions and the impact of the intervening factors identified; The proposed strategies for the use of VAR technology in this research should be applied in developing the quality of football Premier League competitions.

Keywords: Development, Football premier league, Technology, VAR.

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INTRODUCTION

In today's new and creative world, all sciences have undergone great and advanced changes, and sports industry, due to its competitiveness and the intrinsic need for technology and innovative management during competitions, is increasingly moving on the way of using new technologies and applied development in sport (1). Over time, there have been extensive changes in the world sport industry and various sports have gone out of their traditional form in the last two decades and have taken on a new shape with technological tools to mechanize and improve the performance and overall efficiency of sport activities (2). The use of technology in sports is effective in improving the performance of athletes and competitors in order to develop sports and the formation of new business opportunities for the growth and development of sports (3). In the current age, humans interact with computers to provide new methods and forms for applying technology in a sport environment to develop quality (4).

The development of various sports is directly related to the use of modern technology and communication systems, and over time, the practical role of these technologies in professional sports has been successfully proven (5). Communication technologies play an important role in the development of sport management. The advent of these technologies is effective in improving the decision-making process, planning and organizing sport-related events, event management, sport efficiency, measurement accuracy, financial profitability, performance feedback, sport marketing, website promotion and improving in selling tickets (6).

There are various sports around the world, and football is one of the most popular and spectacular sports in the world, because it attracts the attention of many people in the community during various matches. Due to unforeseen and emotional events, in addition to the referee at the time of the match, it needs expert management and a source of power to guide the game process in critical times (7). When judging a popular sport event such as football, various factors may cause the referee to be disturbed and not have the right decision-making power at one point in the competition. These factors include; the atmospheric pressure of the spectators, the inappropriate position of the referee, the special weather conditions and the reputation of the athletes or coaches. In order to prevent the occurrence of inadvertent and unintentional refereeing mistakes and not to accuse the referees of favoring a particular club as a result of such factors, the unjust success of a club and to prevent possible protests by a club whose rights have been inadvertently lost; having a feedback system to guide referees is essential when holding football competitions (8).

That's why, in the field of developing the application of new technologies in various sports in recent years, experts in some developed countries, by integrating technology in sports, produce radio and video technologies that have created practical sports systems. These technologies are not limited to sport products and have also had an impact on referees who manage the decision-making mechanisms in sports (9). The Video Assistant Referee (VAR) system created a great revolution in football competitions and the first valid event in which this technology was used is the 2018 World Cup in Russia (10). VAR technology is a team of judges in the control room who immediately examines suspicious refereeing scenes using several video and radio systems and informs the referee about the result. This technology optimizes and strengthens human decisions and in a way plays an effective role in establishing justice during the game between clubs by correcting wrong refereeing decisions. The VAR technology can feedback wrong goals as offside or error, suspicious penalty scenes and red cards in the case of referee's wrong decisions (11).

Examining suspicious refereeing scenes disrupts the gameplay and stops the useful time of the game for the referees to check the videos through the monitor (12). The time spent reviewing videos by referees is very short compared to other stoppage times during substitutions, post-goal joys and player injuries and for this reason, extra time is taken into account when announcing the wasted time by the referee in order not to let the clubs' rights be lost (13).

Erdogan (2021), in a study entitled *Footballers' Opinions on the VAR System* found that the use of video assistant referee technology in football competitions reduces stress and psychological pressure on players and referees during the game and increases their self-confidence and self-esteem (14). In a study (2020) entitled *Happiness and Disappointment on the acceptance of Video Check Referees Decisions at the University of Twente in the Netherlands*; respondents agreed to use video assistant referee technology in football and use it in the Dutch league (15). Samuel et al (2020) in a study entitled *an Integrated Conceptual Framework for Decision Making in Football Refereeing*, identified that in addition to high physical fitness, psychological factors and underlying factors for game management, the presence of team agents (VAR) in directing and controlling the game flow is also quite effective and improves the development of referee management during the competition (16).

Errekaigorri et al (2020) in their research on the effects of video assistant refereeing system on playing time, technical, tactical and physical performance in elite football, showed that using video assistant refereeing system during competitions does not have a negative effect on technical tactics and players' performance (17). In a study by Han et al (2020) on the effect of video assistant referee in the Chinese Super League; the results showed that, with the entrance of video assistant referee technology in the Chinese Football League, the number of errors and general violence during the competition were reduced, which will greatly contribute to the development of football in China (18). Findings of the Ntege study (2020) regarding the effect of using technology-based refereeing system in football with a case study showed the use of video assistant referee in Spanish La Liga; Using video assistant referee technology in football competitions; behaviors related to penalty area simulation, elbow use and violent errors during competition have decreased and increased the respect between players with each other, which has led to the development and promotion of football in recent years (19). Kiani and Bahrami (2020) in a study entitled "Prioritization of financial resources", equipment and sports facilities in the promotion of championship sports; Standardization of stadiums and sports halls in accordance with the frameworks approved by international organizations, attracting financial resources and commercial sponsors by the federations were named as important reasons for the promotion and development of championship sports (20). Willkinson (2008) in a study entitled "Identifying Important Factors on the non-use of Communication Technologies and Information Technology in Sports", found factors such as economic problems and lack of budget, lack of standard infrastructure, lack of specialized manpower, lack of group participation, legal frameworks, political, cultural and social as barriers (21).

Extensive changes in technological advances and the use of new technologies in the development of various sports have improved the processes related to performance development and positive feedback resulting from the satisfaction of people involved in the implementation of competitions using these systems. One of the technologies that has brought many positive developments in the enhancement of football is VAR (video assistant referee) technology; it is used in five major European leagues (English Premier League, Italian Serie A, Spanish La Liga, German Bundesliga, French Champions League) and many other leagues in other

countries. Identifying the obstacles that have caused the new technologies and advanced technologies not to be used in our country's football freely, unlike developed countries; is a very important issue that should be taken as soon as possible in line with other countries in the development of sports by providing appropriate solutions to overcome these obstacles and the formation of new strategies to overcome the existing problems. Therefore, considering that no research in this field has been done in the country so far; in this study, due to the existing causal conditions and contexts such as: poor refereeing and the margins resulting from the referee's wrong decisions during the match by identifying interfering factors and development strategies to use this technology, causes proper management and control of game flow by the referee .It will eventually reduce the margins due to the reduction of the referee's wrong decisions to increase the quality of Premier League football matches.

METHODOLOGY

The method of the present study is qualitative and is based on Grounded Theory according to the subject and objectives of the research. The statistical population of the study includes; 25 members of football federation, managers of Premier League clubs, referees, coaches, players, veterans, the Premier League fans and professors of sport management. The statistical sample was purposefully selected for the interview and the interviews continued until theoretical saturation. Interviews were conducted semi-structured with statistical samples. At the end of each interview, the interviews were completely typed and open, pivotal and selective coding was done by MAXQDA2020¹ software.

According to Strauss and Corbin's (1998) theory, while determining the axial phenomenon, the codes and articles extracted were placed in causal, contextual, interfering strategies and consequences, and the relationship between these factors was determined by selective coding. There are four criteria (Acceptability, transferability, Verifiability and Reliability) for qualitative research and its criteria are linked to four conventional criteria in quantitative research (internal and external validity, reliability and objectivity), which in this study, these four criteria are examined and approved (22).

RESULTS

In this section, the information set of the samples participating in the research is presented in Table 1. This table contains information on gender, age, specialty and resume of research samples in the field of football.

¹ MAXQDA Software version 2020

Table 1. Information of participants in research

Experts	Gender	Age	Post	resume
P1	Man	62	Member of the Board of Directors of the Football Federation and Chairman of the Referees Committee of the Football Federation	Chairman of the Refereeing Committee of the Football Federation
P2	Man	69	Advisor of Iran Football League Organization and Chairman of Mazandaran Football Board	Chairman of the Iranian Football League, Member of the Board of the Football Federation
P3	Man	45	Managing Director of Mazandaran Nasaji Club	Managing Director of Badran Tehran Club, Director of the Academy of Esteghlal Club of Tehran
P4	Man	68	Member of the board of Isfahan Zobahan Club	Head coach of Isfahan Steel Club and veteran of the Iranian national football team
P5	Man	45	Director of the Football Federation Coaches Training Committee	Veteran of Iran's national football team
P6	Man	65	Director of Persepolis Club Academy, Tehran	Veteran of Iran national football team and Persepolis club, coach of Persepolis club and Omid national team
P7	Man	43	Sports Newspaper Editor	Director of Public Relations of the Football Federation
P8	Man	37	International Referee of the Football Premier League	Football refereeing
P9	Man	40	National Referee of the Football Premier League	Football refereeing
P10	Man	39	National Referee of the Football Premier League	Football refereeing
P11	Man	64	The head coach of Mazandaran Textile Club and the secretary general of the Iranian Football Coaches Association	Author of football books, head coach of Khuzestan Steel Clubs, Tehran Pass, Tabriz Tractor Manufacturing and Tehran Peykan
P12	Man	42	Head coach of Arak Aluminum Club	Head coach of Tabriz Steel Development Club
P13	Man	58	Coach of the national youth team	Veteran of the national team of Iran and Esteghlal Club of Tehran, coach of Persepolis Club of Tehran
P14	Man	43	Professors of Sports Management	Sports researcher
P15	woman	40	Professors of Sports Management	Sports researcher
P16	Man	28	Player of Tabriz Tractor Manufacturing Club	football player
P17	Man	26	Mashhad Khodro City Club player	football player
P18	Man	27	Saipa Tehran club player	football player
P19	Man	23	Player of Tabriz Machine-Building Club	football player
P20	Man	30	football fan	PhD Student in Sports Management
P21	woman	34	football fan	PhD Student in Sports Management
P22	Man	28	football fan	PhD student in International Law
P23	Man	66	Football expert	Veteran of the national football team of Iran and Esteghlal Club of Tehran
P24	Man	71	Football expert	Veteran of Iran's national football team and head coach of Bandar Anzali Sailors Club
P25	Man	65	Football expert	Veteran of Sepahan and Zobahan Isfahan Club and coach of Isfahan Zobahan Club

In order to analyze the data, after coding the text of all interviews, 86 primary codes were identified by open coding and 28 secondary codes by axial coding, which were selected in the form of selective coding, then, they were divided into 5 categories: causal conditions, contextual conditions, interfering factors, strategies and consequences of using video-assisted technology in the development of the Iranian Football Premier League. Most of the comments revolved around the factors related to the use of video assistant referee technology in the development of Iranian Premier League football competitions. As a result, the axial phenomenon of the application of video assistant referee technology in the development of premier league was considered. In the following, each of the categories, concepts and extracted codes is described.

Causal conditions for the use of video assistant referee technology in the development of the Iranian Football Premier League

Causal conditions are conditions that create and require the development of axial phenomenon. In this regard, 9 codes were identified as causal conditions for the use of video assistant referee technology in the development of the Iranian Football Premier League. The relevant codes were divided into three concepts: refereeing weaknesses, growth and development of the quality of events, opportunities to create productivity in football. These codes and concepts of causal conditions are shown in Table 2.

Table 2. Codes and concepts of causal conditions for the use of video assistance referee technology in the development of the Iranian Football Premier League

General category	Concept	code	Repetition
Causal conditions	refereeing weaknesses	1.Refereeing errors due to the position of the referee and the atmosphere of the stadium	9
		2.A little experience of some referees.	3
		3.The effect of mental and psychological conditions of referees in judging	4
	Growth and development of quality of holding events	4.Developing the quality of referees' performance in football premier league competitions	6
		5. Strategies needed to reduce protests and fringes for football development	4
	opportunities to create productivity in football	6.Need to sponsors in football	4
		7.Need to be more productive in football	4
		8.Need to increase the number of fans and TV viewers	5
		9. Need to make money through football	4

Contextual conditions for the use of video assistant referee technology in the development of the Iranian Football Premier League

Contextual conditions include a set of specific variables and categories that affect the axial phenomenon and its strategies. In this regard, 9 codes were identified as the contextual conditions for the use of video assistant referee technology in the development of the Iranian Football Premier League. The relevant codes were divided into five concepts: specialized human power, supports and interactions, modeling, motivation and football fringes. The codes and concepts of contextual conditions are shown in Table 3.

Table 3. Codes and concepts of contextual conditions for the use of video assistant referee technology in the development of the Iranian Football Premier League

General category	Concept	code	Repetition
contextual conditions	specialized human power	1.Existence of experts in the field of technology and communication in sport	3
		2.Existence of international trained referees in the use of video assistance technology	3
		3. Acceptance and understanding of the use of this technology among the referees of the country	4
	supports and interactions	4.Fan support for the use of this technology in the Premier League	3
		5. Friendly interaction with neighboring countries using this technology	3
	Modeling	6.Modeling similar methods of technology application in other sports in the country	4
	Motivation	7.Motivate hosting international events with technology development	4
	Football fringes	8.fringes created in football	3
		9.Accusing the referees of supporting certain teams	

Interfering factors in the use of video assistant referee technology in the development of the Iranian Football Premier League

Interfering factors are factors that, along with the contextual conditions, affect the strategies for using video assistant referee technology in the development of the Iranian Football Premier League. In this regard, 27 codes were identified as interfering factors in the use of video assistant referee technology in the development of the Iranian Football Premier League. The relevant codes were divided into nine concepts of economic, managerial, legal, structural, cognitive, organizational, executive, media and social factors. The codes and concepts of interfering factors are shown in Table 4.

Table 4. Codes and concepts of interfering factors in the use of video assistant referee technology in the development of the Iranian Football Premier League

General category	Concept	code	Repetition
interfering factors	Economic factors	1.High cost of video assistance referee system	3
		2.Lack of funds	
		3.Financial problems of the football federation	3
		4.Financial problems of football clubs	10
		5.Non-profit of football clubs	
		6.No budget allocation for video assistance referee system	5
	Management factors		3
			4
		7.Management weakness	7
	8.Lack of professionalism of sport managers	6	
	9.Fundamentalism		

			5
Legal factors	10.Lack of standards and rules		4
	11.Boycott		4
	12.Non-standard technology of domestic video assistance referee technology in accordance with FIFA standards		3
Structural factors	13.Non-privacy of football clubs		5
	14.Improper structure of some clubs to install video assistance referee		6
	15.Lack of facilities in football stadiums		4
	16.Lack of specialized manpower		4
Cognitive factors	17.Insufficient knowledge of the necessities of using video assistance technology in the Premier League		5
Organizational factors	18.Reluctance of clubs and football federations		4
	19.lack of needs - assessment by football experts		
	20.Corruption in football		3
	21.Lack of support from the Arbitration Committee and the Arbitration Department		3
	22.Existence of brokers in football		2
	23.Lack of transparency of budget by clubs		
			5
Executive factors	24.Lack of interaction of the Football Federation with the AFC		3
	25. Lack of interaction of clubs with the football federation		4
Media agent	26.Low radio and television cooperation		4
social factors	27.Betting on football		3

Strategies for using video assistant referee technology in the development of the Iranian Football Premier League

Strategies are ways that are adopted in response to the axial phenomenon and under the influence of interfering factors and contextual conditions. In this regard, 27 codes were identified as strategies for using video assistant referee technology in the development of the Iranian Football Premier League. The relevant codes were placed in 8 concepts of educational, cultural, managerial, structural, advertising, financial, executive and supportive development. The codes and concepts of the strategies are shown in Table 5.

Table 5. Codes and concepts of strategies for using video assistant referee technology in the development of the Iranian Football Premier League

General category	Concept	code	Repetition
Strategies	Educational development	1.Presence of international instructors to hold orientation classes and judge training	12
		2.Knowledge of video assistance referee technology	5
	Cultural development	3.Formation of necessary bases for proper culture-building in the football community	6
	Managerial development	4.Specialization of sport managers	6
		5.Prevent politicians from entering football	7
	Structural development	6.Reduce or eliminate fundamentalism	6
		7.Privatization of football clubs	5
		8.Updating the facilities of the stadiums	5
		9.Provide a suitable structure for the installation of video assistance	4
	Advertising development	10.social media advertising.	5
	Financial development	11.Acceptance of part of the costs of launching video assistance technology by clubs	4
		12. Government financial support	
		13. Allocation of funds by the Ministry of Sports or the Federation	6
		14.Reduce or eliminate unnecessary costs such as referees behind the goal line	6
	Executive development	15.Experimental implementation of video assistance referee	4
		16.Interaction of the Football Federation with the international football organizations FIFA-AFC	4
		17.Interaction between clubs and referees and federation	4
		18.Holding briefings to solve problems	4
		19.Establishment of an IT committee in the field of video assistance referee	5
		20.The firm determination of the Football Federation to bring this technology to the Premier League	4
		21.Putting pressure on clubs	5
		22. Follow up and request clubs	7
	Supportive development	23.Support and support for radio and television	6
		24.Empathy of all football fans	4
		25.Attracting sponsors by clubs	6
		26.Attracting sponsors by the federation	5
		27.Government support	4

Consequences of using video assistant referee technology in the development of the Iranian Football Premier League

The consequences are the results of the implementation of strategies for the use of video assistant referee technology in the development of the Iranian Football Premier League. In this regard, 14 codes were

identified as the consequences of the use of video assistant referee technology in the development of the Iranian Football Premier League. The relevant codes were divided into three concepts: development of refereeing, development of event quality and improving the productivity of the football federation. The codes and implications of the consequences are shown in Table 6.

Table 6. Codes and concepts of the consequences of using video assistant referee technology in the development of the Iranian Football Premier League

General category	Concept	code	Repetition
consequences	Development of refereeing	1.Reduce refereeing errors	11
		2.Reduce the charge to the referee of the judges	6
		3.Helping the referees psychologically	5
		4.Increasing the job security of referees	5
	development of events quality	5.Establishing justice in football	12
		6.Reduce protests in football	7
		7.Reducing margins in football	6
		8.Improving the quality of events	6
		9.Competitions become more attractive	7
	Improve the productivity of the football federation	10.Increase productivity at events	7
		11.The economic growth of football	8
		12.Increase sponsor absorption	8
		13.Increasing football fans	6
		14.Increasing TV viewers	5

The final model of qualitative analysis of factors related to the application of video assistant referee technology in the development of Iranian Football Premier League competitions is shown in Figure 1. Causal conditions indicate necessity of the axial phenomenon, which is the use of video assistant referee in the development of premier league, and strategies are determined according to the contextual conditions and interfering factors. As a result, the consequences of using video assistant referee technology in the development of Iranian professional football league competitions have also been identified.

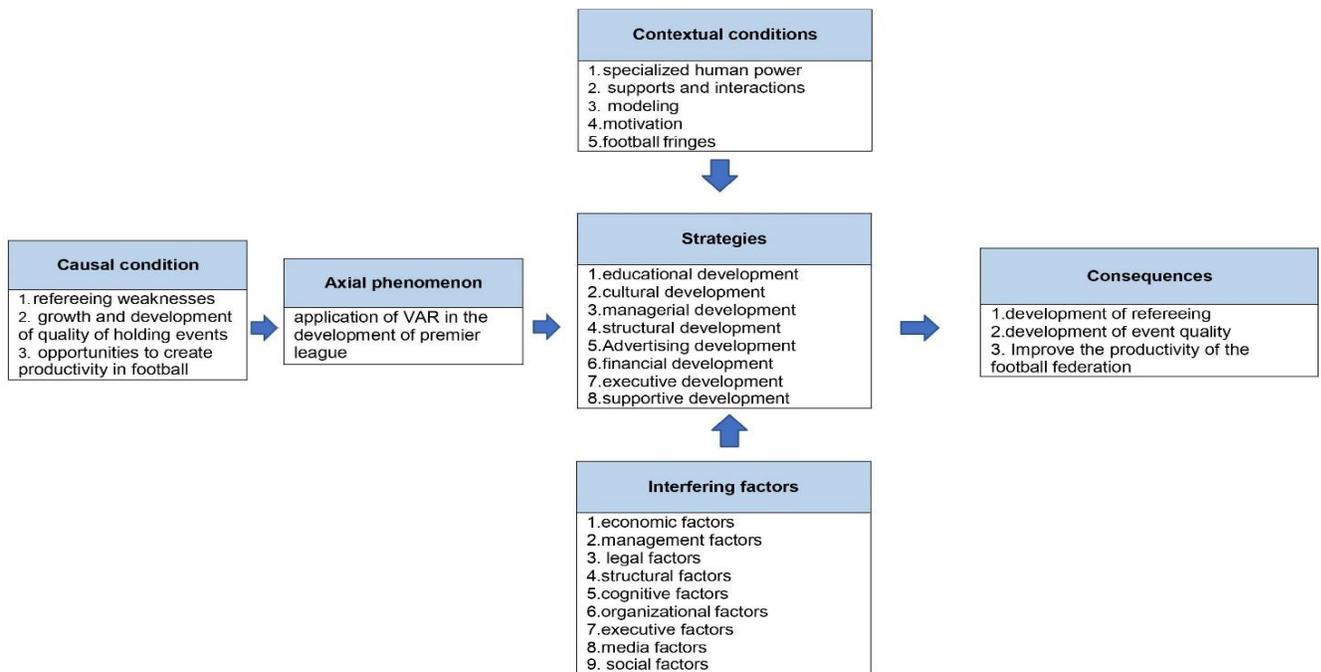


Figure1. Model of factors related to the application of VAR technology in the development of Iranian Football Premier League competitions

DISCUSSION

The domination of popularity and attractiveness of football is not limited to a number of specific countries but all countries, including Iran. It is one of the most popular sports that has involved people in the community (23). Given the enthusiastic individuals and potential capacities that exist for the development of this sport in our country; paying attention to the structural changes in holding football in developed countries and developing the quality of holding it, are of the important issues that should always be considered by the managers of competitions; in order not to diminish the attractiveness of football competitions and try to develop the quality of this sport by improving the management process and holding competitions.

The world of sports is out of its traditional form with the use of new equipment and facilities, and recently technological advances and its application in live broadcasts of competitions and social media is one of the strategies to change sports in the competitive world (24). VAR, as a new technological advance that have made significant changes in improving the game flow management of the football field; is a video that has been significantly used in recent years to improve the management and development of refereeing quality of football competitions in prestigious European leagues. Considering the efficiency of this system and its effectiveness in developing the quality of refereeing in football competitions; The strategic proposals for the development of this technology and the identification of interfering factors that have caused us to be deprived of the positive consequences of this technology despite having suitable ground conditions in the Iranian Premier League have provided the background for the present study.

Given the above and the positive impact that technology has entered into the world of sports; Existence of a series of causal conditions such as; refereeing weaknesses, growth and development of quality of holding events, opportunities to create productivity in football necessitate the need to use this technology in the development of refereeing in Premier League football competitions. Factors such as; Refereeing errors due to the referee's position and atmosphere of the stadium, the inexperience of some referees, the effect of referees' mental condition on refereeing, developing the quality of referees' performance in Premier League football competitions, strategies to reduce protests and football fringes, need to increase the number of fans and TV viewers, and ultimately the need for sponsors in football, require the use of this technology.

The results of the study are consistent with Erdogan (2021), Nunes (2020), Erikstad and Johansen (2020), Samuel et al (2020). And the reason for that is, individual mistakes when judging in football due to situational and psychological factors, reducing the football fringes and creating the necessary solutions to develop the quality of competition by reducing refereeing mistakes.

In addition to causal conditions, having suitable contextual factors such as; high fringes of refereeing errors in football, the presence of international referees trained in the use of video assistant referee technology in the country, the presence of experts in the field of technology and communication in sports, acceptance and understanding of the use of this technology among referees, fan support application and development of this technology in the Premier League, friendly interaction with neighboring countries using this technology, modeling similar methods of application of technology in other sports in the country and the fringes of football resulting from accusing referees of supporting a number of specific clubs from are the other factors that facilitate the entry of this technology into the country and the development of its application. Increasing the chances of hosting international events with the development of applied technologies such as the use of video assistant referee system is one of the important contextual factors for the lack of new and modern sports technologies is one of the reasons for the weakness of not hosting international events and improving structural conditions and technological equipment. The use of new tools is one of the effective opportunities in competitive advantage with other countries in the field of sports development (25). As stated, the results are in consistent with Post (2020) and Erikstad and Johansen (2020) and the reason for the alignment of gaining the support of members of the sports community, including managers, referees, coaches, players and fans on the application of this technology in football, fringes and not accusing the referees of supporting certain clubs.

Economic problems and lack of financial resources are always cited as reasons for senior sport managers to resist using new technologies in sport development. In addition, weaknesses in the legal framework due to the low expertise of some managers are also among the reasons for the lack of development of sport in the use of new tools. Therefore, in spite of having suitable contextual conditions for the development of the application of this technology in premier league; Existence of a number of interfering factors such as; economic, managerial , executive, legal, structural, cognitive, organizational, media and social with high cost of setting up this system, financial problems and lack of budget, financial problems of the football federation, lack of football clubs' income, fundamentalism and poor management, corruption in football, lack of necessary standards in technologies made similar to domestic ones with FIFA standards, international sanctions and consequently lack of importing manufacturing parts or application of technology, improper structure of some stadiums to install this system, insufficient knowledge of the necessities of using this technology in premier league, lack of principled needs assessment by football

experts, lack of interaction between the football federation and international organizations, low interaction between premier league clubs and the football federation and low cooperation of the IRIB with the Ministry of Sport and Youth to try to solve these problems in order to apply and develop this technology in the country. The results of the study are consistent with Wilkinson (2008) and the reason for the alignment are the impact of economic problems and lack of budget, lack of standard infrastructure and lack of group participation to use technology in sport.

Therefore, by creating development strategies in the field of educational, cultural, managerial, structural, advertising, financial, executive and supportive development, the necessary conditions for inviting and attending international instructors to hold orientation classes and training referees, proper culture among the football community in the field of using this technology, using specialized managers in football, increasing interaction between the football federation and international organizations, updating stadium facilities with pressure on clubs, increasing software and hardware facilities are properly set. The stadiums of this country, the determination of the Football Federation to enter this technology in the Premier League, the support of the government and the budget of the Ministry of Sports or the Football Federation, reducing or eliminating unnecessary expenses such as eliminating referees behind the goal line, forming IT committee to assist video referees, repeated clubs' requests from the football federation, holding briefings to solve problems with the presence of club representatives and members of the football federation, accepting part of the costs, launching a video of referee assist technology by clubs, interaction between clubs, referees and Football Federation, reducing or eliminating fundamentalism and getting financial support from the federation and Premier League clubs to finance the launch of this technology, radio and television support and empathy of all football players and professionals must take effective action to develop and use applied technologies in the country's premier league. The results of the research are consistent with Bahrami and Kiani (2020) and the reason is the alignment of the effective role of the Football Federation in providing financial resources by using commercial sponsors and using up-to-date facilities and equipment in stadiums for development.

Finally, it can be said that the negative effects of fringes and football clashes during the game and even after the end of the competition between the players and the staff or the spectators due to the wrong decisions of the referee, in their view, will reduce the fans and TV viewers (26). Therefore, using this technology in football and correcting the referee's wrong decision with VAR system during the game improves the quality of events, develops refereeing and improves the productivity of the football federation by establishing justice and reduces errors, fringes and protests in football. In this sport, reducing refereeing errors, increases referees' job security and psychological help to referees which results in more attractive matches, increasing productivity in events, economic growth of football, increasing TV viewers, increasing the attractiveness of sponsors, ascending football fans and as a result developing the quality of competitions in the Iranian Football Premier League. The results of the research are consistent with Spitz et al (2021), Brussels (2014), Erdogan (2021) and Han et al (2020) and the reason is more efficient football alignment, fair play, increased self-confidence and job security for referees and thus reduction of violence and development the quality of football.

CONCLUSION

In the end, by using the proposed strategies the members of the football federation and the referee committee of the country's Premier football league can reduce the impact of interfering factors in this research by

removing existing barriers from all potential capacities to benefit from the application of new technologies in the sport of football in order to develop the quality of Premier League competitions and the development of refereeing.

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چکیده فارسی

تحلیل کیفی عوامل مرتبط با کاربرد تکنولوژی کمک‌داور ویدئویی در توسعه رقابت‌های لیگ برتر فوتبال ایران

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هدف از پژوهش حاضر، بیان راهبردهای کاربردی استفاده از تکنولوژی کمک‌داور ویدئویی و پیامدهای مثبت آن در توسعه لیگ برتر فوتبال با شناسایی عوامل مداخله‌گر بود. روش پژوهش با توجه به ماهیت موضوع و اهداف پژوهش به صورت کیفی و مبتنی بر نظریه برخاسته از داده‌ها بود. مشارکت کنندگان پژوهش را ۲۵ نفر از خبرگان حوزه فوتبال تشکیل داده و نمونه‌گیری تا دستیابی به اشباع نظری ادامه یافت. در الگوی نهایی که بر اساس کدگذاری و تحلیل داده‌ها شکل گرفت؛ عوامل علی (ضعف‌های داوری، رشد و توسعه کیفیت برگزاری رویدادها، فرصت‌های ایجاد بهره‌وری در فوتبال) سبب توجه به پدیده محوری (کاربرد کمک‌داور ویدئویی در توسعه لیگ‌برتر) و راهبردهای استفاده از آن (توسعه آموزشی، توسعه فرهنگی، توسعه مدیریتی، توسعه ساختاری، توسعه تبلیغاتی، توسعه مالی، توسعه اجرایی، توسعه حمایتی) با لحاظ عوامل مداخله‌گر (عوامل اقتصادی، عوامل مدیریتی، عوامل قانونی، عوامل ساختاری، عوامل شناختی، عوامل سازمانی، عوامل اجرایی، عوامل رسانه‌ای، عوامل اجتماعی) و زمینه‌های موجود (نیروی انسانی متخصص، حمایت‌ها و تعاملات، الگوگیری، انگیزش، حواشی فوتبال) در تحقیق، پیامدهای مثبتی (توسعه کیفیت رویدادها، توسعه داوری و ارتقا بهره‌وری فدراسیون فوتبال) دارد. بنابراین با توجه به شرایط زمینه‌ای و تاثیر عوامل مداخله‌گر شناسایی شده؛ راهبردهای پیشنهادی کاربرد تکنولوژی کمک‌داور ویدئویی در این پژوهش را باید در توسعه کیفیت رقابت‌های لیگ برتر فوتبال به کار گرفت.