

The Impact of Digital Transformation in the Sports Industry

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Abstract: This paper explores the impact of digital transformation on the sports industry. It begins with an analysis of the current state of the traditional sports industry and then advance to its foundational role in the development and adaptation of technological innovations to modern sports. This article discusses how three different sports organizations have successfully engaged in digital technology integration and digital transformation, citing the cases of Liverpool Football Club, ESPN, and the NBA as three outstanding sports organizations, including changes that have occurred in operating models, revenue streams, and fan interactions. The study also covers the barriers and difficulties faced by sports organizations in digital transformation as well as the strategies and methods needed to cope with it, such as adapting to traditional models, investing in technology, and changing the culture of the company. In addition, this paper focuses on the long-term impact of digital transformation in the sports industry, which has changed the traditional business models and revenue streams of the sports industry, increasing the user experience, but also preserving the spirit and values of traditional sports. This paper expresses deep insights into the modern development of digital transformation and the integration of tradition, and looks forward to the future development path of the sports industry.

Keywords: Digital Transformation, Sports Industry, Technological Innovation

1. Introduction

The era of digital transformation is bringing fundamental changes to the way businesses plan and operate. Every business sector is affected by its impact. This change is not just in technology; it requires a deeper reconsideration of how companies interact with their customers and run their businesses. Digital technology is becoming more pervasive. It modifies what customers expect from you. This is driving companies to constantly innovate in various areas. These include product development, customer support and marketing [1]. Big data analytics, artificial intelligence, and cloud computing have become important components of strategic decision-making, and they enable companies to deliver personalized experiences and gain valuable, data-driven insights [2]. As global events such as the new Crown Pneumonia pandemic have accelerated the pace of development of digital platforms, this has led to the need for industries to reassess and reorganize their operating models. It can be seen that teleworking, e-commerce and digital communications are now increasingly being adopted and they reflect a new kind of business that emphasizes the need for flexibility and adaptability [3]. This shift affects the wider economic and social landscape, shaping future changes in work, consumer behavior and global market dynamics. It is only by adapting,

anticipating and shaping these changes that businesses can ensure that they find their firm footing in the rapidly changing digital world and remain sustainable and relevant in the long term [4].

This paper focuses on the digital transformation of the sports industry. Global disruptions such as the COVID-19 pandemic have exacerbated this transformation. This study aims to explore how digital technology has transformed aspects of sport. It has been integrated into the sports movement in it. It has changed fan engagement, athlete performance analysis and event management. This paper will explore how sports organizations have adapted their business models and operational strategies, and they do so in order to effectively utilize digital platforms. Key areas of research include the impact of digital transformation on the economic landscape of the industry. In addition, the way fans interact with each other is changing. The future of sports will be digital. The exploration will also have broader implications for organizational change and sustainability in the sports sector implications. It will provide a comprehensive understanding of the role of digital technology and reshape practices in the sports industry.

2. The Situation of Traditional Sports Industry

2.1. Current Status of the Traditional Sports Industry

In the traditional sports industry, most of the original organizations such as schools and clubs were funded by the government or charities. Their activities were not for profit. Instead, they aimed to promote physical health through sport. They also aimed to provide leisure and enjoyment. It is largely due to these organizations that sport has become a necessary part of leisure time. Culture has evolved over time. Organizational structures in the sport sector have changed over time, becoming more and more complex and diverse. Over the past decades, stadiums, training facilities, clubs and sports centers have become profit driven businesses. This development goes beyond purely commercial change. It also illustrates how popular sport is in contemporary society. Good sports facilities, such as gyms, provide people with a sensible diet and training program that is essential to their fitness regimen. They provide more opportunities for people from all walks of life to participate in various types of sports, and also promote the development of related industries, such as nutrition, sports medicine, and equipment manufacturing. Various sports organizations can manage and maintain stadiums and sports facilities by hiring employees, allowing the development of commercial sports to increase employment opportunities and financial income, thus advancing the country's economy. The move from tradition to commercialization and from hobby to profession has shaped the formation of the modern sports landscape [5].

With the advancement of science and technology, sports have become part of the change. The sports industry, today, needs to move towards digitalization and the need for digital transformation is integrated into all industries. Of course, this is not only about investing in and developing new technologies, but also thinking about how to balance the integration of traditional sports programs and modern technology so that sports fans can increase their experience and happiness while retaining the spirit of the original sports they love. All sports organizations need to compete and progress with each other to meet the challenges of digital transformation and work together to create a digital, modern and intelligent sports society for sports fans.

2.2. Traditional Model and Digital Challenges of PP Sports

PP Sports is a modernized emergent sports media founded in 2005, but with the increasing demand for digital transformation, as the leader of Chinese sports media, is gradually falling behind. As a sports media, article content, event rights, and programming are extremely influential to the viewer experience, but they have not done a good job in recent years, leading to a massive loss of subscribers.

Their article and program content lacks innovation, and their overall strategy does not meet the requirements of the digital era.

In addition, the copyright issue of PP Sports is a concern for everyone. Affected by the new crown epidemic, PP Sports' finances are in a state of flux, and the money brought in by users buying sports memberships can't offset the sky-high royalties. With the retreat of its owner, Suning Sports, PP Sports has completely lost its source of funding, which ultimately led to it consistently defaulting on its league royalties and terminating its contract with the English Premier League and Italian Serie A, which resulted in the loss of even more advertising revenues, subscriber memberships, leaving pp sports in the red in recent years. pp sports has become a victim of the copyright market, which is also part of market competition [6].

The PP Sports case emphasizes how important it is for the sports industry to adapt to digital trends. If sports broadcasters want to stay in the market and make money, they need to innovate in content delivery. In addition, they need to be creative in their digital strategy and audience engagement. creativity. They must adapt to the changing nature of sports media consumption.

3. Digital Transformation

3.1. Case Studies: NBA, ESPN, and Liverpool FC

Around 2000, the NBA began its digital transformation. It went through a major strategic change in 2010. The league began to gain international reach. It did this by developing star players, forming brand alliances and managing media operations. This included signing exclusive footwear contracts and implementing additional marketing campaigns. The NBA has historically relied heavily on ticket sales as a source of funding. Profitable sponsorship and licensing agreements are another source of revenue for the league. For example, the NBA has a \$1 billion, eight-year contract with Nike. Recently, however, the reliance on ticket sales has been waning. The media and entertainment industry is becoming increasingly important. one of the main pillars of the NBA's strategy has been digital marketing, providing personalized and tailored services and content, such as teams tailored to the preferences of various supporters. In addition, the NBA has ventured into a number of new areas. These include blockchain technology, meta-universe technology and eSports technology. The NBA has set a benchmark for digital transformation among sports leagues and associations. The digital pivot has led to a surge in the number of fans. It has significantly enriched user experience and engagement. The NBA has expanded its global reach by embracing digital channels and has become a benchmark and model for digital transformation on sports leagues [7].

ESPN is a model of digital transformation in the sports media. Unlike pp sports, ESPN's digital transformation focuses more on innovation in technology and strategy. Founded in 1979, ESPN, has been the cable TV leader, as the nation's largest sports cable TV station, ESPN has the broadcast rights of the major sports leagues in the U.S. With the advent of the digital era, ESPN has done a good job of predicting and preparing in advance, while maintaining the competitiveness of cable TV, ESPN has developed an online streaming service and mobile applications, but also appeared in the ESPN has developed online streaming services and mobile apps while maintaining its cable competitiveness, and has also appeared on major social media platforms. Not only that, ESPN is also researching and developing virtual reality technology, towards the meta-universe world, previously in its streaming platform ESPN + NBA virtual live broadcasts, viewers can watch the players' performance through more angles, of course, want to really apply and do a good job of virtual reality there is still a long way to go, and need a lot of money and human resources investment, but it cannot be denied that, ESPN has been walking in the But it is undeniable that ESPN has walked in the forefront of this industry, leading the development and innovation of sports media [8].

Digital transformation is also urgently needed in sports clubs, Liverpool Football Club, by searching the information of the major leagues to build a database, statistical data analysis and modeling for decision-making, has made a great contribution to the personnel transfer of Liverpool, Salah, Coutinho, two key players in the revival of Liverpool are recommended by Graham to buy. Liverpool's manager, Usain Klopp, is also indispensable to Liverpool's revival, and after he took office in 2015, he passed the tactical concepts and data analysis through digital technology and his own in-depth understanding of soccer in an easy-to-understand way, and the players are excellent both in terms of their tactical execution on the field and the team atmosphere off the field. This is why Liverpool was able to find itself in the doldrums, enter the Klopp era, and return to the top of Europe in 2019 when Liverpool won the Champions League. This is how digital technology has helped the team, and in recent years, more and more teams have learned from Liverpool, and the digital transformation in Liverpool Sports Football Club is undoubtedly very successful [9].

3.2. Challenges and Strategies in Digital Transformation

Digital transformation has impacted the sports industry on all fronts, with the largest share being media, clubs and sports organizations. Different types and sizes of the sports industry have different challenges, they all have the same essence, which is to enhance their self-competitiveness through digital transformation in order to survive and thrive. For example, for large organizations like the NBA, they need to balance digital technology with preserving traditions, integrating state-of-the-art technology and analytics to achieve the best results. As for small sports organizations, they need to focus their energy and financial resources on one aspect, such as digital marketing, etc. Standing out in one aspect can allow small sports organizations to occupy their own place in the market [10].

Investment in technology is also a challenge of digital transformation, this challenge is all encompassing, investment in technology means that money needs to be spent on developing new technology, which means that there is a risk of failure in every development and this risk is not small, especially for small sports organizations, one failure in research and development is enough to put them out of business, but if they are lucky enough to be successful in their research and development, then these small organizations will grow rapidly and become the leaders in the field. The new technology invested in also needs to meet the needs of their customers, their fans, and be aligned with the basic goals of their organization; technology investments in the wrong direction are bound to fail. Smaller sports organizations look more for short-term returns, while larger sports organizations do the opposite, they look for long-term investments and creations, such as ESPN who have invested heavily in their streaming platform.

Cultural change is also a major issue, some traditional sports organizations have management that are more old-fashioned in their thinking and operate in old-fashioned, traditional ways, not embracing and seeking new types of technology and digital transformation. This old-fashioned thinking can hinder the development and application of new strategies and technologies in sports organizations, and these traditional sports organizations are bound to become obsolete if they continue to think this way. This kind of thinking can certainly not be said to be wrong, and in order to change this kind of thinking, it can't be replaced by new technologies, but rather, it needs to be balanced by adopting a digital integration approach to the development of digital technologies while retaining some of the traditional valuable ideas, and Liverpool Football Club is a good example of this, as they have successfully combined data analytics with the unique insights of their coaches.

All in all, a strategic approach is key to solving the challenges of digital transformation, and the strategic approaches of the NBA, ESPN, and Liverpool Football Club are highly informative. Developing a strategic approach that works for the company involves combining the company's goals with digital transformation, while also taking into account the customer experience.

3.3. Long-Term Impact of Digital Transformation in the Sports Industry

The impact of digital transformation on the sports industry is widespread. The first is the transformation of traditional business models and revenue sources. Previously, the main source of revenue for sports events was the sale of tickets, broadcasting rights and peripheral merchandise. Today, however, revenues from digital platforms account for a significant portion of the overall revenue stream, even surpassing that of tickets, which includes online advertising, title sponsorships, online merchandise and subscription services. A concrete example is that media platforms have created a comparison mentality among fans by monetizing fan data, which can be used to satisfy personalized needs through these tokens, such as avatars or names of special stars on the network, membership privileges, and the redemption of some of the peripheral merchandise, which in turn makes them stay longer on the platform to complete tasks to obtain tokens or to obtain them in the form of online transactions. This shift has led to more diverse revenues for the sports industry, favoring its development of new technologies that continue to increase the user experience.

As the digital transformation is applied, fan engagement continues to increase and is widely recognized and enjoyed by fans not only on social media platforms, but also on apps and virtual platforms. They can get close to their favorite athletes and teams in a variety of ways, such as fans can interact with them under the official and player accounts in social media, teams and players will send more dynamic and surprising moments in their own lives, to bring fans closer to the players, and on major holidays such as Christmas, the team will send videos recorded by the players to express their blessings to the fans, and even the players will hold some offline events. Even the players will hold some offline or online activities and invite their fans to participate, such as playing 2K games together. Similarly, the team will also invite some special people to watch the game, which reflects a kind of humanistic care and helps to increase the fans' loyalty and love for the team, and the fans can thus support the team by selling peripheral merchandise and digital content, etc., and provide financial support and help for the team's operation [11].

The use of emerging technologies such as Virtual Reality (VR) and Artificial Intelligence (AI) will drastically increase the fan experience and the level of competition in sports clubs in the future. Fans can virtually watch matches, participate in match activities, and watch intense matches from multiple immersive perspectives through VR and AR. In addition, the platform can also customize content through AI to more accurately provide personalized services to fans. Clubs can use AI to analyze data, such as proper diet, injury prevention, scientific training and research on opponents, to improve the competitiveness and athleticism of their teams, and bring fans more intense and higher level matches. These technologies don't just improve sports today, they help to leverage the sports industry's leadership in technological innovation and help to predict future trends. The sports industry will be redefined by this innovative approach. It will become more dynamic, interactive and fascinating for all parties involved.

All things considered, the sports industry will be greatly affected by digital transformation in many ways. Business models have been redefined up, the fan experience has changed, and it's enabling new applications of developing technologies. The digital landscape is changing and the industry as a whole is adapting. It is important to integrate these innovations while preserving the traditional nature of sport. When digital innovations are successfully integrated, the fan experience is improved even more, and it ensures the success of sports organizations and their continued growth in the digital age. Its continued growth in the digital age. Thus, the future of sport lies in the integration of tradition and technology.

4. Conclusion

In conclusion, the landscape of the sports industry is undergoing a major shift, and sports organizations need to accurately combine traditional sports values with modern digital technologies, to retain good traditional values while developing new technologies and new models to suit their needs, a balance that is critical, and to develop a complete digital strategy through team goals and targeted user experiences, and to digitally transform as quickly as possible to make a difference in the whole fast-changing world of sports is making a difference, and like the previous examples of Liverpool, the NBA and ESPN, they are the ones to learn from. Digital transformation has redefined fan engagement and user experience in the sports industry, bringing fans and players and teams closer together, not only as an interaction but also as a way of generating revenues for sports organizations, while at the same time presenting new challenges that they face.

Looking ahead, the development of the sports industry in the digital era is regular, with the iterative updating of technology, the sports industry will continue to adjust the industrial landscape and basic strategies according to the changing needs of users, maintain their unique traditional values and invest in the development of new technologies, but their goal is always the same, which is to meet the essential entertainment needs and healthy life that sports bring to people. In the future, various sports organizations need to work together to promote the development of the entire sports industry and create a better environment for fans and athletes.

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