

## RESEARCH ARTICLE

# From system quality to behavioral responses: A review of influences on the usage of sports applications

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### ABSTRACT

In contemporary society, audiences increasingly rely on sports platforms for live event streaming, match schedules, and purchasing sports merchandise and services. Fierce competition exists among digital platforms for broadcasting rights to prestigious events like the Olympics. Beyond live transmission, these platforms serve as comprehensive sports hubs, curating diverse content. By developing engaging offerings, they foster user loyalty and repeated engagement. As integrated ecosystems of information services, their content quality directly impacts user satisfaction and platform credibility. There is a lack of systematic integration to gain insight into why information quality improves user feedback, as well as a lack of theoretical integration of current research. The aim of this study was to describe, synthesize and elucidate the findings of published research on individuals' intentions to use sport information systems by conducting an empirical study of their intentions to persist with sport information systems. Considering the exponential growth in the number of studies on persistence intentions, this study adopted bibliometric analysis to analyse the trends. This paper will discuss the distribution of literature, quantitative relationships, research structure, and trends in specific areas based on the empirical findings.

**Keywords:** system quality; information quality; cross-analysis; motivation; behavioral responses; sports application

## 1. Introduction

The development of information systems (IS) provides opportunities for different types of organisations to improve the competence, efficiency and accountability of their services and products, thus simplifying the daily activities of their clients<sup>[1]</sup>. The adoption of information systems does not only provide a return on investment for the company, but also helps users to carry out their activities. This behaviour is noticed after the user has used the information system for the first time. Understanding what factors influence individuals to continue using IS has become a necessity for researchers and companies<sup>[2, 3]</sup>. In recent years, there has been an explosion in the number of studies on user responses to IS use, which now cover a wide range of topics such as mobile banking services, mobile payments, e-learning, social networking, health applications, e-governance, m-commerce, and so on. Considering the increasing number of studies and the varied techniques, theories, and contexts in which they have been conducted, a great deal of dispersed information

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and divergent results have emerged. The process of searching for research becomes more difficult in the context of so much information, hence the need for comprehensive and integrated user response information. Therefore, it is critical and necessary to highlight, summarise and clarify existing research findings in order to gain a comprehensive understanding of user responses to the use of information systems<sup>[4]</sup>. This process contributes to theory development and reveals new relationships and gaps<sup>[5]</sup>. There have been a number of literature reviews on the continuing intentions of information systems that have explored different aspects of previous research, such as theories, technologies, and contexts of use. However, most of this literature does not focus on specific types of IS. As many types of platforms provide sports information counselling in the market, they are oriented to different groups and have different starting points, and therefore provide different information contents. So far, there is no strict definition of such information platforms and few scholars have conducted a systematic literature review of such platforms although the growing reliance on sports platforms and digital tools has transformed sports consumption. Traditional media, such as cable television, are being replaced by digital platforms, such as DAZN in Asia, which enables real-time streaming on smartphones. This shift has expanded users' access to sports content and reshaped their expectations and behaviours towards on-demand sports content.

Usually, as a comprehensive information platform, a live streaming sports platform allows users to obtain relevant information at any time through an app or a webpage, especially when users can obtain information through links, tags, or exchanges with other users while watching sports events, which is a more direct and convenient way of obtaining information. Therefore, such platforms often become widely used sports information platforms by users, as evidenced by the competition among major media platforms for the broadcasting rights of the events, and live broadcasting services will indeed gain more users for the platforms. As a result, there has been a significant amount of recent research work on the ability of information quality to facilitate user response. However, the findings are mixed. While some studies have reported that information quality can motivate users, enhance their self-efficacy, and promote user response<sup>[6,7]</sup>, others have found no significant effect<sup>[8,9]</sup>. There may be many variables that determine the effectiveness of apps<sup>[10]</sup>; one reason for the mixed results may be the different behaviour change techniques (BCTs) used in these apps. Other variables that may explain the biased results are related to the users, such as their perceptions of the app technology and their demographic characteristics.

Literature shows mixed evidence about the information quality of live streaming sports to foster users' response. A systematic integration that offers insights into which information quality can or cannot foster users' response is lacking, as is a theoretical integration of current research. A comprehensive review is therefore necessary to summarise and clarify existing knowledge. Despite the large number of literature reviews on the use of information systems, few have focused on specific types of systems, such as sport applications. This review addresses these inconsistencies by systematically integrating existing research and identifying variables that influence the effectiveness of sport applications. We performed a systematic review guided by a theoretical framework focusing on the effects of users' response to improve our understanding of what factors are more or less effective. This contributed to theoretical development and provided practical insights into the design of more engaging and effective sports platforms.

## **2. Research methodology**

### **2.1. Literature search**

Following the systematic literature review (PRISMA framework), the standard methodology for reporting methods in systematic literature reviews<sup>[11,12]</sup>, was conducted a computerised literature search using similar or related (“information quality” or “information system”) in a computerised literature search. and

[“sports” or “sports platform” or “sports website” or “sports app”] and [“motive” or “motivation”] and [ “response” or “behaviour” or “actual user” or “intention to use” or “revisit” or “continue to use”]. keywords for Boolean search. Databases searched only focus on Scopus. In addition, we referenced the references of previous reviews, and scanned the reference lists of the articles we found to identify potential additional articles.

## 2.2. Eligibility and exclusion

This study used eligibility and exclusion as important criteria for screening and examining relevant literature. Firstly, this study excluded investigative articles that were relatively short in length and selected mainly journal articles. Secondly, to avoid language translation difficulties, the search in this study was limited to English language literature. Finally, in terms of the time period of the literature, literature from 2014 to 2024 was selected. Because sports information platforms are the product of technological progress and closely related to the development of the times, the literature of the last ten years is the focus of the study.

As the search process progressed, indexed articles from the disciplines of social sciences, psychology and business, management and accounting were selected as the focus of the study on the feedback of users' behaviors in using sports information platforms. Other studies, such as computer science, engineering, diversity, arts and humanities, medicine, biochemistry, geology and molecular biology, agriculture and biological sciences, and environmental sciences, were excluded because not much research has been conducted in these disciplines on users behaviour for information quality. Finally, in line with the objectives of this SLR, countries and regions were not specifically screened, but only unidentifiable documents were excluded, with the aim of maximizing access to documents relevant to the topic.

## 2.3. Systematic review process

**Table 1.** Criteria for article inclusion and exclusion.

Criterion	Inclusion	exclusion
Literature type	Journal articles	Non-peer-reviewed articles Short survey Conference paper Erratum book chapter and others
language	English	Other languages
Publication timeline	Articles from January 2014-December 2024	Below 2014 and above 2024

## 2.4. Data extraction

In the data extraction stage, 15 articles were selected based on the characteristics below:

1. Articles included must be original research papers.
2. The articles must be in the English language and from the field of Social sciences, Psychology, Business, Management and Accounting. Meanwhile, Computer Science, Engineering, Diversity, Arts and Humanities, Medicine, Biochemistry, Geology and Molecular Biology, Agriculture and Biological Sciences, and Environmental Sciences were excluded.
3. Extracted articles published from 2014 to 2024.
4. The extracted papers were from United States, United Kingdom, China, Spain, Ireland, South Korea, Colombia, United Arab Emirates, Turkey, Switzerland, Saudi Arabia, Russian Federation, Qatar, Norway, Netherlands, Iran, France, Finland, Czech Republic, Chile and Australia.

5. The search strategy was scientifically tailored and limited to the Scopus database only.

Findings Regarding Articles Selected on The relationship between Information quality on users behaviour

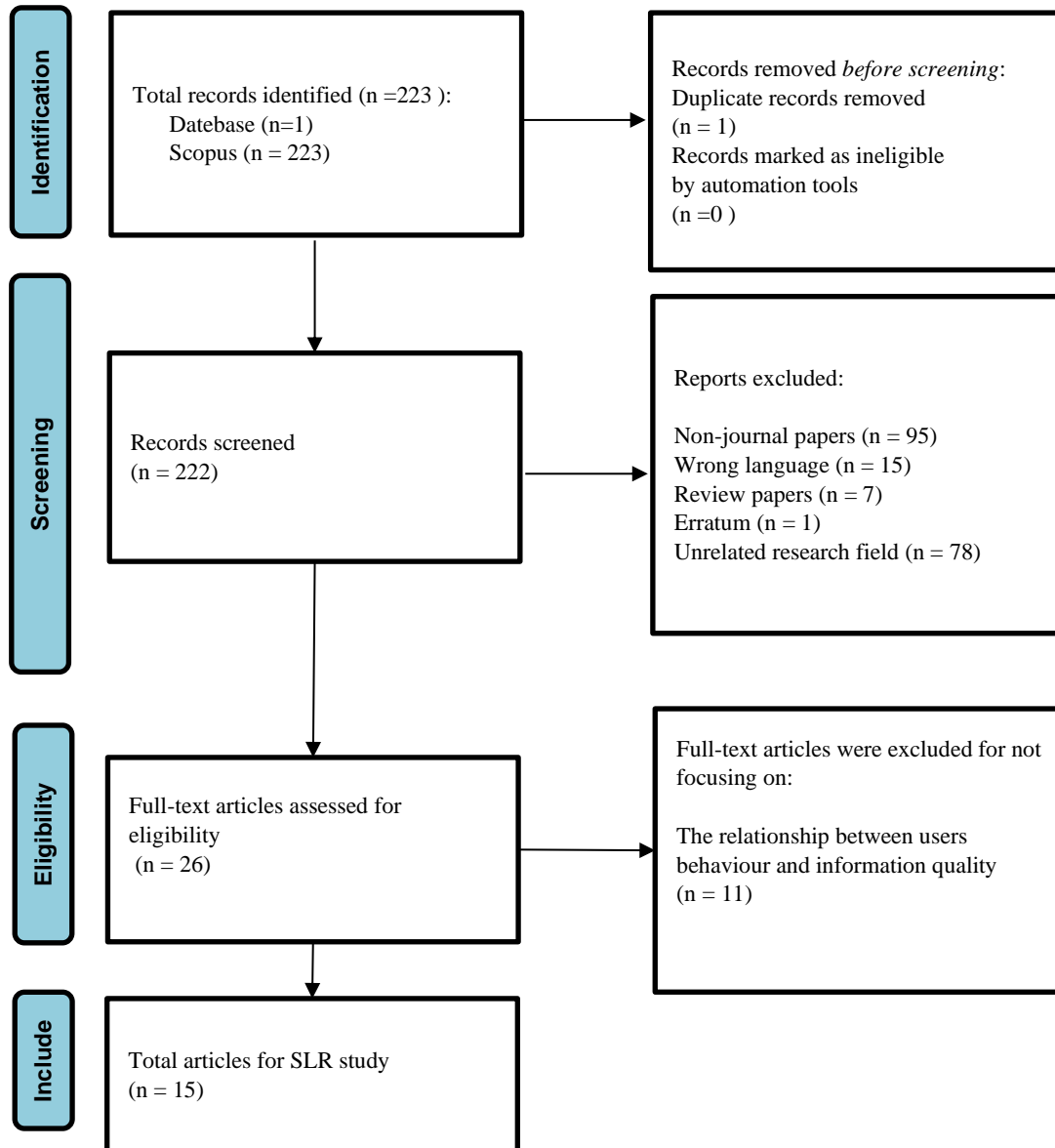


Figure 1. PRISMA steps for SLR studies (adapted from Page et al., 2020<sup>[13]</sup>).

Table 2. Findings regarding articles selected on the effect of information quality on users behaviour.

Concepts	inclusion	Total research / Year
Information quality	by subject areas, document types, and document source	749,930 document results. Spanned (1984- 2024)
Users behaviour	by subject areas, document types, and document source	190,854 document results. Spanned (1990- 2024)

Previous research work is the basis for creating new knowledge. When researchers carry out literature review, they interpret, analyze, compare and critically evaluate the existing knowledge system. The process of SLR enables scholars to discover the pattern of previous

results, absorb the depth and details of existing knowledge, and scientifically identify the gaps in future exploration.

**Table 3.** Characteristics of the articles selected for analysis.

<b>Title of article</b>	<b>Authors/Year</b>	<b>Topic</b>
Factors influencing consumer use of a sport-branded app: the technology acceptance model integrating app quality and perceived enjoyment	Won D.; Chiu W.; Byun H.	Information system; App quality; Perceived enjoyment
Applying the Kano model to investigate the quality of transportation services at mega events	Chen M.-C.; Hsu C.-L.; Huang C.-H.	Service quality; Satisfaction; Mega-event Websites;
Disrupting Unwanted Habits in Online Gambling Through Information Technology	Hou J.; Kim K.; Kim S.S.; Ma X.	Online systems; Habit disruption
A filtering-based approach for improving crowd sourced GNSS traces in a data update context	Ivanovic S.S.; Olteanu-Raimond A.-M.; Mustière S.; Devogele T.	Data quality; Machine learning
Understanding antecedents of continuance and revisit intentions: The case of sport apps	Perez-Aranda J.; González Robles E.M.; Alarcón Urbistondo P.	Sport application user; Revisit intention; Information system
Influence of teachers' ICT skills on the adoption of an e-learning management system in Sport Psychology during the COVID-19 pandemic	Alturise F.	E-learning; Sports; Teachers' Influence
Examining Consumer Motivations for Play-to-Earn Gaming: Application of Analytic Hierarchy Process Analysis	Lee M.; Park C.	Esports; Consumption Behavior; Consumer Motivation
CP and MIP approaches for soccer analysis	Duque R.; Arbelaez A.; Díaz J.F.	Real-time Application; Machine Learning; Soccer Data Analysis
Investigating citizens' experience of public communication of science (PCS) and the role of media in contributing to this experience (a case study on Isfahan Citizens)	Maher Z.; Khorasgani A.R.; Hashemianfar S.A.	Public communications of sciences; Public understanding of science and technology; Media.
Competitions between OTT TV platforms and traditional television in Taiwan: A Niche analysis	Katherine Chen Y.-N.	Viewing behavior; Traditional TV; OTT TV; Information systems
Tracking oneself for others: communal and self-motivational value of sharing exercise data online	Ehrlén V.	Sport; Social support; Social network; Physical activity
Online purchase behavior of sports consumers: the effect of eWOM and celebrity endorsements	Akoglu H.E.; Özbek O.	Buyer behavior; Consumer; EWOM
What Motivates People to Pay for Online Sports Streaming? An Empirical Evaluation of the Revised Technology Acceptance Model	Sun Y.; Zhang H.	Live streaming; Perceived enjoyment; Willingnes
Quantifying multi-dimensional attributes of human activities at various geographic scales based on smartphone tracking	Zhou X.; Li D.	Mobile application; Information and communication Technology; Individual activity tracking; Geographic information systems;
Who are mobile app users from healthy lifestyle websites? Analysis of patterns of app use and user characteristics	Elavsky S.; Smahel D.; Machackova H.	Mobile app users; Smartphones; Healthy lifestyle Websites; Individual differences

## 2.5. Systematic literature review process findings in details

In order to investigate the relationship between information quality and user behaviour, it is first necessary to clarify the concept of information quality. With the development of communication

technologies, information has become a key resource for contemporary societies and organisations. Information quality (IQ) is one of the key determinants of the quality of organisational decisions and actions, as organisational processes depend on information. At the same time, the increase in the volume and diversity of information has made reliable information increasingly difficult to identify, and at one time there were culturally recognised mechanisms for information quality assurance, such as peer-review processes for research, manual screening and cleaning of databases, and elaborate editing processes for books and journals. However, these mechanisms are disintegrating due to scale and cost<sup>[14]</sup>.

Previously proposed frameworks for assessing information quality<sup>[15,16]</sup> have shown that most of these frameworks are ad hoc, intuitive, and incomplete, and may not produce robust and systematic measurement models. Little work has been done to identify and characterise the root causes of information quality problems and to relate these causes to types of information activities. Their inconsistency with the overarching structure of information quality limits the domain of application of these frameworks and prevents them from making predictable causal links between information quality and types of activity. Scholars continue to propose relevant information quality dimensions, trade-off relationships, relevant general metric functions, and operational methods. There is also ongoing research on information quality in different communities, as well as on the automatic generation and inference of information quality metadata<sup>[17,18]</sup>, in which Information Quality (IQ) has become a major concern for organisations and an active research area in Management Information Systems (MIS). At the same time, the development of data warehouses and direct access to information from a variety of sources for managers and users of information has increased the organisation's need for and awareness of quality information<sup>[19]</sup>

A survey of variables used to measure the success of information systems reported that information quality is one of six categories commonly used in MIS research<sup>[20]</sup>. In the last decade, there has been a significant increase in information quality research activities to meet the needs of organisations trying to measure and improve information quality<sup>[21]</sup>. In industry, IQ is often rated as the primary focus of data warehousing projects<sup>[22]</sup>.

## **2.6. Data analysis strategies**

A total of 15 articles meeting specific criteria were collected for this study. In order to provide a more comprehensive analysis of the research questions, this study adopted a mixed research method. Firstly, this study used quantitative research methods to analyse the collected data, and statistically summarised the research trends and the distribution of research vectors in the relevant literature over the past ten years through bibliometric methods, in order to describe the overall development trend of previous research.

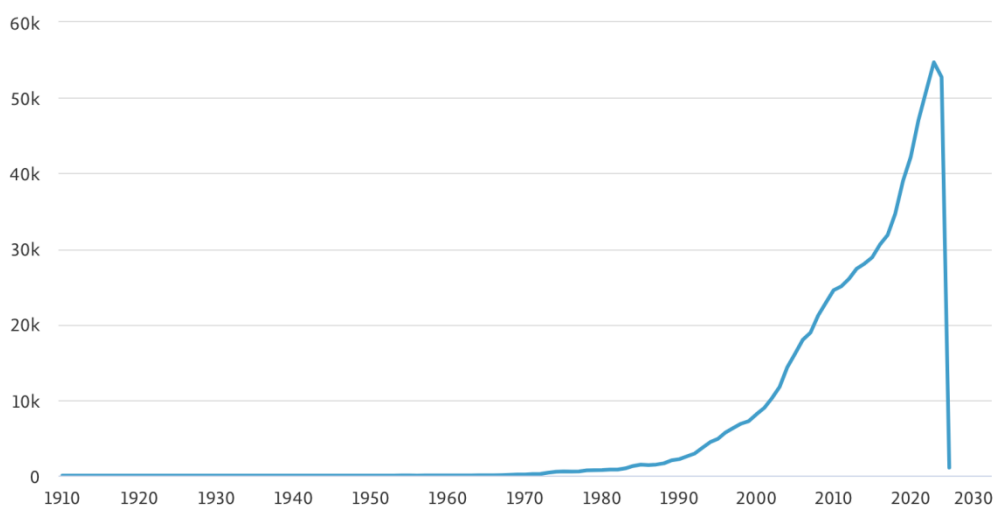
In addition, this study also qualitatively analysed the collected literature by classifying the selected literature into themes through content analysis. This helped to examine the current state of research on the quality of information on sports event platforms, thus responding to the research questions of this study.

## **3. Results and discussion**

From 2014 to 2024, we conducted a systematic literature review of sports information platforms to provide a comprehensive examination of how sports-based information platforms are being used to promote user engagement behaviours in the new media environment. Using a rigorous mixed-methods approach, this review combines bibliometric analysis with detailed content analysis to reveal the evolving dynamics of the use of information platforms in the sports industry. The findings suggest that the interplay between sports events and user behaviour, driven by advances in information and communication technologies, is positive and reciprocal and is undergoing a significant shift towards greater interaction and diversity. The methods

allow for a multifaceted exploration of trends, themes and influences observed over a decade, providing a robust summary of the practice of digital technologies influencing user behaviour. The results of this review not only reflect the academic contributions and research trajectories in the field, but also discuss the practical implications provided by the future development of the sports industry, particularly the improvement of information quality.

The study used a mixed research methodology to analyse the collected literature in order to explore the research questions.



**Figure 2.** Distribution of Publication Year (1).

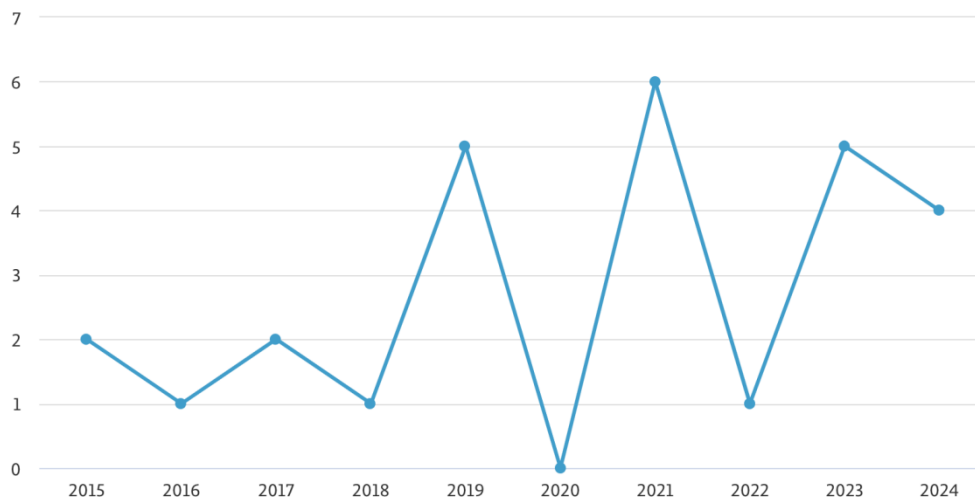
According to the current SLR, information quality began to receive attention around 1990, and that attention has continued to increase. The reasons for this are the unsatisfactory assessment of information quality and the increasing importance of information quality. Of the 759,522 results found in the Scopus database alone, many studies span from 1990 to 2024 and peak in 2023. Obviously, in today's information explosion, research related to information quality remains crucial.

### 3.1. Bibliometric analysis

Bibliometric analysis is a quantitative method based on written documents<sup>[23]</sup>. This method allows for descriptive data to be derived from an overall overview, and this study focuses on analyses by year, country, and discipline<sup>[24]</sup>. In this study, the use of bibliometric analyses of the collected literature was not just a trend, but a considered choice based on its ability to produce high-quality data results. Based on the **Figure 3**, Distribution of Publication Year suggests that external events, notably the global COVID-19 pandemic, may have a significantly influenced the focus and intensity of information quality and users behaviour research.

Since 1990, there has been a year on year surge in research on the quality of information from various organisations, institutions, platforms and other sources. But there is a literature gap in research on the information quality of sports platforms. Only a few studies have explored the relationship between information quality of sports platforms and their user behaviour. In the literature keywords for this study, only 27 literature results were extracted. It is worth noting that these search results were found after the inclusion and exclusion criteria were applied. As can be seen in the **Figure 3** below, the research on the relationship between the quality of sport-related information and user behaviour is not as good as compared to the research on information quality.

The reality in the **Figure 3** below is that the years 2019, 2021 and 2023 were the peak years for research on sports information platforms, while during the epidemic period, there was a drop off in 2020, with the relevant research literature appearing as late as 2024. despite the fact that sports information, as a pervasive and significantly characterised information system broadly influencing a large number of audiences around the world, is still under-attended



**Figure 3.** Distribution of Publication Year (2).

This pattern suggests that external events, notably the global COVID-19 pandemic, may have a significantly influenced the focus and intensity of research for information quality and users behaviour.

### 3.2. Research objects and trends

By examining the research topics in the corpus of research on information quality and user behaviour from 2014 to 2024, it is possible to see that the distinction between types of information platforms, although clear, is also very broad, and that although the main focus is on web-based and mobile platforms, with fewer platforms for traditional media, more research is chosen to study the information systems of each platform, and the analysis shows that, due to social media and information dissemination techniques development, there is a clear tendency for researchers to focus on mobile device-based sports information platforms, with website and app-based sports information platforms receiving the most attention, with 12 papers addressing this platform. There are 5 papers were devoted to the impact of the information quality of mobile apps on users' psychology and behaviour. Although traditional media still occupy an important position in the sports industry, especially with the addition of online technology, e.g. Amazon, Tencent, etc. still have the largest number of sources of sports information and remain global media giants, only 2 papers focused on such media. Three papers in the dataset do not specify a particular platform, but instead focus on the information system and the quality of the information itself, exploring some of the new possibilities that the information system and the quality of the information can offer for user behaviour. This distribution highlights the differences in academic interests and may also reflect the different roles that information systems and information quality play in user behaviour (**Table 4**).

This trend in research topics highlights the role of information quality in user psychology and behaviour, suggesting that while emerging platforms such as mobile phones and the web are beginning to attract academic interest, television-based platforms still have a place in academic research, and reflecting the diversification of information systems themselves.



**Table 4.** Sample type distribution by research objects.

Sample type	n
Phone application	5
Website or platform	7
TV	2
Not mentioned	3

### 3.3. Research design and trends

In a systematic review of the 15 studies selected, an analysis of the research designs revealed clear trends in research methodology, reflecting the diversity of topics ranging from technology adoption in sports applications to consumer behaviour analysis in online platforms. The studies cover a wide range of areas such as sports branding apps, transport services at mega-events, online gambling and e-learning, each with different research objectives and methodologies.

A large proportion of these studies (11 in total) used quantitative methods, emphasizing the measurement of variables and empirical analysis of system effectiveness. In particular, empirical measurement and analysis of phenomena such as user engagement, technology acceptance and behavioral intentions, e.g. studies exploring consumer motivation to use sports apps or persistent intentions to use sports apps [25, 26], online gambling behaviors<sup>[27]</sup>, and purchasing behaviors of sports consumers<sup>[28]</sup> have relied on structured surveys, statistical modelling, and data analyses to examine questions about the factors influencing technology acceptance, consumption patterns, and user engagement factors. These studies highlight the value of large-scale data collection and, by quantifying the relationships between different factors such as application quality, perceived enjoyment, and user intent, highlight the value of empirical data in understanding measurable outcomes and testing theoretical frameworks such as the Technology Acceptance Model (TAM) and its extensions<sup>[26, 29]</sup>. Insights are provided for strategy and decision-making in the development of sports information platforms.

In contrast, three studies used qualitative methods to delve deeper into users' subjective experiences and motivations<sup>[30, 31, 32]</sup>. These papers focused on the reasons behind consumer behaviour or the psychological aspects of technology use. All used qualitative research methods such as interviews, case studies and thematic analyses. For example, the study investigating citizens' experiences of public science communication<sup>[31]</sup> on the motivations for “playing games for money” gaming <sup>[30]</sup> suggests that in-depth interviews can provide a fuller understanding of the motivations behind gaming participation, reflecting a growing trend towards the use of multifaceted research methods in more complex areas of research. These methods provide a nuanced understanding of human behaviour that quantitative methods may miss, such as the role of media in shaping public perceptions or the emotional and social motivations behind technology use. This is particularly important for exploring complex or emerging phenomena that are difficult to measure numerically.

However, only one article used a mixed research methodology, Ehrlén combining quantitative questionnaires and qualitative in-depth interviews to delve into the social communication dimensions of self-tracking behaviors and their impact on health behaviors<sup>[33]</sup>. The study extends the theoretical framework of digital leisure and health behaviour research, balances techno-optimism with critical perspectives, and provides practical guidance for health interventions, digital platform design and public education.

Overall, the research design of these studies demonstrates a clear trend towards empirical and data-driven understanding of user behaviour and system performance, balanced with the study of underlying

psychological and social dynamics. As research related to technology, sport and consumer behaviour continues to evolve methodologically. Whilst quantitative methods have dominated due to their ability to provide generalized and statistically validated insights, there is a clear need for more mixed-methods research to enrich the understanding of the multifaceted user experience and to provide a more holistic view of the factors influencing the adoption and use of technology. Future research may benefit from the integration of these methods to provide more comprehensive and insightful findings.

**Table 5.** Sample type distribution by research design.

Sample type	n
Quantitative Method	11
Qualitative Method	3
Mixed Method	1

### 3.4. Themes distribution and trends

The thematic distribution of the 15 selected studies highlights the strong academic interest in three main areas: technology adoption and user behaviour, information service quality and optimisation, and social and communication aspects of digital platforms. The bibliometric analysis showed that the majority of studies (7 papers) focused on technology adoption and user behaviour (**Table 6**). This focus reflects the strong academic interest in understanding users' use and interactions with information system technologies. (e.g., sports branding apps, e-learning systems, and online sports streaming platforms) Research on this topic typically employs theoretical frameworks such as the Technology Acceptance Model (TAM) and its extensions to explore the factors that influence users' adoption, willingness to continue, and motivation to use<sup>[29,25]</sup>. The emphasis on user behaviour highlights the importance of information systems in matching users' needs and preferences, particularly with regard to the quality of sport and health-related information.

Information Service Quality and Optimization had 6 papers and also received considerable attention, reflecting the strong interest in improving the quality and efficiency of information services in digital and physical environments. This theme includes studies on the application of the Kano model for the evaluation of transport services for large events<sup>[34]</sup>, the optimisation of crowdsourced GNSS data<sup>[35]</sup>, and the analysis of the competition between OTT TV platforms and traditional TV<sup>[32]</sup>. In addition, research on Constraint Programming (CP) and Mixed Integer Programming (MIP) for football analyses<sup>[36]</sup> also belongs to this theme, highlighting the application of advanced computational methods to enhance service delivery and decision-making. The focus on the quality and optimization of information services demonstrates the academic and practical importance of ensuring that services meet user expectations and operate efficiently, especially in high-risk environments such as large events or competitive industries.

Conversely, the social and communicative aspects of digital information platforms are the least explored themes, with only two papers devoted to this area<sup>[31, 33]</sup>. This underrepresentation suggests a significant gap in the literature and provides an opportunity for future research to delve deeper into the social dynamics and communicative practices enabled by digital information technologies. For example, a study on online sharing of exercise data<sup>[33]</sup> highlights the public and self-motivational value of self-tracking practices, while a survey on the public communication of science<sup>[31]</sup> explores the role of media information platforms in shaping civic experiences. Understanding these social and communicative aspects is critical to building digital information platforms that foster meaningful interaction and engagement among users.

The observed trend in the distribution of themes suggests that high priority has been given to technology adoption and user behaviour and to the quality and optimization of information services, which suggests that,

while the technical and operational aspects of digital information platforms have been well explored, the social and communicative, behavioural aspects have been less thoroughly researched. This calls for a more balanced research agenda that not only continues to look at user behaviour and information quality, but also significantly strengthens the focus on the social and communicative, behavioral aspects of digital information platforms. Such an approach is essential for the development of comprehensive strategies that capitalise on technological advances while ensuring that they resonate with users and promote meaningful participation. By addressing this gap, future research can provide richer insights into how digital technologies can be designed and implemented to enhance individual and collective experiences in sport, health and beyond.

**Table 6.** Sample type distribution by themes.

<b>Sample type</b>	<b>n</b>
Technology adoption and user behaviour	7
Information service quality	6
Social and communicative	2

### **3.5. Cross-analysis**

The cross-analysis of the selected studies reveals several key insights into the interplay between system quality, user behavior, and the adoption of sports applications. This section synthesizes the findings from the bibliometric analysis, research objects, research designs, and thematic distribution to provide a comprehensive understanding of the factors influencing the usage of sports applications.

The bibliometric analysis highlights a significant influence of external events, particularly the COVID-19 pandemic, on the focus and intensity of research related to information quality and user behavior. The years 2019, 2021, and 2023 marked peak periods for research on sports information platforms, with a noticeable dip in 2020. This pattern suggests that global disruptions can shift academic priorities, potentially delaying research outputs. However, the resurgence in 2021 and 2023 indicates a renewed interest in understanding how sports information platforms can adapt to changing user behaviors during and post-pandemic.

The analysis of research objects reveals a clear preference for studying web-based and mobile platforms over traditional media. Mobile device-based sports information platforms, including apps and websites, received the most attention, with 12 out of 15 studies focusing on these platforms. This trend reflects the growing dominance of digital platforms in the sports industry and aligns with the broader shift towards mobile technology in information dissemination. However, the underrepresentation of traditional media, such as television, in academic research (only 2 studies) suggests a gap in understanding how these platforms continue to influence user behavior, especially in regions where traditional media remains prevalent.

The research design analysis underscores a strong preference for quantitative methods, with 11 out of 15 studies employing surveys, statistical modeling, and data analysis to measure variables such as user engagement, technology acceptance, and behavioral intentions. This emphasis on empirical data highlights the value of large-scale data collection in understanding measurable outcomes and testing theoretical frameworks like the Technology Acceptance Model (TAM). However, the limited use of qualitative methods (3 studies) and mixed methods (1 study) indicates a potential oversight in capturing the nuanced, subjective experiences of users. Future research could benefit from integrating qualitative insights to provide a more holistic understanding of user behavior, particularly in complex areas such as emotional and social motivations behind technology use.

The thematic distribution of the studies reveals a strong academic interest in technology adoption and user behavior, with 7 out of 15 studies focusing on this area. This reflects the importance of understanding how users interact with sports information systems and the factors that influence their adoption and continued use. The second most explored theme, information service quality and optimization (6 studies), highlights the academic and practical importance of ensuring that digital platforms meet user expectations and operate efficiently. However, the least explored theme, the social and communicative aspects of digital platforms (2 studies), points to a significant gap in the literature. This underrepresentation suggests a need for future research to delve deeper into how digital platforms can foster meaningful interactions and engagement among users, particularly in the context of sports and health-related information.

The frequent use of the Technology Acceptance Model (TAM) and its extensions in the studies underscores the relevance of this theoretical framework in understanding user behavior in sports applications. However, the limited exploration of other theoretical frameworks, such as those focusing on social dynamics or communication theories, suggests an opportunity for future research to broaden its theoretical base. Integrating multiple frameworks could provide a more comprehensive understanding of the multifaceted factors influencing the adoption and use of sports applications.

The findings from the cross-analysis have significant implications for the development of sports information platforms. The emphasis on technology adoption and user behavior suggests that platform developers should prioritize user-centric design, ensuring that applications are intuitive, engaging, and meet the specific needs of their target audience. The focus on information service quality and optimization highlights the importance of leveraging advanced computational methods to enhance service delivery and decision-making. Finally, the underrepresentation of social and communicative aspects calls for a more balanced approach to platform development, one that not only focuses on technical and operational aspects but also fosters meaningful user interactions and community building.

In conclusion, the cross-analysis of the selected studies provides valuable insights into the factors influencing the usage of sports applications, from system quality to user behavior. While the research demonstrates a strong focus on technology adoption and information service quality, it also reveals significant gaps in understanding the social and communicative aspects of digital platforms. Future research should aim to address these gaps by integrating diverse methodological approaches and theoretical frameworks, ultimately contributing to the development of more comprehensive and user-friendly sports information platforms.

## **4. Conclusion**

This systematic literature review explores the relationship between information quality, system quality, and user behavior in sports applications, based on 15 studies published between 2014 and 2024. The analysis identifies key trends, gaps, and implications for both academic research and the sports information platform industry.

The bibliometric analysis highlights the significant impact of external factors, notably the COVID-19 pandemic, on the research focus. Peak years in 2019, 2021, and 2023 reflect the growing interest in how sports platforms adapt to changing user behaviors during and after global disruptions, while the dip in research during 2020 shows how crises can temporarily shift academic priorities.

The majority of studies focused on web-based and mobile platforms, aligning with the increasing role of digital technologies in sports information dissemination. However, a gap exists in research on traditional media, such as television, which remains influential in certain regions. This suggests the need for further

exploration of how traditional platforms shape user behavior, particularly in markets where digital adoption is slower.

Methodologically, the studies predominantly employed quantitative approaches, with 11 out of 15 using surveys and statistical models. This emphasizes the value of large-scale data to understand user behavior and test theories like the Technology Acceptance Model (TAM). However, the limited use of qualitative or mixed methods leaves room for deeper exploration of the emotional and social factors behind user interactions with sports applications.

In conclusion, while the review underscores the importance of system and information quality in shaping user behavior, it also reveals gaps in understanding the social and communicative aspects of sports apps. Future research should address these gaps by incorporating diverse methodologies and theoretical frameworks, ultimately contributing to more user-centered, engaging sports platforms. The main conclusion of this study is that while information quality is a key determinant of user engagement and continued use of sport applications, its effectiveness is moderated by a variety of factors including user perceptions, satisfaction, trust, EWOM, individual differences, and the specific behavioural change techniques (BCTs) employed by these applications. In response to the fragmented and mixed findings in the existing literature, this review integrates and summarises previous studies to gain a comprehensive understanding of the factors that drive or hinder user response.

## **Conflict of interest**

The authors declare no conflict of interest.

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