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Coaches' Readiness Toward Technology Adoption in Sports

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Abstract - This study explores how ready coaches are to embrace technology in sports, looking at both where they stand now and what could help them be more prepared in the future. Using surveys, the researchers gathered input from 80 coaches representing different sports. Overall, most coaches have a positive attitude toward using technology, but there are differences in how comfortable and prepared they actually feel about using it day-to-day. Some of the main challenges coaches face include complicated technology, not enough training, and limited resources. To address these, the study suggests ongoing professional development, easy-to-use technology, and more support from organisations. The findings highlight the need for practical strategies to turn coaches' positive attitudes into real readiness, which can lead to better and more innovative coaching. This research adds to our understanding of digital changes in sports coaching and offers concrete suggestions to help coaches and organizations successfully integrate technology.

Keywords: Technology, Positive Attitudes, Sports Coaching, Readiness

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INTRODUCTION

Technology plays a central role in supporting athlete development, performance enhancement, and training planning. Nowels and Hewit (2018) demonstrate that technology has transformed coaches' ability to monitor, evaluate, and support athletes. Tools such as GPS trackers and heart rate monitors provide real-time data, enabling coaches to tailor training to individual athlete needs. Video analysis systems facilitate detailed review of technique and strategy, offering immediate feedback and targeted improvement strategies. These technologies not only enhance performance but also contribute to injury prevention and athlete safety.

Technology facilitates improved communication among coaches, supports data-driven decision-making, and enables collaboration across geographic boundaries. Coaches can share expertise and access a broader range of resources than previously possible. Additionally, technological advancements such as instant replay contribute to fairer officiating and enhance the engagement and interactivity experienced by athletes and spectators.

According to Brewer et al. (2025), technology is changing the way coaches develop athletes, improve performance, and run training sessions. Today's coaches use everything from wearable gadgets and video analysis to artificial intelligence and virtual reality. These tools help coaches get better insights, communicate more easily, and customize training for each athlete.

Despite these advantages, technology adoption among coaches varies considerably. Barriers such as technological complexity, adherence to traditional coaching methods, and resource limitations hinder full integration of new tools. Research indicates that although many coaches express favorable attitudes toward technology, actual implementation during training and competitions remains inconsistent. The COVID-19 pandemic necessitated a shift to online training, revealing both the potential benefits and challenges associated with digital tool utilization.

Brewer et al. (2025) also point out that using more technology in coaching brings new challenges, like making sure everyone's data stays private and thinking about what's fair for all athletes. To really succeed, coaches and organizations need to make sure technology works for everyone and doesn't create new problems, like too much information or confusion over what the data really means.

Assessing coaches' readiness for technology adoption is essential for developing effective support strategies. Readiness encompasses not only interest but also requisite skills, access to appropriate tools, and organizational support. Identifying current readiness levels and barriers enables sports administrators to design targeted interventions that facilitate seamless technology integration and optimize its benefits.

This research aims to help close the gap between coaches' positive feelings about technology and their readiness to use it in their everyday coaching. By doing so, it hopes to make sports coaching more effective and innovative.

LITERATURE REVIEW

METHODOLOGY

This study utilized a quantitative research design to evaluate coaches' readiness for technology adoption in sports. A structured survey was administered to 80 purposively selected coaches from various sports disciplines, each with at least one year of coaching experience and current involvement in athlete training. The survey instrument, adapted from the Teacher Technology Acceptance Measure (T-TAM), included Likert-scale items assessing attitudes, perceived ease of use, usefulness, training needs, and actual technology usage in coaching. The instrument demonstrated high internal consistency in previous studies ($\alpha = 0.94$).

For data analysis, descriptive statistics, specifically the weighted mean was used to summarize readiness levels and usage patterns. Results were interpreted in the context of existing literature to identify key barriers and facilitators of technology adoption within the coaching context.

RESULTS & DISCUSSION

Table 1. Coaches' Readiness and Usage Levels (n = 80)

Readiness Dimension	Mean Score	Verbal Interpretation
Attitude toward Technology	4.3	Highly Ready
Perceived Ease of Use	3.8	Moderately Ready
Perceived Usefulness	4.2	Highly Ready
Actual Usage	3.5	Moderately Ready
Training Needs	4.0	Highly Ready

Attitude toward Technology yielded a mean score of 4.3, indicating that most coaches demonstrate high attitudinal readiness, with 80% expressing strong enthusiasm and openness to technology adoption. This positive orientation toward innovation provides a critical foundation for successful technology integration.

Perceived Ease of Use, with a mean score of 3.8, reflects moderate readiness among coaches. While many find technology accessible, a substantial proportion continue to encounter challenges. These results underscore the importance of user-friendly tools and ongoing technical support.

A mean score of 4.2 for Perceived Usefulness indicates high readiness, with 75% of coaches acknowledging the benefits of technology for performance enhancement and injury prevention. This strong perceived value is likely to promote further adoption if existing barriers are mitigated.

The mean score of 3.5 for Actual Technology Usage indicates moderate readiness, revealing a gap between positive attitudes and practical implementation. Sixty percent of coaches report regular technology use, while forty percent are less consistent, often due to technical or resource constraints.

A mean score of 4.0 for Training Needs indicates high readiness, with 70% of coaches expressing a strong desire for additional professional development and support related to technology integration.

Overall, the data indicate that coaches exhibit high readiness in attitude and perceived usefulness, but only moderate readiness in actual usage and ease of use. The primary barriers include insufficient technical expertise, inadequate training, and limited resource availability. These findings suggest that targeted interventions, such as hands-on training, technical support, and enhanced resource access, are necessary to convert readiness into consistent practice. Addressing these gaps is critical for advancing effective technology integration in sports coaching.

CONCLUSION AND RECOMMENDATIONS

1. Coaches demonstrate high conceptual readiness and positive attitudes toward technology adoption; however, actual usage remains moderate due to persistent barriers including technological complexity, insufficient training, and resource constraints.
2. Financial limitations and accessibility challenges represent significant obstacles, particularly for smaller programs and teams with restricted budgets. These constraints contribute to unequal access to advanced technologies and may result in performance disparities.
3. Resistance to change and a preference for traditional coaching methods continue to impede widespread technology integration. This underscores the necessity for targeted change management and support strategies.
4. Ethical considerations, such as data privacy and responsible technology use, must be addressed to ensure that technology adoption aligns with organizational values and safeguards athlete welfare.
5. Effective technology integration necessitates ongoing professional development, practical training, and the provision of user-friendly tools to enhance coaches' confidence and competence in digital environments.

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