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Systematic Review: The Role of Video Analysis in Improving Basic Football Skills

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Abstract

This systematic review examines the role of video-based media, including video tutorials, video feedback, interactive videos, video tests, and motion analysis software, in improving basic football (soccer) technical skills. Basic skills such as passing, dribbling, shooting, and ball control require accurate visual understanding to support effective motor learning and error correction. A systematic literature search was conducted using Google Scholar databases, focusing on peer-reviewed articles related to video-based learning and performance analysis in sports. A total of 20 relevant studies met the inclusion criteria. The findings consistently show that video-based interventions positively influence technical accuracy, movement understanding, learning motivation, decision-making ability, and overall performance quality. Video feedback was identified as the most effective approach for correcting technical errors, while motion analysis software such as Kinovea proved valuable for biomechanical evaluation, particularly in shooting techniques. This review concludes that video analysis is an effective and relevant learning strategy for coaches and educators to enhance mastery of basic football skills across educational and training contexts.

Keywords: Video Analysis; Basic Soccer Techniques; Athlete Performance

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1. INTRODUCTION

The integration of technology into sports education and coaching has become increasingly prominent, particularly through the use of video-based learning media. Previous studies have demonstrated that video tutorials and interactive media significantly improve the learning of basic sports techniques by providing clear, repeatable, and objective visual representations of movement. In football, video-based instruction has been shown to enhance fundamental skills such as passing, dribbling, and ball control by supporting motor comprehension and skill retention.

Research by (Ariawan et al., 2023; Simanjorang et al., 2020) highlights the effectiveness of video tutorials in football learning contexts, while (Anggara et al., 2021) report similar benefits across different sports. The replayability of video allows learners to control learning pace, which contributes to improved movement understanding and motivation (Alfani & Satria, 2021). However, many existing studies primarily focus on the development or general effectiveness of video media without adequately linking it to specific training needs or technical evaluation processes.

Beyond instructional use, video also functions as an evaluation tool through video feedback (VFB), which enables athletes to visually identify technical errors that are difficult to perceive in real time. Studies by (Permadi & Lubis, 2022; Pratama & Fajaruddin, 2023a) demonstrate that VFB significantly improves technical accuracy and motor awareness. Furthermore, motion analysis software such as Kinovea offers biomechanical insights by measuring angles, movement speed, and technical phases, particularly in shooting skills.

Despite these findings, systematic reviews that specifically synthesize evidence on video-based interventions for improving basic football techniques remain limited. Therefore, this study aims to systematically review and synthesize existing research to identify patterns, effectiveness, and practical implications of video-based media in improving basic football skills.

2. METHOD

This study employed a systematic literature review approach. Articles were identified through Google Scholar using keywords related to video tutorials, video feedback, motion analysis, and football skill learning.

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Inclusion criteria consisted of: (1) peer-reviewed journal articles, (2) studies involving video-based media or analysis, (3) relevance to sports skill learning with emphasis on football, and (4) publication within the last ten years. A total of 20 articles met the inclusion criteria and were analyzed descriptively.

3. RESULTS AND DISCUSSION

Based on Tables 1 and 2, 20 articles were reviewed to examine the use of video-based media in improving technical sports skills, with a particular focus on basic soccer techniques. The reviewed studies used various forms of video media, including video tutorials, video feedback (VFB), interactive videos, video tests, and motion analysis software such as Kinovea.

Table 1 shows that video-based interventions consistently improve motor accuracy, coordination, and movement understanding across different sports such as football, volleyball, swimming, taekwondo, basketball, and petanque. Although not all studies were conducted specifically in football, the consistency of findings across sports strengthens the validity of video media as an effective tool for learning and correcting movement techniques. Video feedback and motion analysis were highlighted as dominant approaches for improving technical accuracy and biomechanical quality of movement.

Tabel 1. Results of the Review of Articles Related to the Use of Video Media in Sports Technique Learning

No	Author and Year	Research Focus	Main findings	Relevance to Footbal
1.	(Adib et al., 2023)	Video and Exercises on volleybal	Video increases reaction	Supports increased motor respons
2.	(Pande Made Dharma Sanjaya & Nyoman Rediani, 2022)	Swimming video	Improve basic technique	Video as an effective motion mode
3.	(Ar-Rahman et al., 2021)	Taekwondo Video	Improves movement accuracy	Strengthening video effectivenes
4.	(Permadi & Lubis, 2022)	VFB improves accuracy	VFB improves accuracy	Improves movement accuracy
5.	(Irfan Arifianto & Raibowo, 2020)	Improve coordination	Improve coordination	Improves movement accuracy
6.	(Dipiarsa, Akka, Arrin et al., 2020)	Konivea effective in analyzing motion	Konivea effective in analyzing motion	Improves movement accuracy
7.	(Widyanata et al., 2025)	Improve accuracy	Improve accuracy	Supports biomechanical evaluation
8.	(Pratama & Fajaruddin, 2023)	Improve dribbling	Improves dribbling ability	Basic ball techniques
9.	(Ariawan et al., 2023)	Video passing dan control	Passing and control videos	Directly relevant
10.	(Alfani & Satria, 2021)	Soccer learning video	Improves learninig outcomes	Supports technique learning
11.	(Wibisana et al., 2023)	Referee understanding through video tests	Strengthens understanding of rules	Important for cognitive aspects in football
12.	(Beiderbeck et al., 2023)	Football technology	Video as the future of training	Strategically relevant
13.	(Elita et al., 2025)	Passing using VFB	Passing accuracy increases	Highly relevant
14.	(Pirman & Iratutisisilia, 2023)	Passing video at elementary level	Technique improves	Beginner implementation

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No	Author and Year	Research Focus	Main findings	Relevance to Footbal
15.	(Joli et al., 2025)	SLR VFB & multimedia	VFB very effective	Strengthens review findings
16.	(M. Rachmat Kasmad et al., 2025)	Video based balanced nutrition media	Videos improve understanding	Relevant to the cognitive aspects of engeneering
17.	(Ramadhani Putra & Ridwan, 2025)	Interactive football video	Increase motivation	Affective influences in engineering learning
18.	(Iuliano et al., 2023a)	Video analysis dribbling U10	Improve decision making	Relevant to the tacticalaspects of football
19.	(Taufik & Gaos, 2019)	Audiovisual media for dribbling	Improve dribbling	Evidence that visual learning is effective
20.	(risman Gulo et al., 2025)	Video feedback an multimedia	VFB effective for engineering learning	Riview result booster

Table 2 specifically summarizes studies related to football techniques. The findings indicate that video tutorials are effective in improving passing-control skills and dribbling performance, particularly at the beginner and school levels. Studies using video feedback demonstrate significant improvements in passing and shooting accuracy, while motion analysis using Kinovea provides detailed biomechanical evaluation of shooting techniques, including movement phases, angles, and ball trajectory.

Table 2. Journals Related to Sports Games (Soccer) Using Video Media

No	Researchers and Year	Soccer Technique	Video Media	Findings
1.	(Ariawan et al., 2023)	Passing-control	Video tutorial	Significant improvement
2.	(Pratama & Fajaruddin, 2023b)	Dribbling	Video tutorial	Increased speed and accuracy
3.	(Widyanata et al., 2025)	Shooting	Kinovea analysis	Biomechanical improvement
4.	(Elita et al., 2025)	Passing	Video feedback	Accuracy increased
5.	(Dipiarsa, Akka, Arrin et al., 2020)	Shooting	Video analysis	Clarifies movement phases

Discussion

The alignment between Table 1 and Table 2 indicates a clear pattern: video-based learning media are effective not only as instructional tools but also as evaluation instruments. Video tutorials function as consistent visual models that support initial skill acquisition, whereas video feedback allows athletes to identify and correct specific technical errors that are difficult to observe in real time.

Furthermore, motion analysis software enhances the role of video by providing objective biomechanical data, making it particularly suitable for complex skills such as shooting. In addition to motor improvements, several studies also reported positive effects on cognitive and affective aspects, including increased motivation, better understanding of game rules, and improved decision-making ability.

Overall, the results presented in Tables 1 and 2 support the conclusion that video-based media constitute a comprehensive learning strategy capable of simultaneously enhancing motor, cognitive, and affective domains in football skill development.

4. CONCLUSION

Based on the findings summarized in Table 1 and Table 2, this systematic review concludes that video-based media play a significant and consistent role in improving basic football technical skills. The evidence shows that video tutorials are effective for supporting the acquisition of fundamental skills such as passing, dribbling,

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shooting, and ball control, particularly in beginner and school-based learning contexts. Video feedback (VFB) is identified as the most effective approach for improving technical accuracy. Studies summarized in the tables demonstrate that VFB enables athletes to visually recognize and correct technical errors related to body position, foot placement, and movement timing, resulting in significant improvements in passing and shooting accuracy. Furthermore, motion analysis software such as Kinovea contributes substantially to biomechanical evaluation by providing objective measurements of movement angles, speed, and technical phases. In addition to motor skill improvement, the reviewed studies also indicate positive effects of video-based media on cognitive and affective aspects, including increased learning motivation, better understanding of game rules, and improved decision-making ability. Overall, the findings support the conclusion that video tutorials, video feedback, and motion analysis form a comprehensive and effective learning strategy for developing basic football skills. Therefore, the integration of video-based media is strongly recommended for coaches, physical education teachers, and sports educators, particularly at the beginner and developmental levels.

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