

# On-Pitch Use of Mobile Devices: An Acceptance Study Among German Elite Youth Football Coaches

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**Abstract:** Through 19 in-depth interviews with youth academy coaches at different levels, this study investigates the acceptance of mobile devices among elite youth football coaches in Germany, focusing on the integration of smartphones and tablets for on-pitch use. While mobile devices provide opportunities for live tracking, video feedback, and performance monitoring, their adoption remains influenced by traditional coaching norms and organizational limitations. Using the Technology Acceptance Model (TAM), this research explores coaches' perceptions of usefulness and ease of use, examining factors such as subjective norms, structural barriers, and resource availability. Findings reveal that while many coaches recognize the value of technology for individualized player development, the devices are typically viewed as supplementary to traditional methods. Social expectations, resource constraints, and device-specific challenges continue to shape coaches' willingness to integrate mobile tools, highlighting the need for targeted support to enhance the effective use of technology in youth coaching.

**Keywords:** Mobile Device Acceptance, Elite Youth Football Coaching, Technology Acceptance Model, Coaching Innovation, German Football Culture

## Nutzung mobiler Endgeräte auf dem Platz: Eine Akzeptanzstudie deutscher Nachwuchsleistungsfußballtrainer

**Zusammenfassung:** Diese Studie untersucht auf der Grundlage von 19 Experteninterviews die Akzeptanz von mobilen Geräten bei Nachwuchsleistungsfußballtrainern in Deutschland, mit Fokus auf die Integration von Smartphones und Tablets im Training. Obwohl mobile Endgeräte Möglichkeiten für Live-Tracking, Video-Feedback und Leistungsüberwachung bieten, wird ihre Nutzung durch traditionelle Coaching-Normen und organisatorische Einschränkungen beeinflusst. Anhand des Technology Acceptance Models (TAM) wird die Wahrnehmung der Trainer bezüglich Nützlichkeit und Benutzerfreundlichkeit untersucht, wobei Faktoren wie subjektive Normen, strukturelle Barrieren und Ressourcenverfügbarkeit berücksichtigt werden. Die Ergebnisse zeigen, dass viele Trainer den Wert der Technologie für die individuelle Spielerentwicklung erkennen, die Geräte jedoch meist als Ergänzung zu traditionellen Methoden sehen. Soziale Erwartungen, Ressourcenbeschränkungen und technologiespezifische Herausforderungen prägen weiterhin die Bereitschaft der Trainer, mobile Endgeräte zu integrieren, und verdeutlichen den Bedarf an gezielter Unterstützung, um den effektiven Einsatz von Technologie im Nachwuchstraining zu verbessern.

**Keywords:** Akzeptanz mobiler Geräte, Elite-Nachwuchsfußballtraining, Technologieakzeptanzmodell, Coaching-Innovation, Deutsche Fußballkultur

## Introduction

As in every industry, so in sports, technological developments are influencing alterations in regulations and training environments (Morrison 2023). The pursuit of enhanced performance is an integral aspect of the nature of sports, and traditional practices are subjected to continuous scrutiny for the purpose of identifying potential enhancements. It is therefore imperative not to underestimate the potential of technological progress and possibilities (Memmert/Raabe 2017). Consequently, tablets have been employed on an extensive basis by coaches during matches in the Football Bundesliga for several years. In acknowledgement of their utility for activities such as live tracking, video feedback and performance monitoring. Likewise, laptops are perceived as particularly useful for a range of administrative and organisational tasks, including text processing, video editing, and data management. Furthermore, findings have been published concerning the utility of smartphones in the daily work of coaches, for example in communication with players and other stakeholders (Ingwersen/Schlesinger/Habenstein 2022).

However, despite these findings, there are indications in the media and scientific literature that the actual use of these mobile devices by coaches is not solely dependent on their perceived usefulness. Despite their indispensable role in the daily work of coaches, the label “laptop coach” has come to symbolize the traditional resistance to change within German football and coaching culture, which is strongly shaped by established practices and beliefs. This term, often used pejoratively by German sports media, discredits young, tech-savvy coaches (especially those, lacking a professional playing background) by framing their reliance on technology as a deviation from traditional coaching norms. Moreover, research has already been conducted into the perception of smartphones. Despite offering the same functions as tablets, they are generally regarded as leisure items that could detract from a coach’s professional image on the pitch. In contrast tablets are frequently regarded as emblematic of professionalism (Ingwersen et al. 2022). The use of technology on the pitch is particularly significant, as on-field work represents the core of a coach’s responsibilities. This setting is also where coaching most distinctly differs from other professional tasks like communication and administration, where mobile devices, particularly smartphones and laptops, are indispensable for efficient functioning. On the pitch, technology use is less straightforward, as traditional training methods remain deeply ingrained, and relational, hands-on engagement with players is central to coaching (Cushion/Armour/Jones 2003; Williams/Hodges 2005). Consequently, integrating mobile devices on the field presents unique challenges, as it must align with established norms while preserving the direct, interpersonal nature of coaching. The media discourse, existing research findings, and the unique demands of on-field coaching all suggest that coaches’ use of mobile devices on the field is influenced by factors beyond mere usefulness. Given the considerable autonomy coaches hold in choosing which technologies to adopt – due to their pivotal role in player development and the lack of clear guidelines or oversight on mobile device use in training (Ingwersen et al. 2022) – the decision to incorporate or avoid mobile devices largely hinges on each coach’s personal acceptance of the technology. Thus, understanding coaches’ acceptance of mobile devices is essential for optimizing technology integration in both coaching and coach development, and it serves as the central focus of this contribution.