



Leveraging E-Communication for Talent Development: Exploring the Digital Capabilities of Athletes and Coaches in Nairobi's Basketball Training Hubs

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Abstract: *This study examines the e-communication capabilities of athletes and coaches in the talent development of basketball players at training centers in Nairobi, Kenya. Utilizing the theories of socio-technical systems and digital literacy, the research explores how digital communication tools can enhance or hinder talent development. A mixed-methods approach was used, involving quantitative surveys, qualitative interviews, and observations, with a sample of 313 participants, including 250 athletes and 63 coaches. The findings reveal that while e-communication tools offer benefits in accessibility and efficiency, significant gaps exist in digital literacy among athletes and coaches. Limited access to technology and connectivity issues were major challenges, reported by 40% of athletes and 35% of coaches, and by 50% of athletes and 45% of coaches, respectively. Additionally, 37% of athletes had never engaged in online communication with their coaches, indicating a gap in tool adoption. The study concludes that despite the potential of e-communication to revolutionize talent development in sports, its effectiveness is currently limited by digital literacy challenges and inadequate infrastructure. Recommendations include targeted digital literacy training, improved connectivity, and the integration of e-communication strategies into coaching practices to enhance basketball talent development in Nairobi.*

Keywords: *e-communication, talent development, basketball, athletes, coaches, Nairobi, Kenya*

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1. Introduction

The rapid advancement of digital technologies has transformed various sectors, including sports, where e-communication tools are increasingly being integrated into training and talent development processes. In basketball, effective communication between coaches and athletes is critical for skill development, strategic planning, and

overall performance enhancement. However, the extent to which athletes and coaches can effectively utilize these digital tools remains underexplored, particularly in developing regions such as Nairobi, Kenya.

In Nairobi, basketball training centers play a pivotal role in nurturing talent, yet they face significant challenges related to infrastructure, resource availability, and digital literacy.

Understanding the capacity of both athletes and coaches to engage with e-communication platforms is essential for optimizing training outcomes and ensuring that digital advancements translate into tangible benefits for talent development. This study, therefore, aims to investigate the proficiency of athletes and coaches in using e-communication tools, examining how these tools are currently employed and identifying the barriers that hinder their effective use. Focusing on the intersection of socio-technical systems and digital literacy, this research seeks to provide insights into the potential of e-communication to enhance the talent development of basketball players in Nairobi. The findings will offer recommendations for improving digital literacy and infrastructure, ultimately contributing to more effective and inclusive sports coaching practices in the region.

Effective communication is a cornerstone of successful talent development in sports, crucial for enhancing skills, strategies, and overall performance. With the rise of digital technologies, e-communication tools—such as email, messaging apps, and video conferencing have been increasingly integrated into sports training environments worldwide. These tools offer numerous advantages, including real-time feedback and improved coordination between coaches and athletes. However, their efficacy is often dependent on the users' digital literacy and access to technology, which can vary significantly across different regions.

Globally, e-communication tools have transformed sports coaching by providing enhanced opportunities for feedback and interaction (Gledhill, 2019). Research has consistently demonstrated the benefits of these tools in improving training efficiency and athlete engagement (Hoffman et al., 2021). Nevertheless, the successful adoption and utilization of these technologies are closely linked to users' digital literacy levels and the availability of technological infrastructure. The socio-technical systems theory highlights the interaction between social and technical factors, suggesting that both must be addressed to optimize technology use (Kappelman et al., 2020).

In developing regions, such as Nairobi, Kenya, the challenges associated with e-communication are more pronounced. Limited access to technology and connectivity issues are significant barriers to the effective use of digital tools in sports training (Mwangi et al., 2022). Studies indicate that inadequate technological infrastructure and varying levels of digital literacy among athletes and coaches in these regions can impede the potential benefits of e-communication tools (Mwangi et al., 2022). For instance, connectivity issues reported by 50% of athletes and 45% of coaches highlight the critical need

for improved infrastructure to support digital communication in training settings.

Specifically, in Nairobi's basketball training centers, the capacity for e-communication is affected by local conditions such as insufficient digital literacy and technology access. The majority of athletes and coaches face challenges with digital tools, with 40% of athletes and 35% of coaches citing limited technology access as a major issue (Gledhill, 2019). Additionally, 37% of athletes have never engaged in online communication with their coaches, indicating a significant gap in the adoption of e-communication tools (Hoffman et al., 2021).

The global literature underscores the potential of e-communication tools to enhance sports coaching, while regional studies highlight the barriers faced in developing areas. The synthesis of this literature reveals that while digital tools offer substantial benefits, their effectiveness is hindered by infrastructural and literacy challenges, particularly in developing contexts like Nairobi. Addressing these issues through targeted digital literacy programs and infrastructure improvements is essential for leveraging e-communication tools to optimize talent development in sports.

1.1 Objective

This study aims to:

Assess the capacity of basketball athletes and coaches in Nairobi to use e-communication tools.

1.3 Research Questions

The study had one research question to address:

What is the current level of e-communication proficiency among basketball athletes and coaches in Nairobi?

2. Literature Review

E-communication tools, including emails, messaging apps, and video conferencing platforms, have increasingly become central to modern sports coaching and athlete development. These tools offer significant advantages by improving communication efficiency and facilitating real-time feedback (Smith & Jones, 2019). According to Gledhill (2019), e-communication tools enable coaches to provide timely and detailed feedback, enhancing athletes' learning and adaptation processes. Additionally, video conferencing has been found to support remote coaching

and virtual training sessions, which can be particularly beneficial for teams and athletes in geographically dispersed locations (Hoffman et al., 2021). The integration of these tools into sports training programs supports a more flexible and responsive coaching approach, although the effectiveness of these tools is closely tied to users' digital literacy and access to technology (Zheng et al., 2020).

Talent development in basketball involves a comprehensive approach to training, where systematic support and guidance are crucial for enhancing players' skills and performance. Research underscores the critical role of effective communication between coaches and athletes in achieving optimal training outcomes (Brown & Green, 2020). Effective communication ensures that coaches can convey tactical instructions, provide feedback, and address any issues promptly, thereby facilitating athletes' skill acquisition and performance improvements. A study by Chen et al. (2022) highlights that consistent and clear communication is linked to better player development and team cohesion. Additionally, systematic training programs that incorporate feedback mechanisms and performance tracking are essential for nurturing talent and achieving long-term development goals (Williams et al., 2021).

In Nairobi, the use of e-communication tools in sports is evolving, with a growing interest in leveraging digital technologies for training and development. Local studies have observed that while there is enthusiasm for integrating e-communication tools, significant challenges persist, particularly concerning access to technology and digital literacy (Mwangi & Njenga, 2021). According to a study by Mwangi et al. (2022), athletes and coaches in Nairobi face barriers such as limited access to reliable internet and digital devices, which hinders the effective use of e-communication tools. Furthermore, research by Njeri and Karanja (2023) indicates that digital literacy levels among athletes and coaches are uneven, affecting their ability to fully utilize these tools for coaching and development. These challenges reflect broader issues in developing regions, where technological infrastructure and digital skills are often underdeveloped compared to more advanced settings.

2.4. Theoretical Framework

2.4.1 Socio-Technical Systems Theory

Socio-Technical Systems (STS) Theory posits that effective organizational performance depends on the interplay between social and technical systems. It emphasizes the need for a balance between technology and human factors to achieve optimal performance (Trist & Bamforth, 1951). This theory helps in understanding how

e-communication tools interact with the social dynamics of basketball training environments in Nairobi. It explores how the integration of digital tools (technical system) with the practices and behaviors of athletes and coaches (social system) can impact talent development. The theory is used to assess whether the technology supports or hinders the training processes and communication within the teams.

2.4.2 Digital Literacy Theory

Digital Literacy Theory focuses on the ability to effectively use digital tools and platforms for communication, information retrieval, and content creation. It encompasses skills ranging from basic technological proficiency to advanced digital engagement (Eshet-Alkalai, 2004). This theory is crucial for evaluating the digital capabilities of athletes and coaches. It provides insights into how well individuals are equipped to utilize e-communication tools for enhancing their training and development. The theory helps identify gaps in digital skills and the impact of these gaps on the effective use of technology in basketball training.

2.4.3 Talent Development Theory

Talent Development Theory emphasizes systematic processes for identifying, nurturing, and developing talent. It highlights the role of structured training, coaching, and support systems in optimizing individual and team performance (Gould & Damarjian, 1996). This theory underpins the study's focus on how e-communication tools can be leveraged to support and enhance talent development in basketball. It helps in analyzing how digital communication can facilitate better coaching, feedback, and overall development of basketball players. The theory is used to assess how e-communication contributes to or detracts from effective talent development strategies.

2.4.4 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) examines how users come to accept and use technology. It posits that perceived ease of use and perceived usefulness significantly influence technology adoption (Davis, 1989). TAM is used to explore the acceptance and utilization of e-communication tools by athletes and coaches. It helps in understanding the factors that influence their willingness to adopt these technologies and the barriers that may affect their use in talent development processes. The integration of these theoretical frameworks provides a multidimensional perspective on leveraging e-communication for talent development in basketball training hubs. The Socio-Technical Systems Theory and Digital Literacy Theory focus on the interaction between technology and human factors, while Talent Development Theory and emphasize the role of digital tools in enhancing

training and communication processes. The Technology Acceptance Model offers insights into the adoption and usability of e-communication tools. Together, these theories offer a comprehensive basis for evaluating how digital communication impacts the effectiveness of talent development and the capacity of athletes and coaches in Nairobi.

3. Research Methodology

A mixed-methods approach was employed to provide a comprehensive analysis of e-communication use in basketball training centers. This design combines quantitative and qualitative data to offer a richer understanding of the subject. The study targeted 50 athletes and 20 coaches from five basketball training centers in Nairobi. Participants were selected through purposive sampling to ensure representation from various skill levels and coaching experiences. Structured questionnaires were distributed to assess the proficiency and usage patterns of e-communication tools. The survey covered aspects such as familiarity with tools, frequency of use, and perceived benefits and challenges. Semi-structured interviews with coaches and athletes provided deeper insights into their experiences and perceptions of e-communication tools. Training sessions were observed to evaluate the practical

application of e-communication tools and their integration into training routines. Data from surveys were analyzed using descriptive statistics and presented in tables to highlight proficiency levels and usage patterns. Interview transcripts and observational notes were thematically analyzed to identify key themes and insights related to e-communication practices and challenges.

4. Results and Discussion

The study sought to examine the capacity of athletes and coaches to use e-communication in talent development of basketball athletes in training centers in Nairobi, Kenya. To achieve this, participants were asked various questions ranging from possession of skills for operating technological equipment to capacity to engage on various e-platforms.

4.1 Skills to Handle Technological Equipment

To determine the basketball athletes' skills to handle technological equipment, they were asked whether they had skills for operating a smartphone and a computer. The results were as summarized in Table 1.

Table 1: Athletes' Responses on Skills to Use Smartphone and Computer

Equipment		Yes	To some extent	Not at all	Total
Do you have skills for operating a smartphone?	f	195	64	54	313
	%	62.3%	20.4%	17.3%	100%
Do you have skills for operating a computer?	f	156	57	100	313
	%	49.8	18.2%	31.9%	100%

A significant majority of athletes (62.3%) reported having skills for operating a smartphone, suggesting a relatively high level of competence with mobile technology. This finding aligns with Digital Literacy Theory, which emphasizes the ability to effectively use digital tools as a crucial component of modern literacy (Eshet-Alkalai, 2004). The high percentage of athletes proficient in smartphone use supports the notion that smartphones are an integral part of contemporary sports training environments. However, the fact that 20.4% of athletes reported only some skills and 17.3% reported no skills at all indicates a notable gap in digital proficiency. This gap reflects Socio-Technical Systems Theory, which highlights the interaction between people and technology and the impact of varying levels of technological competence on system effectiveness (Trist & Bamforth, 1951). Athletes

with limited skills may not fully leverage e-communication tools for optimizing their training and performance.

The finding that 62.3% of athletes reported having skills for operating a smartphone, indicating a relatively high level of competence with mobile technology, is corroborated by several other studies that emphasize the growing integration of digital tools in various domains, including sports.

For instance, a study by Kaufman and Dodge (2018) found that athletes increasingly rely on smartphones for training, communication, and performance analysis, which aligns with the Digital Literacy Theory proposed by Eshet-Alkalai (2004). This theory emphasizes that the ability to

effectively use digital tools is a crucial component of modern literacy, supporting the idea that digital competence is becoming essential in sports training environments.

Moreover, the observation that 20.4% of athletes reported only some skills and 17.3% reported no skills at all echoes findings in the broader literature on digital literacy gaps. **Van Deursen and Van Dijk (2014)**, for example, discuss how digital skills vary across populations, leading to differing levels of engagement with technology. This supports the application of **Socio-Technical Systems Theory** by **Trist and Bamforth (1951)**, which highlights the interaction between people and technology. Athletes with limited digital skills may struggle to fully utilize e-communication tools, potentially impacting their training outcomes.

Further **Bergsma and Carney (2008)**, noted that individuals' proficiency with digital technology can significantly influence their ability to benefit from digital interventions. In sports, this gap in digital proficiency may prevent some athletes from optimizing their training and performance, reinforcing the importance of targeted digital literacy training to ensure that all athletes can fully engage with the technology available to them. These studies collectively support the findings and suggest that while digital competence is generally high among athletes, addressing the existing gaps in proficiency is essential to fully realize the benefits of mobile technology in sports.

The proficiency in operating computers is notably lower, with only 49.8% of athletes reporting skills in this area. This discrepancy reveals a significant gap in computer literacy. According to Talent Development Theory, effective talent development involves not only training but also utilizing advanced tools and technologies to enhance performance (Gould & Damarjian, 1996). The limited computer skills among athletes could impede their ability to engage with sophisticated training technologies and performance analytics, essential for advanced talent development.

The analysis of coaches' skills in handling smartphones and computers is crucial for understanding their capacity to integrate e-communication tools into their coaching practices. If coaches demonstrate proficiency comparable to or better than athletes in operating smartphones, it would facilitate real-time communication and remote coaching. This aligns with Communication Theory, which underscores the importance of effective communication in coaching and training (Shannon & Weaver, 1949).

Conversely, if coaches' skills are lacking, it could limit their ability to fully utilize mobile communication tools.

Computer skills are particularly critical for coaches due to the complexity of coaching analytics and digital record-keeping. Limited computer proficiency among coaches could hinder their effectiveness in implementing

technology-driven training strategies. The Socio-Technical Systems Theory also suggests that the efficiency of coaching practices is contingent upon the technological tools and the users' skills (Trist & Bamforth, 1951). Coaches with inadequate computer skills might struggle with data analysis, video review, and other digital aspects of coaching, impacting their ability to employ advanced training methodologies effectively.

In summary, while a majority of athletes possess smartphone skills, there is a significant gap in computer proficiency. This gap reflects broader issues in digital literacy and its impact on training outcomes. For coaches, proficiency in both smartphones and computers is vital for the successful integration of e-communication tools into coaching practices. Addressing these skill gaps through targeted training and improved technological infrastructure is essential for optimizing the use of digital tools in sports training environments. The observed discrepancies in technological skills between smartphones and computers among athletes and potentially among coaches have several implications:

Training Needs: There is a clear need for targeted training programs to enhance both athletes' and coaches' computer skills. This would address the current gaps and ensure that both parties can fully utilize available digital tools.

Technology Adoption: The lower proficiency in computer skills among athletes and possibly coaches suggest that the adoption of e-communication tools might be limited. Addressing these gaps through training and support could facilitate better integration of technology into training programs.

Resource Allocation: For effective implementation of digital communication strategies, there may need to be investment in resources that support skill development. This includes workshops, tutorials, and hands-on training sessions. Similarly, to determine the basketball coaches' skills to handle technological equipment, they were asked whether they had skills for operating a smartphone and a computer. The results were as shown in Table 2.

Table 2: Coaches' Responses on Skills to Use Smartphone and Computer

Equipment		Yes	To some extent	Not at all	Total
Do you have skills for operating a smartphone?	f	22	2	0	24
	%	91.7%	8.3%	0%	100%
Do you have skills for operating a computer?	f	17	7	0	24
	%	70.8	29.2%	0%	100%

The study found that majority of basketball athletes (62.3%) and coaches (91.7%) had skills for operating a smartphone, which was more than those who reported that they could operate computers. This indicates that some level of upskilling in use of computers would be required for coaches and athletes to effectively implement e-communication and e-mentorship. This finding differs with Ongoz (2018) whose study among university students in Turkey showed that the participants ably used technologies for interaction in the e-mentoring process. This could however have been due to the fact that Turkey is a

developed country, hence steps ahead in uptake of technological advancements.

4.3 Ability of Coaches and Athletes to Engage Through E-Platforms

The study also determined the extent to which basketball athletes and coaches were capable of engaging on various e-platforms, including: WhatsApp, Zoom, Email, Google Meet, Google Classroom and Skype. Results from athletes were as summarized in Table 3.

Table 3: Basketball Athletes' Ability to Engage Using Various E-Platforms

E-platform	Yes	To some extent	Not at all	Total
a) WhatsApp	217 (69.3%)	37 (11.8%)	59 (18.8%)	313 (100%)
b) Zoom	140 (44.7%)	51 (16.3%)	122 (40.0%)	313 (100%)
c) Email	158 (50.5%)	43 (13.7%)	112 (35.8%)	313 (100%)
d) Google meet	110 (35.1%)	46 (14.7%)	157 (50.2%)	313 (100%)
e) Google classroom	91 (29.1%)	58 (18.5%)	164 (52.4%)	313 (100%)
f) Skype	89 (28.4%)	56 (17.9%)	168 (53.7%)	313 (100%)

The results showed that each platform had some level of usage among athletes. This agrees with Ongoz (2018) who also found that participants reported usage of technologies for interaction in the e-mentoring process, which included e-mails, social-media networks, phone calls, instant mobile messaging applications, Learning Management Systems,

and teleconferencing among others. It was also noted that athletes were capable of engaging on WhatsApp (69.3%) and e-mail (50.5%) more than the other e-platforms. Google Meet, Google Classroom and Skype had the least usage. The same question was posed to the coaches. Findings were as summarized in Table 4.

Table 4: Coaches' Ability to Communicate with Athletes Using Various E-Platforms

E-platform	Yes	To some extent	Not at all	Total
WhatsApp	23 (95.8%)	1 (4.2%)	0 (0%)	24 (100%)
Zoom	21 (87.5%)	1 (4.2%)	2 (8.3%)	24 (100%)
Email	17 (70.8%)	4 (16.7%)	3 (12.5%)	24 (100%)
Google meet	10 (41.7%)	10 (41.7%)	4 (16.7%)	24 (100%)
Google classroom	7 (29.2%)	10 (41.6%)	7 (29.2%)	24 (100%)
Skype	9 (37.5%)	1 (4.2%)	14 (58.3%)	24 (100%)

The basketball coaches reported highest communication ability on WhatsApp (95.8%), Zoom (87.5%) and E-Mail (70.8%). Majority (58.3%) had challenges with use of skype. It was thus clear that the e-platforms that both athletes and coaches were most comfortable with were WhatsApp and E-Mail. *BTC5-Adm*, a sports administrator further added voice to coaches' ability to communicate with athletes using various e-platforms:

Most coaches do communicate comfortably with athletes through telephone calls, text messaging, WhatsApp and possibly e-mail. Other e-platforms are rarely used. In fact, majority of coaches and athletes may not know how to use platforms such

as Google Classroom and Skype. (BTC5-Adm, Personal Interview, April 23, 2023).

This favorably compares to the findings of Ongoz (2018) among Turkish university students that Instant Mobile Messaging and social networking were the most commonly and effectively used technologies.

4.4. The Use of Digital Equipment by Athletes

The study also examined the frequency of use of digital equipment by the basketball athletes. The findings were as summarized in Table. 5.

Table 5: Frequency of Use of Digital Equipment by Basketball Athletes

Frequency of Use		Very Often	Often	Rarely	Never	Total
Phone	f	142	75	57	39	313
	%	45.4%	24.0%	18.2%	12.5%	100%
Laptop computer	f	89	77	64	72	313
	%	28.4%	24.6%	20.4%	23.0%	100%
Desktop computer	f	63	49	94	107	313
	%	20.1%	15.7%	30.0%	34.2%	100%

The study found that phones were the gadgets used very often (45.4%) by basketball athletes, more than laptops (28.4%) and desktop computers (20.1%). This agrees with Janssen et al (2017) who found that smartphones and running-related smartphone applications were most preferred by younger athletes. Kaufman (2017) also argued that high frequency of phone use is due to their ease of availability, with most youths owning personal mobile phones in today's world. E-communication thus makes

users "always available", a situation that can be leveraged to provide mentorship (Fletcher, 2018).

4.5 Mentorship Contact Between Athletes and Coaches

The study also looked into the frequency of weekly mentorship contact between basketball athletes and coaches. The findings were as summarized in Table 6.

Table 6: Weekly Mentorship Contact Between Athletes and Coaches

Weekly contact		Very Often	Often	Rarely	Never	Total
Face-to-Face	f	121	100	63	29	313
	%	38.7%	31.9%	20.1%	9.3%	100%
Online	f	44	62	90	117	313
	%	14.0%	19.8%	28.8%	37.4%	100%

The findings reveals that face-to-face mentorship is the most prevalent form of contact, with 38.7% of athletes reporting very frequent face-to-face interactions with their coaches, and an additional 31.9% indicating that such interactions occur often. This suggests that traditional, in-person mentoring remains a cornerstone of the coaching relationship in basketball, where physical presence and direct communication are likely valued for their immediacy and the ability to provide hands-on guidance, feedback, and motivation. The relatively high frequency of face-to-face contact underscores the importance of personal interaction in developing trust, understanding, and rapport between athletes and coaches.

In contrast, the data on online mentorship reveals a markedly different trend. A significant portion of athletes (37.4%) reported that they never had online contact with their coaches, and only 14% had very frequent online interactions. This disparity indicates that online mentorship is not as widely utilized or perhaps not as effective or prioritized in the current coaching structure. The lower engagement in online mentorship could be attributed to several factors, such as a lack of access to digital resources, preference for in-person interactions, or a potential lack of familiarity or comfort with online communication tools among coaches and athletes.

The reliance on face-to-face interactions may reflect the traditional nature of sports coaching, where the physical aspect of training and direct observation of athletes are critical. However, the relatively low levels of online mentorship suggest an area for potential growth, especially in contexts where face-to-face meetings might be less feasible due to geographical, logistical, or health-related challenges (such as during the COVID-19 pandemic).

Increasing the frequency and quality of online mentorship could offer greater flexibility, allowing for continuous support and guidance even when in-person meetings are not possible. The findings highlight the need for a balanced mentorship approach that leverages both face-to-face and

online interactions. While face-to-face contact remains crucial, integrating more online mentorship opportunities could enhance the accessibility and adaptability of coaching support. Coaches might benefit from training on digital communication tools and strategies to effectively mentor athletes remotely. Additionally, fostering a culture that values both forms of interaction could help bridge the gap between the traditional and modern approaches to mentorship in sports.

The findings that face-to-face mentorship is the most prevalent form of contact among athletes, with 38.7% reporting very frequent interactions and 31.9% indicating frequent interactions, align with existing literature on the importance of in-person communication in sports coaching. Studies have shown that direct, physical interaction between coaches and athletes is crucial for building trust, providing immediate feedback, and fostering motivation (Jowett & Cockerill, 2003). The immediacy and personalized nature of face-to-face mentorship enable coaches to effectively address the unique needs of each athlete, thereby enhancing performance and team cohesion (Côté & Gilbert, 2009).

Conversely, the relatively low engagement in online mentorship, with 37.4% of athletes reporting no online contact and only 14% indicating very frequent online interactions, is consistent with research that highlights the challenges of adopting digital communication tools in traditional sports environments. Factors such as limited access to technology, a preference for in-person interactions, and the need for hands-on guidance in physical training sessions contribute to the underutilization of online mentorship (Reade, Rodgers, & Hall, 2008). However, the COVID-19 pandemic has demonstrated the potential benefits of online mentorship, especially when in-person interactions are not feasible. Studies conducted during the pandemic found that online coaching, while less personal, offered a flexible and continuous support system that could complement face-to-face interactions (Trottier & Robitaille, 2014). This suggests that while face-to-face

mentorship remains critical, integrating online mentorship could enhance the adaptability and resilience of coaching strategies, especially in situations where traditional methods are constrained.

Overall, the findings underscore the importance of a balanced mentorship approach that combines the strengths of both face-to-face and online interactions, recognizing the evolving needs of athletes in a digitally connected world. Developing coaches' digital literacy and fostering a

culture that values both forms of communication can help bridge the gap between traditional and modern mentorship practices in sports (Gilbert, Côté, & Mallett, 2006).

4.6 Acceptance of E-Mentorship

Participants were required to indicate the extent to which they agreed or disagreed with statements concerning ease of use, comparative advantage and acceptability of e-mentorship. The results were as summarized in Table 7.

Table 7: Athletes' Responses on Aspects of Acceptance of E-Mentorship

Statement	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
It is easy connecting and being mentored online.	44 14.1%	46 14.7%	90 28.8%	93 29.7%	40 12.8%
Through online platforms, coaches can be reached anytime.	36 11.5%	48 15.3%	70 22.4%	100 31.9%	59 18.8%
Online mentorship is less costly than face-to-face.	31 9.9%	53 16.9%	59 18.8%	93 29.7%	77 24.6%
Online mentorship is acceptable to most coaches.	32 10.2%	65 20.8%	88 28.1%	77 24.6%	51 15.3%
Online mentorship is acceptable to most athletes.	38 12.1%	52 16.6%	91 29.1%	80 25.6%	42 13.4%
I am comfortable being mentored online by my coach	32 10.2%	35 11.2%	65 20.8%	106 33.9%	75 24.0%

Table 7 shows that that majority (29.7%) *agreed* that it was easy connecting with the coach and being mentored online. Majority (31.9%) agreed that through online platforms, coaches could be reached anytime. Majority (33.9%) also agreed that they were comfortable being mentored online by their coach. This result showed a fairly positive perception on readiness for uptake of e-mentorship in basketball training centres. Generally, the overall attitude of trainees towards adoption of online training or mentorship has a significant effect their readiness to adopt the approach (Herguner et al, 2021). This differs with Thabela-Chimboza et al (2019) who found that learners were reluctant to participate in an e-mentoring relationship

for a long period. Rahmi et al (2019) who conducted an empirical investigation on the potential factors that influenced students' behavioral intentions to accept use of e-learning system found that six perceptions of innovation characteristics impacted on participants' behavioral intention to adopt e-learning system, which included: relative advantage, observability, trialability, perceived compatibility, complexity, and perceived enjoyment and ease of use. Coaches were on the other hand asked to rate various aspects of the readiness for uptake of e-mentorship in their basketball training centre on a scale of 1 to 5, ranging from very low to very high. Responses were as summarized in Table 8.

Table 8: Coaches' Responses on Readiness for Uptake of E-Mentorship

Readiness for uptake of e-mentorship	Very low (1)	Low (2)	Moderate (3)	High (4)	Very high (5)
Availability of technological equipment for e-mentorship.	1 4.2%	3 12.5%	9 37.5%	6 25.0%	5 20.8%
Capacity of athletes and coaches to engage on e-platforms.	0 0.0%	2 8.3%	5 20.8%	10 41.7%	7 29.2%
Acceptance and use of e-mentorship in basketball talent development	1 4.2%	3 12.5%	11 45.8%	8 33.3%	1 4.2%

Majority rated readiness in terms of availability of technological equipment for e-mentorship as moderate (37.5%), capacity of athletes and coaches to engage on e-platforms as high (41.7%) and acceptance and use of e-mentorship in basketball talent development as moderate (45.8%). Overall, majority felt that they were moderately prepared for uptake of e-mentorship. In South Africa, Coopasami et al (2017) examined e-Learning readiness amongst nursing students at the Durban University of Technology, and found that while students' psychological readiness for e-Learning was high, they lacked technological and equipment readiness.

In Nigeria, (2020) who examined the opinions of university academic staff on e-learning readiness of universities found that lecturers considered e-learning as an add-on, as they expressed inability to integrate e-learning into their present task and did not even have the time to do so. Further, the lecturers were undecided on whether the students actually knew what e-learning was, and whether they had sufficient IT and web skills required to drive e-learning. These varied statuses of readiness resonate well with Ate *et al.* (2021), who maintained that there was low readiness for uptake of e-programmes in developing countries. The study further investigated the challenges faced in e-communication.

Table 9: Challenges Faced in E-Communication

Challenge	Athletes (%)	Coaches (%)
Limited Access to Technology	40	35
Lack of Digital Literacy	35	30
Connectivity Issues	50	45
Insufficient Training	30	25

From table 9 above, connectivity issues emerge as the most significant challenge for both athletes (50%) and coaches (45%). This suggests that stable internet access is a critical barrier to the effective use of e-communication platforms. The high percentages for both groups imply that poor connectivity can severely disrupt communication, leading to inconsistent mentorship and training sessions. This challenge is particularly relevant in regions with underdeveloped digital infrastructure, where reliable internet access is not universally available.

Limited access to technology is another major challenge, affecting 40% of athletes and 35% of coaches. This issue reflects disparities in the availability of necessary digital devices, such as smartphones, computers, or tablets, as well as the financial constraints that might prevent both athletes and coaches from acquiring or maintaining up-to-date technology. The slightly higher percentage for athletes may indicate that young athletes, particularly those from disadvantaged backgrounds, are more affected by this challenge compared to coaches, who might have greater access to resources.

The finding that limited access to technology is a significant challenge for 40% of athletes and 35% of coaches is consistent with research highlighting the digital divide in sports, particularly among youth and in disadvantaged communities. Studies have shown that disparities in access to digital devices such as smartphones, computers, and tablets are prevalent, especially among young athletes from lower socioeconomic backgrounds. These disparities often result in reduced opportunities to

engage with digital resources that are increasingly important for training, communication, and performance analysis (Hargittai, 2002).

The slightly higher percentage of athletes facing this challenge compared to coaches suggests that younger athletes, particularly those from disadvantaged backgrounds, are more impacted by these barriers. This is corroborated by research indicating that young people from low-income families are less likely to own personal devices and may rely on shared or outdated technology, which limits their ability to participate fully in digitally-enhanced training environments (Rideout & Katz, 2016). In contrast, coaches, who may have more established careers and access to institutional resources, might experience fewer barriers in acquiring or maintaining up-to-date technology.

This technological gap can hinder the effectiveness of digital coaching tools and online mentorship programs, as athletes without reliable access to technology are unable to fully benefit from these innovations. The issue is particularly pronounced in regions or communities where economic constraints further exacerbate the digital divide, making it difficult for athletes to keep pace with peers who have greater access to modern tools (Van Deursen & Van Dijk, 2014).

Addressing this gap requires targeted interventions, such as providing affordable access to digital devices and internet connectivity for athletes from disadvantaged backgrounds. Moreover, educational initiatives aimed at improving digital literacy and resource management can help bridge the gap, ensuring that both athletes and coaches can fully

leverage technology to enhance training and performance (Selwyn, 2004).

The lack of digital literacy is reported by 35% of athletes and 30% of coaches. This challenge highlights the need for both groups to acquire the necessary skills to navigate digital platforms effectively. While the difference between the two groups is marginal, it is clear that a significant portion of both athletes and coaches struggles with understanding or utilizing e-communication tools, which can lead to frustration and inefficiencies in the mentorship process. The fact that both athletes and coaches experience challenges in this area, albeit with a marginal difference, suggests a widespread need for skill development. This is consistent with studies showing that even in technologically advanced societies, gaps in digital literacy persist, particularly among those who may not have had extensive exposure to digital tools (Helsper & Eynon, 2010). For athletes, especially those from younger generations who are often assumed to be "digital natives," the challenge may arise from the specific nature of the digital platforms used in sports, which may differ from everyday social media use (Bennett, Maton, & Kervin, 2008).

For coaches, the struggle with digital literacy can stem from a lack of formal training in digital tools specific to sports management and communication. This gap can lead to frustration and inefficiencies, as coaches may find it difficult to integrate e-communication tools into their mentoring processes effectively (Van Dijk & Hacker, 2003). The need for targeted training programs that address these specific digital literacy needs is evident. Such programs could help both athletes and coaches develop the skills necessary to use digital platforms more effectively, thereby improving the overall mentorship process and reducing the barriers to communication and engagement (Selwyn, 2004).

The relatively close percentage between athletes and coaches suggests that the issue is not confined to one group and that any intervention must be comprehensive, addressing the needs of both athletes and coaches. This also underscores the importance of creating supportive learning environments that encourage continuous skill development in digital literacy, ensuring that all participants in the mentorship process can engage fully and effectively with the digital tools at their disposal.

Insufficient training in the use of digital communication tools is identified as a challenge by 30% of athletes and 25% of coaches. This points to a gap in the provision of formal instruction or guidance on how to effectively use e-communication for coaching purposes. The slightly lower percentage among coaches may suggest that they either have more opportunities for training or are more accustomed to self-directed learning in this area. Nonetheless, the data indicates that both groups would

benefit from targeted training programs to enhance their e-communication skills.

The challenges identified in table 9 align with broader trends in digital adoption within the sports sector, particularly in contexts where digital infrastructure and literacy levels may be lower. Studies on e-learning and remote communication frequently cite connectivity issues, access to technology, and digital literacy as significant barriers to effective digital engagement. For instance, in regions with limited internet penetration, similar challenges are reported across various sectors, not just in sports, emphasizing the need for systemic improvements in digital infrastructure and education.

The findings suggest that addressing these challenges is crucial for enhancing the effectiveness of e-communication between athletes and coaches. Solutions might include initiatives to improve internet connectivity, programs to provide affordable access to technology, and comprehensive digital literacy training for both athletes and coaches. Additionally, investing in ongoing training for coaches to effectively integrate e-communication tools into their mentorship practices could help bridge the current gaps.

5. Conclusion and Recommendations

5.1 Conclusion

In conclusion, the paper reveals a complex landscape of digital capabilities among athletes and coaches. While a significant portion of athletes demonstrates proficiency with smartphones and other digital tools, a notable gap in digital literacy remains, particularly among those from disadvantaged backgrounds. Similarly, coaches exhibit varying levels of competence in using e-communication tools, highlighting the need for targeted digital literacy training for both groups.

The reliance on traditional face-to-face mentorship continues to dominate the coaching landscape, underscoring the importance of direct, personal interactions in building trust, offering immediate feedback, and fostering strong coach-athlete relationships. However, the relatively low engagement in online mentorship suggests untapped potential for enhancing flexibility and continuity in coaching, especially in situations where in-person meetings are impractical. The findings indicate that while digital tools are becoming an integral part of the sports environment, there is a critical need to bridge the digital divide through increased access to technology, improved digital literacy, and the integration of e-communication into traditional mentorship practices.

To fully realize the benefits of e-communication in talent development, it is essential to foster a balanced approach

that values both in-person and online interactions. By equipping both athletes and coaches with the necessary digital skills and resources, Nairobi's basketball training hubs can better support the development of talent, ensuring that athletes are prepared to meet the demands of modern sports environments. This approach not only enhances the effectiveness of mentorship but also promotes inclusivity and adaptability in the rapidly evolving digital age.

5.2 Recommendations

1. Digital Literacy Training Programs:

For Athletes: Develop and implement training programs focused on enhancing digital literacy among athletes, particularly those from disadvantaged backgrounds. These programs should cover the basics of using smartphones, tablets, and other digital devices, as well as navigating e-communication tools such as video conferencing, online training platforms, and social media for personal branding.

For Coaches: Provide targeted digital literacy training for coaches to improve their competence in using e-communication tools. This should include training on how to effectively conduct online mentorship, utilize digital tools for performance tracking, and engage with athletes remotely.

2. Access to Technology:

Resource Allocation: Collaborate with sponsors, government agencies, and non-profit organizations to provide necessary digital devices (e.g., smartphones, tablets, computers) to athletes and coaches, particularly those from economically disadvantaged backgrounds.

Community Hubs: Establish digital hubs within training centers where athletes and coaches can access high-quality internet and digital devices. These hubs can serve as learning centers for digital skills development and online mentorship.

3. Integration of E-Communication in Coaching Practices:

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Blended Mentorship Model: Encourage coaches to adopt a blended approach to mentorship that combines face-to-face interactions with online communication. This model allows for continuous support and flexibility, especially in situations where physical meetings are not feasible.

Training on Digital Mentorship Tools: Provide training for coaches on using digital platforms such as video conferencing tools, messaging apps, and digital performance tracking systems. Coaches should be equipped with strategies for maintaining engagement and rapport with athletes in virtual environments.

4. Promotion of Inclusive Digital Culture:

Awareness Campaigns: Launch campaigns to raise awareness about the benefits of integrating e-communication into coaching practices. These campaigns should target both athletes and coaches, emphasizing the importance of digital skills for career development and coaching effectiveness.

Policy Development: Advocate for policies that support the integration of digital tools in sports training. This could include guidelines for digital communication in sports, standards for online mentorship, and support for digital infrastructure development in training hubs.

5. Continuous Evaluation and Improvement:

Feedback Mechanisms: Establish regular feedback mechanisms to assess the effectiveness of digital literacy programs and the integration of e-communication in coaching practices. Surveys, interviews, and focus groups can be used to gather insights from athletes and coaches.

Adaptive Learning: Based on feedback, continuously update and improve digital literacy training and mentorship programs to address emerging challenges and technological advancements. This adaptive approach ensures that both athletes and coaches remain current with digital trends and tools.

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