

**Why do Scientists and Coaches need to Work  
Together?**

Sports science aims at improving athletic performance through scientific methods, and sports scientists have the duty to discover the most impactful knowledge gaps and oversee the implementation of unique training programs. Issues such as injury prevention and recovery, nutrition, mental training, individual skill development, strength, endurance, strategy and tactics, and training programs are of interest to sports coaches. Research conducted by Kubayi, Yoga, and Abel observed that coaches, instead of obtaining such information of interest from scientists, prefer interacting with other coaches, experimenting with new ideas, consulting mentors, attending workshops and conferences, and watching sport coaching videos for knowledge gaining (p. 51). The apathy displayed by coaches in interacting with scientists stems partly from difficulties experienced in transferring new research findings into coaching practice. Despite the non-connectedness between coaches and scientists, researches have shown that the fundamental needs of coaches can only be best satisfied with the involvement of scientists.

### **To Enable the Use of Real-Time Training Data in Improving Performance**

According to Roberts (n.p), coaches believe that collecting data is helpful in tracking the performance of an athlete over time and that using this information can potentially modify an athlete's training needs. Furthermore, the research found out that coaches believed that a daily assessment of mental status, recovery, and fatigue, as well as nutrition behavior and sleep, was necessary for understanding an athlete on and off the field. Moreover, the coaches that took part in the research noted that the aforementioned measures are fundamental for understanding biomechanical analyses of athletes. Moreover, the coaches beheld that collecting data would be necessary for boosting their confidence in training methods. Roberts (n.p) further observed that coaches had the greatest concerns over time-related requirements and strategies as well as effectiveness in collecting data. With these needs and genuine concerns of coaches, it follows

that the incorporation of scientists and researchers in coaching activities can yield the desired coaching outcomes. Since scientists are experts at gathering, analyzing, and interpreting data, coaches should work together with scientists to enable them to concentrate on coaching as the scientists make available and interpret the desired data from athletes. Collaborations between coaches and scientists enable the synthesis of day-to-day coaching and athletic performance data into evidence-based information that can be published and disseminated for implementation by other coaches.

### **To Eliminate Coaching Bias**

Additionally, coaches and scientists need to work together to avoid bias and errors in training that could result in wrong coaching decisions and diminished athletic performance. According to Zavertiaeva, Naidenova, and Parshakov (p. 863), human beings are prone to error and bias in several ways. For instance, in the process of coaching, coaches pick and look for evidence that match and support their beliefs and hopes in line with the confirmation bias concept (Giamellaro and Siegel, p. 25). In so doing, coaches may be inclined towards collecting subjective data from athletes who enjoy the training offered and perform well. In the event that a team wins, coaches attribute the wins to their programming and coaching, a phenomenon known as self-serving bias (Gillham and Van Mullem, p. 412). When designing the next phase of training, coaches may be influenced by the latest posts on blogs and social media as well as whatever seems to be trendy, falling into the trap of availability bias. Furthermore, coaches may suffer representativeness heuristic bias when looking at injury data and test results based on probability and sample size. Achieving the best coaching outcomes and improving athlete performance require coaching decisions that are not biased and subjective. Incorporation of

science into coaching ensures that evidence-based actions are taken in every situation by coaches despite their biases.

### **To Bridge Interdisciplinary Knowledge Gap**

Coaching entails great responsibilities that may not be effectively achieved without interdisciplinary engagement of knowledge from other fields. They have the responsibility to get on with athletes, help athletes learn, understand the various skills of a sport, mentor the skills of athletes, and assist athletes to achieve their personal goals. Whereas most coaches have basic theoretical and practical knowledge concerning exercise psychology, sports pedagogy, biomechanics, sports sociology, and exercise physiology, the knowledge in the individual field is not sufficient to enable arrival at the best coaching decision for every situation. Scientists and researchers bridge the gap in knowledge by offering up-to-date and specific exercise-focused evidence-based information. Coaches can focus on coaching, as scientists study their coaching practice against athlete outcomes and offer improvements.

When coaches and scientists work together, it becomes possible to combine objective scientific measures with subjective measures in making training adjustments and improving athletic performance. Such adjustments could include reducing the intensity or volume of a session, for instance, based on athlete's subjective rating of fatigue combined with measures of external performance such as 10 meters acceleration time. Incorporating science into coaching ensures that coaches are not only objective with their coaching decisions but also have sufficient time to concentrate on their coaching activities as scientists and researchers gather and analyze the necessary data for improvement of their outcomes. With scientists in the scene, coaches can gain more insights from the different disciplines that affect athletic performance. Coaches also

get to work around their personal biases that could lead to erroneous coaching outcomes by applying evidence-based and objective practices founded on scientific research.

**Works Cited**

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