

Analysing Coach Behaviour

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Introduction

The vast majority of modern sport science and sport technology has been focused on athletic performance. Scientists seek to measure what an athlete can produce functionally over time in competition through competition analysis, e.g. race splits; technically through the application of field-based biomechanics, e.g. inertial sensors; and, then to explain such changes through the underlying physiology, e.g. endocrine, immune and metabolic markers.

In the past decade there has been a growing emphasis on what is the probably the biggest technical intervention on the athlete... the coach. By turning the camera around 180 degrees to focus on the psycho-physiological factors on how a coach can impact on athlete's performance, a stream of investigation and opportunity has arisen to enhance how the scientific community supports the coaching process.

Much like the challenges with measuring and understanding athletic performance in the field over a long duration, it is impossible to truly study and understand such a relationship in lab based conditions. There are a number of possible directions for study of a partnership that exists beyond setting training programmes. The ultimate aim is to understand how effective a coach is at getting the best out of the athlete in training and competition.

Emerging technology

In recent times a number of technologies have emerged (and older ones that have been applied) that can help better understand the demands of modern coaching and help a coach better understand his/her effectiveness and impact on an athlete's development.

The process for doing this is no different to studying an athlete in their sport:

1. Defining what successful coaching performance looks like.
2. Understand and describe the demands of the coaching process (the event) in the specific environment with specific athlete/s, e.g. distribution of time on day to day coaching demands such meetings, instructing, planning, programming.
3. Focusing down on critical components of the performance with more targeted understanding and analysis, e.g. understanding how a coach handles stress during competition.

To truly understand the demands of modern coaching it is crucial to capture all aspects of the coaching process and interactions with athlete, support personnel, parents and colleagues including actions, language, observations and thought process.

In recent years there has been a growth in a concept called life logging – the use of miniature computers to capture as many aspects of your life as possible on a continuous basis. Examples of these include ‘Get Narrative’ <http://getnarrative.com/>, Vicon Revue <http://viconrevue.com/product.html> and Lifelapse (app via your iphone) <http://www.lifelapse.com/> (see Figure 1). These approaches provide a novel and practical solution to objectively capturing the coaching process.

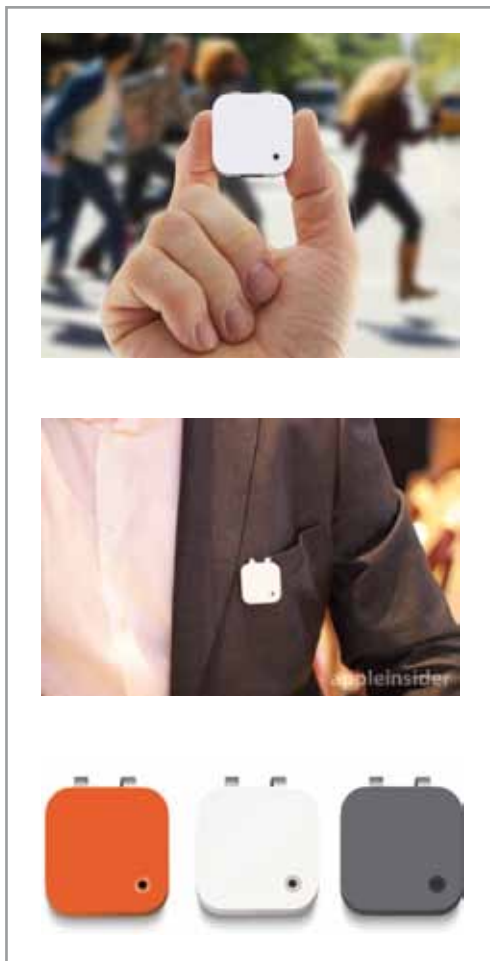


Figure 1: Get Narrative - a life logging camera that stores your life history by being clipped on your body.

The development of these technologies provides a minimally invasive and simple method of capturing the life of the coach and using such data to quantify what you do in the role described by time motion analysis, e.g. % time in meetings, % time instructing, % time planning etc; how you go about their role, e.g. approach taken with different individuals to deliver the same message; and, through further analysis a better understanding of how effective you are in these engagements through the interactions and communication methods used with athlete and peers.

The use of these concepts has been adopted in other industries, e.g. lone workers – see Edesix Video Badge (www.edesix.com) for other purposes. The Edesix video badge is a body worn video system based on an ID holder that can record up to 8 hours of quality video and audio.

Summary

In recent years there has been a renewed emphasis on studying the impact of the coach and the psycho-physiological links to athlete performance. The emerging growth of life logging technologies is providing a novel and practical method to better describe and understand this process. In partnership with the right support around the coach it has potential to provide an objective process to enable a coach to advance their impact on their athlete/s.

Please note: the author has no involvement with any of the commercial companies or products mentioned in this report.

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