

Our experience of using Biofeedback in sport

Univ. Prof. Dr. Günter Amesberger - Testimonial

(Head of the Sport Pedagogy and Sport Psychology Division at the IFFB
Department of Sports Science and Kinesiology)

At the IFFB for Sports Science and Kinesiology biofeedback readings are used in combination with questionnaires and performance tests within the context of sport psychological assessment and advice. The tests we use include a stress test that provokes stress-induced responses at different levels (emotional, cognitive, motor). Since assessment takes place at regular intervals we acquire valuable information about the effect of the interventions that are implemented in the intervals between test sessions.

We also use biofeedback to help the visualisation of movement and sometimes directly during the practice of sport. The Schuhfried biofeedback system is particularly suited to this purpose, being easily attached to the body on account of its small size and light weight. During the practice of sport this gives us direct information about physical changes taking place in the player or athlete. Initially we analyse how the player or athlete reacts at a physiological level to being placed under pressure in the sporting situation. In the next phase critical situations are deliberately created during training, requiring the player or athlete to make use of mental techniques that he or she has learned. Biofeedback, in combination with observation and questioning, provides an indication of how well those techniques are succeeding.

Another area of application is in research. We study the effect of the use of different biofeedback protocols on performance in attention, reaction and perception tests and the way in which these protocols interact with self-assessments. We are also interested in the ways in which physiological parameters change during the course of mental training.

Overall biofeedback is an important tool in sport psychological advice and research. One final point is that through the provision of direct feedback it also motivates sportsmen and -women to carry out mental training.