

Coach and Biomechanics: Jurgen Grobler

Jurgen Grobler is one of the most successful coaches not only in the rowing World, but also in all Olympic sports. His crews won gold medals in all eight Olympics from 1976 to 2008, a total of 9 Olympic gold and 2 bronze medals, and his athletes also contributed to 7 other Olympic titles.

Jurgen was born soon after the World War II in a small town Burg near Magdeburg, East Germany into the family of a successful architect. In childhood, he enjoyed a variety of school sports: handball and other ball games, swimming and water-polo, fishing, etc. He discovered rowing at the age of 16 and tried nearly all boat types from singles to eights, winning titles in the National student championships. Jurgen also liked photography, which he did as “a pioneer” after-school activity. This hobby and his dreams to travel around the world inspired him to become a TV cameraman. However, only 3-4 interns for this profession were required in the DDR, which was not a very big country. Therefore, Jurgen decided to become a coach and in 1965 entered the sport education faculty of Leipzig University. At Uni, he studied all sport sciences: Physiology, Biomechanics, Psychology, Biochemistry, training theory and also communist philosophy; the last was not really interesting for a rowing coach. The topic of his master’s thesis was Biomechanics of Canoeing. Force transducers were attached to a canoeing paddle and kilometers of oscillographic paper were consumed recording the signals. During his last year in Uni, Jurgen had to practice as a coach at the Dresden rowing center. His mentor was Dr. Hans Eckstein, who coached the Olympic champions in M4- at Mexico-68 and Munich-72. Another mentor was the head of the National team Prof. Korner. They both gave Jurgen a lot of insight and knowledge in rowing.

After graduation from Uni in 1970, Jurgen became a sculling coach at the Magdeburg high performance centre. He was very innovative, trying various “crazy” things. In spring 1972, at the Moscow regatta his double lost only to the USSR crew, who became Olympic champions a few months later. Then a sculler (Gueldenpfenning) from his double won the National championship and qualified for the Munich Olympics, where he won the bronze medal. That was a real success for a 26 year-old coach. He repeated this result the next year at the European Championships. After this, Jurgen became a recognised coach for the National Team and achieved fantastic success at the Olympics-76 in Montreal. Two of his crews won gold medals, in the M2+ (Jaehrling/Ulrich) and M4x (Gueldenpfennig/Reiche/Bussert/Wolfgramm) events.

At that time, Sport Science was rapidly developing in the DDR and evolved into a centralized system, which could be accessed by all the regional centers such as Leipzig, Dresden, Magdeburg and Rostock. Such well known scientists as Profs. Korner, Burmann, and Schwanits worked with rowing at Humboldt Uni in Berlin. National frameworks were developed centrally in various areas of science and had to be followed by all coaches in the country. Biomechanical testing was provided regularly 2-4 times a year by FES in Berlin, which had a big team of scientists and technicians. They developed various sorts of transducers and used special dedicated boats. They

used a solid frame connecting the stretcher with the swivel (similar to the sliding rigger, of later years), and they were able to measure the propulsive force of each rower. First, the information was recorded on a magnetic tape, and then radio data communication was used. In Moscow-1980, Jurgen’s coxed pair repeated their Olympic success. The next Games in Los Angeles were missed owing to the political boycott. At the Seoul-88 Olympics, Jurgen switched to females with his usual success, the double Peter/Schroeter winning the gold.

After the fall of the Berlin Wall in 1989 and the unification of Germany, the East German sport system collapsed and was acquired by its “big brother”. In 1990 Jurgen took on a new challenge and accepted an invitation from the Leander Club and went to the UK. Rapidly, he became the National coach and worked with the Redgrave/Pinsent pair, who won the gold medal at the Barcelona-92 and Atlanta-96 Olympics. In 2000, the two famous rowers moved into a four and at the Sydney Olympics Jurgen helped Steve Redgrave to win his fifth gold medal. His coxless fours also won at the last two Olympics. At Athens, Matt Pinsent won his fourth gold medal, and in Beijing a new crew James/Williams/Reed/Hodge won with a fantastic finishing spurt.

Grobler believes that a combination of scientific and practical approaches is the key to his phenomenal success. He says, “A coach has to have a feeling of what he is doing. First of all, the coach needs to motivate athletes to do unusual things.” He always tries to bring Biomechanics and Physiology together as well as training and racing rowing technique. Jurgen reckons that leg work is the key component of an effective drive. The next one is the trunk, and acceleration of the rower’s mass is the main target of the drive. Some of Jurgen’s coaching expressions are: “Treat the stretcher as fragile eggs during recovery, then smash them very late at catch”; “Let hands go before catch, then pickup a flying wheel with the handle”. He says that the catch should not be soft. The faster the boat, the more front-loaded the force curve should be. The rower’s mass should always move relative to the boat. The finish of the drive must be dynamic; the rower should use the oar bend, hold the knees down and return using the handle to save energy and avoid overloading the boat.

Jurgen pays attention to long oar angles, but says that they must be optimal for an individual rower’s physique. We saw a very wide grip by his Olympic coxless four in Beijing. Jurgen’s comment was: “The optimal grip in sweep rowing is with two hands’ width between, but my rowers found a wider grip more comfortable and I didn’t argue. The inside arm controls the handle and the outside arm pulls it. In fact, their outside arm is strong enough to hang on handle and inside arm was bent at catch to keep the body straighter. It is more important to keep legs straight without wobbling and connect both feet to the stretcher. I wouldn’t say we had an ideal grip, but it worked quite well for us”.

This example is good illustration of Grobler’s approach: **“There are some rules to follow, but a coach must be creative to find new ways. It is very important not only teach athletes, but also learn from them.”** His successes looks supernatural, but everybody who worked with Jurgen saw that it was just a combination of scientific and practical methods, a lot of hard work and a bit of luck.

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