

# The 16<sup>th</sup> North America, Central America, and Caribbean Track and Field Coaches Association Congress

Carolina, Puerto Rico

## Introduction

One hundred-twenty coaches representing 17 countries, including Spain and Japan, took part in the 16th North America, Central America, and Caribbean Track and Field Coaches Association Congress in Carolina, Puerto Rico from the 12th to 15th October 2006. In terms of general programme, quality of presentations, attendance, hotel and local support, this was arguably the finest NACACTFCA Congress to date.

The theme for the congress was Technical Skill Development and the keynote speaker was Günter Tidow (GER). His presentation set the stage for discussion of the basic issue of a technical model and style variations in various events by the other main speakers Ramona Pagel (USA), Ricardo Guardarrama (CUB), David Butler (USA), Tom Tellez (USA) and Wynn Gmitroski (CAN).

## Keynote speech

**Skill acquisition and technique training in athletics: A model oriented approach**  
Günter Tidow (GER)

Professor Tidow, who several years ago developed the idea of "set values" for model techniques in the technical disciplines of athletics and corresponding analysis sheets, discussed the development of his systematic

approach. He explained that the analysis sheets for the sprints, hurdles, jumps and throws were designed to allow coaches and athletes to use visual and video assessment to develop technique and style in a practical setting. He used several examples of specific technical skills such as variations in the penultimate step in the long jump, the plant position in the pole vault, and the takeoff stride in the hurdles to demonstrate style variants within a technical model. Tidow also presented evidence from his study of the visual analysis skills of sport science students in which he found that students often need special training in order to visually observe and evaluate technique effectively. He explained that a coach's success in assessing the "set values" in his system and teaching technique depends on this capability and he gave recommendations for helping coaches develop skill in this area.

## Main presentations

**Concepts in throwing**  
Ramona Pagel (USA)

Pagel, a four-time Olympian and American record holder in the shot put, discussed the basic principles of throwing including the concepts that forces are applied from the ground up, that a long range of motion from slow to fast creates acceleration to a maximal release velocity, and that the hips are the link that chains lower and upper body power. She

then focused on specific applications to the individual disciplines of the javelin, shot put and discus. In the javelin, she said the training emphasis is on running efficiency and transfer of velocity into smooth crossover and plant at a speed that can be controlled for delivery of the implement. Core work and motions that enhance dynamic hip, shoulder, and trunk strength are used to develop specific strength. In the shot, she noted the importance of the left side block for right-handed putters, which converts the horizontal forces to vertical forces. The "left off" drill exaggerates the driving of the hip from the right side, making a left side block even more effective. In the discus, Pagel talked about the transfer phase from the turn and sprint to the power position, noting that athletes with stronger core development will better handle and profit from the long range of motion and great rotational forces going into the power position and block. Pagel emphasised that the specific components allow a coach to reach an optimal end-result only "after much repetition and cognitive understanding of the events and how to apply them to a particular athlete."

**Training considerations for skill development in the jumping events**  
Ricardo Guardarrama (CUB)

Guardarrama discussed the technical training he used to develop athletes 15-18 years of age in the horizontal jumps and showed videos of his young athletes effectively demonstrating the skills described. He said his method of progression emphasises the smooth rhythmic transition from the approach run into the jump. Training focus-

es on rhythmic runs and take-off drills, bounding and the whole movement. Drills for the long jump include short approach take-offs into the pit with the initial emphasis on take-off extension progressing towards complete flight and landing movements. Drills for the triple jump include bounding on the grass to develop strength and technical patterns. He



**NACACTFCA President Victor Lopez (2nd from left) with the speakers at the 16th NACACTFCA Congress**

mentioned alternating bounds (LRLR), triple jump bounds (LLR-LLR) and modified triple jumps into the pit. Guardarrama said that he mainly develops strength through natural drills as the technique improves and added that he believes it is not necessary or advisable to begin weight training at an early stage.

**The important aspects of pole vault technique**  
David Butler (USA)

Butler, who coaches several successful male and female vaulters, discussed the fundamental importance of 1) an efficient pole carry to enhance the plant motion; 2) an early, high plant with both arms; 3) preserving proper swing mechanics. The front elbow should be tucked down with the wrist and V of the hand up under the pole instead of the elbow out to the side and the wrist down. This allows for smooth transition of the pole upward into the plant. Keeping the back elbow up and closing the angle of the arm also enhances the smooth upward motion of the plant. Beginning the plant on the third to last step by moving both hands upright ensures an early, efficient, and high plant with both arms extended upward. Driving the front arm upward through the plant creates an open angle between the body and an elastic response through the shoulder complex, which enhances the swing. This allows

for a natural swing to the top of the pole, but only if the athlete - and coach - do not destroy the swing by pulling down or rowing forward with the hands! Butler used several videos of take-off and swing drills in the training of his athletes and gave examples of intra-athlete development of technical skills over time. The identical technical skills were also demonstrated by video analysis of performances of world-class vaulters to reinforce his technical model, one very much influenced by his mentor Vitali Petrov.

### The natural skill of sprinting

Tom Tellez (USA)

Tellez, the coach of Carl Lewis, Leroy Burrell and countless other world-class sprinters focused on the natural aspect of sprinting. He argued that the window of opportunity to develop proper motor patterns in the early adolescent period is actually a time when many coaches and athletes damage the natural running patterns by improper cues and understanding of running technique. According to Tellez, athletes and coaches focus too much on upward knee action and unnatural heel recovery by using drills leading to unnatural mechanics and reduced force into the ground – i.e. reduced stride length, leg recovery, and maximum velocity! If a sprinter keeps the toe dorsiflexed and fires the hip downward through the ground, recovery occurs naturally and sets up the next stride motion. Arm motion is also over-coached. Contrary to the model of keeping a 45° angle for the entire motion, 100-200m sprinters need to open the arms on the backswing to allow for complete stride extension. Arm action controls the rhythm and range of motion of the leg stride – i.e. short arm action means reduced leg extension. Tellez used videotape to demonstrate the near identical technical movements of two world-class sprinters training side by side, and analyzed the natural technique of a very young athlete (the son of Olympic Champion Joe DeLoach) to demonstrate technical points of sprinting and to show the natural ability of uncoached youth to run properly!

### Skill development and fundamentals of movement

Wynn Gmitroski (CAN)

Gmitroski stressed a holistic approach to developing postural stability and efficient movement with the aim of achieving optimal performance in the endurance events. He defined skill as “the ability to carry out a task with maximum certainty and minimum expenditure of energy and time.” Most of his remarks concerned the trainability of youth. He spoke of a skill development window between the ages of 8-12 for learning fundamental movements and went on to say that the focus in the years 12-16+ should be on “building engine and sport specific skills” and the years 16-23+ should be devoted to optimising skills. He said the critically sensitive period for skill development is often missed by coaches / programmes, leading to over-competition, damage that is not fully correctible, and general sport skills going unlearned. Gmitroski argued that creating an athlete requires special attention to the early window of skill trainability, postural development, and movement optimisation. This will prevent major problems later as dysfunctional posture and movement lead to impaired motor control, increased tension, poor technique, poor performance and injury! “Specializing early in a late-specialisation sport contributes to one sided preparation, injuries, early burnout and early retirement.”

### Additional points

In addresses to the participants, both the NACAC President Dr. Amadeo Francis and NACACTFCA President Victor Lopez highlighted the need for the national coaching associations in all countries and for good cooperation between these associations and the national athletics federations in order to stimulate coaching education programmes and the delivery of other services to coaches.

Further information on the congress and the NACACTFCA is available at [www.nacactfca.org](http://www.nacactfca.org).

Reported by Richie Mercado