

# **NORTH AMERICA, CENTRAL AMERICA AND CARIBBEAN TRACK & FIELD COACHES ASSOCIATION**

## **NACACTFCA BULLETIN Vol. 5 Number 3 - Oct. 2007**



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**Regional Calendar Information:** Go to CAC and NACAC sites for regional calendars: <http://www.athlecac.org> and <http://www.nacac.sportcentric.com/>

**Coaching Sites:** <http://exrx.net/> and [Sports Coach](http://www.brianmac.co.uk/) at <http://www.brianmac.co.uk/> are two comprehensive sites for athletics and scientific information about training.

### **2008 Barbados Relay Fair:**

Elite Sports informs you that the Barbados Relay Fair will take place on Saturday 09 February 2008 at the national stadium in Barbados. Please notify the schools in your territory of the event organized as a competition for schools and run in the age categories: Primary, Under 15, Under 17, Under 20, Tertiary & Clubs - male and female. Schools may compete in any or all categories as there will be a separate champion of each age division. Each group will compete in 4x100, 4x400 and a medley relay. Participants will be responsible for their own expenses but, on request, assistance will be given in making the necessary arrangements. Elite Sports looks forward to having representation from each territory in 2008. - June Rudder

### **IAAF Scientific Reports from Helsinki:**

Get the latest biomechanical reports for technical events. Sprints - <http://www.iaafacademy.com/helsinki%20reports/Helsinki%202005%20Final%20Report%20-%20Sprinting.pdf>

High Jump -

<http://www.iaafacademy.com/helsinki%20reports/Helsinki%202005%20Final%20Report%20-%20High%20Jump.pdf>

Javelin -

<http://www.iaafacademy.com/helsinki%20reports/Helsinki%202005%20Final%20Report%20-%20Javelin.pdf>

Pole Vault -

<http://www.iaafacademy.com/helsinki%20reports/Helsinki%202005%20Pole%20Report%20-%20Pole%20Vault.pdf>

**IAAF Academy Coaching Courses** Go to <http://iaafacademy.com/> for more details.

**Coaching Development Director** 29/10/2007 - 05/11/2007 Singapore Language: English

**Coaching Development Director** 04/11/2007 to 11/11/2007 Litoral Language: English

**Chief Coaches Course** 17/11/2007 to 30/11/2007 Cairo Language: English

**Chief Coaches Course** 09/12/2007 to 23/12/2007 Beijing Language: English

**Coaching Development Director** 16/12/2007 to 23/12/2007 Moscow Language: English

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# 17<sup>th</sup> NACACTFCA INTERNATIONAL ATHLETIC CONGRESS

October 11-14, 2007

Hotel Real Intercontinental - San Salvador, El Salvador

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SALVADOREAN OLYMPIC COMMITTEE*

## CONGRESS GUEST SPEAKERS:

Jerry Clayton - Throwing Events - USA - Senior Assistant Coach at Auburn University. One of the top throwing events coaches in the USA. In his productive career of over 25 years coach Clayton has developed a number of Olympic and world medalists.

Carlos Carvariello - Endurance Events - Brazil - The Head National Coach of Brazil and personal coach of some of the best long distance runners from Brazil. His scientific approach to the training and long term development of his athletes is unique and proven to obtain great results.

Irving "Boo" Schexnayder - Jumps - USA - One of the top jumping events coaches in the world. Personal coach of many Olympic and world medalists. Former jumping events coach at Louisiana State University.

Les Gramantik - Combined Events - Canada - Canada's Head National Coach one of the most respected combined events coaches in the world. Head Coach at the University of Calgary in Alberta, Canada.

Victor Lopez - Sprints/Hurdles - Puerto Rico – Former Head Women's Coach at Rice University for 26 years. His systems and methodology in the training of sprinters and hurdlers are used by many. The Chairman of the IAAF Coaches Commission.

*\* In this year's Congress we would be offering simultaneous presentations by event groups and practical sessions, plus event groups roundtables and time for short presentations (20 minutes) by coaches in the association – contact [rmercado@sis.org](mailto:rmercado@sis.org) if you wish to present in San Salvador\**



## **Combined Events - Les Gramantik, Head Coach Athletics Canada**

*from a presentation to be delivered at the 17<sup>th</sup> NACACTFCA Congress in San Salvador*

**Training in athletics should start with Combined Events** - There are many books and coaching manuals written about Track and Field or as I call it Athletics that provides a good source of information for coaches. Interestingly, each one of them places the chapter about Combined Events at the end of the manual (last chapter). I for one strongly believe that in coaching and teaching athletics the chapter on Combined Events needs to be first (the first chapter). The Long Term Athlete Development Model suggests that a multi directional athletic training in the early years of youth development will have a positive effect on later success in sport (all sports not just athletics).

**Combined Events are more than their parts** - So many times Combined Event are wrongly viewed as a sequence of seven or ten events. Performing seven or ten disciplines within two days creates a completely different approach to preparing for those events. The demand on performing under continuous accumulation of fatigue, which is unavoidable in spite of the breaks between events, creates a more difficult situation for the Combined Events athletes than the “specialist” has to face.

**Create a variety of Combined Events for youth athletes** - IAAF determines the technical specifications for the Heptathlon and the Decathlon. However, the correct athlete development pattern will require modifications both in distances and implement specifications for youth programs. There are many variations are suggested for different age groups. My recommendation is to use Triathlons (three events) for under 12, switch to Tetrathlons for under 14, followed by Pentathlon for under 16. After this the junior age program will come in effect (Heptathlon and Octathlon). There are a multitude of variations at your choice to design those events. It is also gives you an opportunity to create Combined Events for youth with a flavour for speed/power or stamina. Examples: Triathlon: 60m, Long Jump, Ball Throw – or – High Jump, Ball Throw, 200m

Tetrathlon: 80m, Long Jump, Shot Put, High Jump – or – 60m Hurdles, High Jump, Ball Throw, 200m

**Talent Identification** - Talent is the most important factor for athletic success. Everybody agrees that without talent not much can be achieved. There is a distorted view out there that the Combined Event athletes are the less gifted, that is a very superficial conclusion. One thing is correct that the Combined Event athletes are consistently measured against the standards set by the specialists.

**Natural movement talent** - Natural movement talent is the most sought after gift. That is when a young individual able to execute target techniques right away, or when he or she needs only a small amount of instruction to execute the skill. This ability is mostly the result of a great variety of movement opportunities in early childhood.

**Anthropometric and physiological qualities** - There are obvious qualities coaches are looking for in athletes for Combined Events. Some of these are anthropometric in nature and perhaps non perfectible, others are based on physiology and clearly perfectible. From a general point of view, since Combined Events are predominantly speed/power event, identification of speed abilities has a high priority. There has been success achieved by Decathletes with mediocre speed abilities, however, There is no chance to success in Heptathlon without superior speed qualities.

**Field testing and Monitoring for talent and athlete development** - Talent identification and monitoring of athlete development is well served by field tests. There is a variety of testing and monitoring models are available for coaches to use. It is important to develop your own system which is not only assist you in identifying the talent you are looking for but also gives you a tool to monitor their progress. If test data used from sources other than your own, for athlete evaluation, it needs to be a very careful assessment done regarding comparability. In more advanced stages of training beside field tests coaches, with help from sport science, can also administer laboratory tests.

**Coaching Philosophy** - There are a number of different ways to coach Combined Events with comparable degrees of success. Some programs consider coaching Combined Event athletes by a group of specialist coaches, while others will have one single coach in charge.

**So, who is the best suited to coach Combined Events?** Is it specialists or combined event coach?

**Characteristics of the Combined Event coach** - General consensus is that the best programs are prepared and delivered by one coach. The strength of the Combined Events coach is characterised by different qualities than the specialist coach. While the specialist coach will always work with top young talent the Combined Event coach will have to show special competence exactly where the athletes have the most difficulties, or poses the least amount of natural talent. Problems like this are completely unknown to the specialist coach.



## *Gramantik, cont.*

### **How can a specialist coach contribute to the Combined Event program?**

Asking specialist coach for advice is not always the best solution. The specialist coach tends to focus on details of the skill based on his/ her experience with accomplished top athletes which may not provide the needed help.

The best relationship between the two is based on co-operation and when the Combined Event coach no longer know what to do than he/she can seek the advice of specialist. Ultimately, the best results, in athletics, are achieved when the basic technical elements are thought correctly from the beginning. Final thought, the Combined Events programs require a single coach controlling the program regardless if it is a co-operation between many or just delivered by one coach.

**Planning and Training protocol** - Next to talent identification quality coaching is the most important component of achieving success in athletics. Coaching is a careful combination of art and science. Science provides us in coaching with solid scientific principles which should not be ignored, and the art is the on site interpretation and application of those principles.

### **Principles of planning**

**Develop short and long term plan** - There has to be a short term and a long term plan for each athlete.

Short term planning is mostly a season and long term is two to four years.

**Planning is cyclic** - Planning has to be cyclic in nature that is to create the physiological adaptation.

The principal of overcompensation requires proper combination of physiological loading, which is the actual training, followed by rest/ recovery.

**Loading and recovery patterns** - Coaches must apply proper loading and recovery patterns based on principles of energy systems. Combined events are predominantly anaerobic alactic in nature consequently, planning of training has to support that.

**Periodize to perform on demand** - Periodization (planned performance training) is a division of the training year into phases and cycles to integrate training objectives and peak at the right time. Both short and long term plans need to be periodized in order to assist the process of peaking and performing on demand. Statistically, Combined Event athletes perform the closest to their personal or seasonal best at major international competitions.

### **Planning and training protocol**

**Training protocols** - First consideration is, Combined Event athletes need to train in multiple daily training sessions.

The time required coupled with the volume of training makes multiple daily session imperative for the efficiency of the training protocol.

**Development of fitness and skill** - To create a program that bland general as well as specific fitness in combination with skill and event specific technique is the greatest challenge when it comes to development of training protocol for Combined Events.

**Development of coordination abilities** - Coordination abilities such as rhythm, balance, orientation, differentiation, reaction anticipation have a major role in development of the athlete and need to be in the fore front of training protocol for Combined Events. This can be addressed independently from specific skills, in form of gymnastics, or incorporated into specific track skills. One of the best to develop coordination skills is hurdling.

**Consider laterality for skill development** - Laterality is a concept around life long preference for one extremity.

The challenges of multiple skill development that are not always complement each other it is important for the Combined Events coach to provide an enhancement to motor learning by recognising laterality. Example is right arm left leg combination for throwing and jumping which also enhances the rotation around one longitudinal axis; this will assist in skill learning and provides the athletes with enhanced muscular contractibility.

**Strengthen natural movement talent** - The Combined Event athletes need to be assisted to use their natural movement talent as much as possible in order to simplify the training protocol.

**Develop model techniques** - The event specialist is performing the model techniques for the event they are specialise in. In Combined Events training there has to be a careful consideration as to how detailed one can follow the model developed through specialisation. The model technique for Combined Events has to be based on solid biomechanical principles, and often has to stop short of the small details for which the Combined Event athletes have no time in the training protocol.



*Gramantik, cont.*

### **Planning and Training protocol**

**Sequencing the components of training** - This is the most debated issue in Combined Event coaching and there are many different opinions are expressed in the literature. Here is one suggestion: Running workouts in micro cycle (weekly plan) should consider the following sequence: acceleration development, short speed development, speed or specific endurance development and finally strength endurance.

**Strength training** - It is an important component of athletic training, especially in speed/power events.

Careful consideration is to be given to the order of exercises and the loading factors.

Combined Event athletes are dependent on power development (rate in which peak force generated) consequently, extensive strength development should not be the primarily choice of the strength training protocol.

**Block, Focused or Linear training protocol** - Periodization requires a variety of program decisions; one of them is the use of various models of training. Block training implies the use of one single major training objective for the extent of the whole micro or meso cycle. Focused relates to one or more technical component of the event over a micro but more frequently meso cycle and linear programming is indicates that the program is build around the actual Decathlon or Heptathlon event progression.

Decisions regarding which is to be used or to develop a blended program are driven by the needs of the athletes and the timing in the yearly plan.

**Follow the “soft spots” of the scoring table** - Periodically, attention can be given to the more rewarding components of the Combined Events (by the point system) and focus on spending more time developing that area. This protocol however should not represent the main principle of the training methodology. Coaches of Combined Events athletes must develop their own planning and training protocol based on sound fundamentals and in consideration with the athletes they coach.

It would be a mistake to copy a training plan developed by others regardless how successful that program is.

### **Decathlon versus Heptathlon**

**Similarities** - The application of training principles can be the same and some of the planning and training protocol can be similar. But the content must be different.

**Differences** - Decathlon and Heptathlon are two different events and need to be coached differently.

Speed development is the most important component of the Heptathlon program while speed is also important for Decathlon but there have been examples of success with mediocre speed.

It is not recommended to have both Heptathletes and Decathletes train under similar program design.



Getty Images - Maurice Smith (JAM) in the Decathlon pole vault ([www.iaaf.org](http://www.iaaf.org))



# Pole Vault Visual Rowing Gauge

Richie Mercado

A visual gauge of the degree of a vaulter's rowing action can be measured by inspecting two things:

1. Before the body comes in line from hand to toe – the top hand should not move in front of the line of the body
2. After the body breaks at the hip until the swing is completed to vertical, the hand should not move forward of 90° with respect to the runway

1.



**Instant of Pole Contact with Back of Box during Takeoff**

2.



**Instant Takeoff Foot breaks ground contact (arm driven back by plant in box)**



## Visual Rowing Gauge for Pole Vault, cont.

3.



Point of Drive Phase where Takeoff Foot is at farthest point back – arm still back and shoulders open!

4.



Arm moves into line with body during swing – does not move in front of line of body before this point



## Visual Rowing Gauge for Pole Vault, cont.

5.



Arm moves forward from shoulder as swing continues from the hip and shoulder, but does not go past 90° with respect to the runway

6.



Arm never goes beyond 90° with respect to the runway as the vaulter approaches the move to inversion

It should be noted that premature “rowing” of the hands forward in the drive or swing phase will slow the rotational velocity of the pole and prevent smooth swing of the body to vertical by moving the shoulders up and the hips down.

All images from [www.stabhochsprung.com](http://www.stabhochsprung.com)

