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The development and training of decathletes in the USA

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ABSTRACT

In the United States the development and training of decathletes is heavily influenced by the university system. Most top US decathletes do not start specific training for the event until they reach university and post-collegiate elite decathletes are usually associated with a unveristy in order to access facilities and coaching support. Four university coaches who have consistently produced top decathletes are interviewed by the authors, both elite decathletes themselves, to provide an overview of the training systems used. Commonalities between the four programmes are identified and presented in an outline of the training year. This is followed with a brief description of the different approaches taken by the four interviewed coaches and specific training sessions they use with their athletes. A description of the situation faced by elite decathletes and aspects of development of young decathletes are also presented as background information. This article is adapted from a presentation given at the High Level Coaching Seminar 'Combined Events' (Prague, Czech Republic – 27-30 September 2002).

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Introduction

In the United States the development and training of decathletes is heavily influenced by the university system, primarily those universities in the National Collegiate Athletic Association (NCAA). Although there are some combined event competitions available to young athletes (see side bar on page 33), most of the US decathletes who make it to the elite level do not start specific training for the event until they reach university.

It is notable that there are relatively few universities where the programme routinely produces high-level combined event athletes. In this article we present an amalgam of the general training and development principles of four of the county's top coaches, each of whom works at a university the US. All four have worked with at least one world ranked decathlete and have produced numerous

leading performers at the university level. The coaches interviewed for this article were:

- Ed Miller - Assistant Coach at the University of California at Berkeley, NCAA Champion in 1976 and coach of both the authors as well as Phil McMullen (best of 8220 in 2001)
- Cliff Rovelto - Head Coach at Kansas State University and coach of Steve Fritz (best of 8644 in 1996) and the 2001 World Championships bronze medallist in the heptathlon Shelia Burrel (best of 6472 in 2001)
- Rick Sloan - Head Coach at Washington State University a 1968 Olympian and coach of 1996 Olympic gold medallist, 3-time World Champion and former World Record holder Dan O'Brien (best of 8891 in 1992)
- Bill Webb - Head Coach at the University of Tennessee at Knoxville and coach of 2003 World Champion Tom Pappas (best of 8784 in 2003)

The commonalties between the four programmes are presented in the outline below. Following the outline are brief descriptions of the coaches' philosophies and some elements that may be unique to their programmes.

Background

Although the decathlon is largely focused on the universities in the US, it is not necessarily the case that a large emphasis is put on the event by the university teams. Most combined event athletes on scholarships are also expected to score points in individual events in their university's various team competitions. Moreover, because of qualifying procedures for the championship meetings in which university teams take part, there may also be a need for athletes to compete in more decathlons than might otherwise be ideal. Each year, the country's universities typically produce 1 to 5 athletes who are good enough to compete at the USA Track and Field (USATF) national championships.

After graduation, US decathletes are typically on their own as far as financial support. This can put a very large strain on the athlete, because it is difficult to find a job that will permit enough time to train seriously. There was a programme, sponsored by the credit card company Visa, in the 1990s that gave substantial support to US decathletes (costs of travel and equipment, some healthcare and a monthly stipend for the top ten performers). It had a positive impact on the quality and depth of performances in the event, but unfortunately the support was ended in the late 1990s. Since then the performance depth of the decathlon in the US has suffered somewhat. There have been subsequent attempts to secure funding, but none have solidified. Athletes often try with varying success to secure private sponsorship but this can be difficult as there is relatively little interest in the decathlon in the years between the Olympics.

The only government-sponsored programmes of which we are aware are the US Army and US Air Force World Class Athlete Programmes (WCAP). The WACPs currently have only one decathlete, and must make use of university facilities for training. Athletes ranked in the top 15 in the US may live and train at the Olympic Training centre, but there is no decathlon specific coach.

Most elite US decathletes continue to utilise a university's facilities, and usually a university coach, for their training post graduation. This can at times lead to conflicts because at a university the needs of the team, and the student athletes, override the training needs of the elite athlete. There are also rules enforced by the NCAA that may segment the time that an athlete can spend on the track with his coach. Once athletes have found a training site, a competent coach, and secured enough support to live and train, they may then focus on the training principles that will make them a better athlete.

Aspects of Pre-elite Development of Combined Event Athletes in the USA

Primary School (Grade School):

Age group clubs offer combined events in the USATF Junior Olympics:

- Age 10 and under - Triathlon (SP, HJ, 200m or 400m)
- Age 11 to12 - Pentathlon (80mH, SP, HJ, LJ, 800m)
- Age 13 to 14: Pentathlon (100mH, SP, HJ, LJ, 1500m)

Secondary School (High School):

Although several states hold decathlon championships for High School athletes, most states do not allow the javelin in high school competition and several do not allow the pole vault to be contested.

Age group clubs offer the decathlon in the USATF Junior Olympics:

- Age 15-18: Decathlon (5kg shot, 1.5kg disc, and 1.0m hurdles)

Junior Competition (under age 20):

This is often an athlete's first exposure to well-organized and elite competition.

Commonalities

The development and training principles applied to elite decathletes that are common between the four programmes examined are:

General

- Programmes are based around the university, which typically owns the training facilities and hosts competitions.
- All training follows a progression of general to specific.
- Fitness, strength, and technique are central to all programs.

Autumn Training

During the autumn, a strong cardiovascular base is built through longer running work, often done away from the track. It is also the time when a strength fitness base is built through circuit resistance training. Most coaches start to work in speed using accelerations and light plyometric work. Rather than working events as a whole a high volume of drills is employed.

Key elements of the training in this period include:

Running:

- Long runs below anaerobic threshold, 20-30 minutes
- Longer repeat hills
- "Stadium" runs (runs up the steps of a football stadium)
- Accelerations, often on grass

Jumping:

- Little specific jump work is done at this time
- Lighter plyometric jumps are used

Throwing:

- Medicine ball throws, relatively high volume
- Work on segments of the throws, usually starting with stand throws, especially with younger athletes

Strength:

- Bodyweight and free-weight circuits, 2-4 times a week
- Volume is favoured over intensity

Flexibility:

- Work to increase passive flexibility primarily through static stretching

Winter Training

During the winter there is a shift to more work on the track. Running training focuses on building a strong base for the 400m and interval training is used extensively. Drills are made more specific for each event and event specific technique work begins.

Key elements of the training in this period include:

Running:
- Interval training, generally faster than 1500m pace but well below 400m pace
- Faster hill runs
- Sprint specific drills

Jumping:
- Short approach jumps, worked progressively
- Pole vault drills, starting with straight pole drills and moving to training pole vaults
- Full approach run is established

Throwing:
- Medball throws
- Stand throws
- Progressive movement to full throwing

Strength:
- Circuits training, at least once a week
- A core lifting programme to increase strength
- Olympic lifts are central (this varies from programme to programme)

Flexibility:
- Static stretching is maintained
- Range of motion exercises to improve active flexibility

Spring Training

During the spring the events are practiced in competitive form, but there is still work on individual parts of the events. The focus of training moves to explosiveness and speed, but fitness work is maintained. The rhythm of the events is emphasised. Competition begins and the athletes will take part in 3-5 individual events if the meeting's schedule allows.

Running:
- 400m sprint workouts are central
- Speed is emphasised, blocks are used
- Work on 1500m pace
- Intensive work on hurdles

Jumping:
- Full approaches are used
- Drills and segments are assembled into one technique
- Plyometric work becomes more intense

Throwing:
- Full throws are used
- The drills and segments are assembled into one technique
- Fouling is kept to a minimum

Strength:
- Work to improve strength continues
- Volume gradually decreases as intensity increases
- Power is emphasised more

Flexibility:
- Flexibility is maintained

Summer/Competitive Season

During this stage of training refinement and intensity are key. Most of the preparation must have been done by now and the focus is on cleaning up technique in the various events. Competitive situations are used during training.

Running:
- Speed work is central
- Volume is decreased and intensity is increased
- Most running workouts have at least some maximum intensity in them

Jumping:
- Full approaches

Throwing:
- Full throws without fouls

Strength:
- High intensity
- Rest period before major competition

Flexibility:
- Flexibility is maintained

Variance Between Programs

Variations and unique elements between the programmes that emerged from the interviews are as follows:

Ed Miller

Miller draws much of his coaching wisdom from personal experience as a decathlete. Although he follows a training plan, much of his coaching is based on intuitive judgments that he makes after evaluating his athletes. Events and conditioning follow a progression. Two or three events are emphasised each season for focused development.

Examples of workouts:

Autumn:

- "S Run" - a stadium run that involves running diagonally up and down the bleachers on one side of the stadium, running a lap of the track, and running diagonally up the other side of the stadium
- Bodyweight Circuit - a strength circuit that consists of 20 different resistance exercises using mainly the athletes' bodyweight. Many of the exercises are gymnastic oriented and event specific, especially to the vault.

Winter:

- Interval training – 2 to 3 sets of 4x200m
- Core Lifting - cycle of 5 main lifts (Snatch, Clean, Bench, Squat, and RDL). The lifts are on a rotating cycle of percentages. There are generally two hard lifts per workout, and two lighter ones.

Spring:

- Speed Endurance training -150m-200m-300m @ 90 to100% with full recovery
- Lactate Tolerance training – 2 to 3 sets of 250m-100m with 30 seconds between the 250 and the 100 and 4 to 8 minutes between sets.

Summer:

Athletes are evaluated on a weekly or even a daily basis to determine what needs to be addressed to specifically prepare for a competition.

Cliff Rovelto

Rovelto is highly organized, well read and has done a great deal of research into various training systems. He is familiar with periodization and plans out the training year with graphs before it begins. His concept is based on the three Cs of combined event training theory:

- Complementary - that which completes or makes perfect, the quality or amount that completes
- Compatible - exist together in harmony, consistent with
- Commonality - share common bond or trait

Examples of workouts:

Spring:

- Speed Endurance training - 6x100m @ 95 to 100% with 1 minute rest

Rick Sloan

Sloan also draws experience from a successful career as an athlete. He can very well be described as "hard-core." He works hard and expects the same of his athletes. He places emphasis on fitness, and being fit before trying to develop other systems. Uses the analogy of a plate spinner at the circus, for describing decathlon training. When working on technique he stresses rhythm, posture, and timing.

When asked if there was anything that really made Dan O'Brien different and helped him succeed, Sloan says that physically Dan is an anomaly. He has genetics that allowed him to be extremely naturally explosive, he is wired differently than most people.

Examples of workouts:

Winter:

- Interval training – 8 to 12x200m with 1 minute rest

Spring:

- "Cover the Bases Workout" - Repeat 100 metres: starting halfway through the curve, run 100m @ ~95% then run back across the infield at a "road pace" for 2/3-3/4 of the way back before walking the remainder. When you get back to the

start, run the 100m again. Repeat up to 15 times. (Sloan says that he varies this workout through the year by changing the speed of the runback and the number of repetitions.)

- "400m fitness Workout" (borrowed from Michael Johnson's coach Clyde Hart)
  - 2x200m @ 27-28s with 1min between
  - Full rest
  - 1x300m @100%
  - Full rest
  - 2x200m @ 27-28s with 1min between
  - Full rest
  - 1x300m @100%
  - Full rest
  - 2x200m @ 27-28s with 1min between

Bill Webb

Webb runs one of the most consistently competitive university teams and therefore and has a lot of responsibilities. He has a very good staff of assistant coaches with whom he lets his combined event athletes work, though he does stress the need to have one coach who coordinates and oversees the athlete's training in its entirety. Athletes take part in simulated decathlons over 4 days in the autumn.

Webb uses testing in his programme to evaluate progress and focus on what an athlete needs to work on. He generally tests this twice a year utlising the British Amateur Athletic Board (BAAB) "Quad Test":

- Overhead Shot Put
- Standing Long Jump
- Three Double Leg Jumps
- 30m Sprint

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