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TRACK COACH

Spring 2024 — 247



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USA Track & Field

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TRACK COACH

FORMERLY TRACK TECHNIQUE

247 — SPRING 2024



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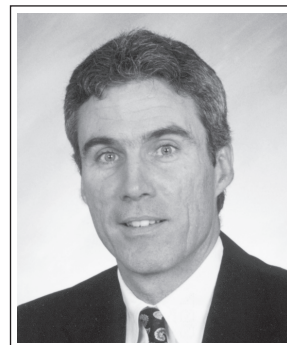
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FROM THE EDITOR

RUSS EBBETS



10 SIMPLE THINGS

Years ago, singers Simon and Garfunkel sang a song, the Sound of Silence, that had a line "the words of the prophets are written on the subway walls." It has always been an intriguing idea to me, and I'll admit I have often looked at any subway scribbles to see if, in fact, there is some worthwhile tidbit or snippet of advice to give me a head start at salvation.

About a decade ago a CNY coach, Jim Vermeulen, shared with me a list of "10 Simple Things that Require Zero Talent." It is a cleverly assembled list of short, common sense points that anyone from a 14-year old to a worker bee can adopt with great success. I am not sure where the list originated, I have seen renditions on-line but no subway renditions. Most of that graffiti still lacks any reportable depth.

10 Simple Things That Require Zero Talent

Being on Time
Work Ethic
Effort
Body Language
Energy
Attitude
Passion
Being Coachable
Doing Extra
Being Prepared

Every team has its superstars or at least their "best kid." This man or woman is usually a great help to a coach. They can serve in a variety of ways. Certainly, they can be role models who exhibit levels of dedication, perseverance and personal discipline that become an example for the rest of the team.

Captain duties often fall on the shoulders of these individuals. It is a lifetime distinction most approach with seriousness. This leadership may be due to their talent, academic success or personal charisma. Sometimes the coach hits the trifecta, with an individual who possesses all three qualities.

And we can't forget the mentoring these young leaders provide. Simple words of

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EDITORIAL COLUMN

Continued from page 7892

encouragement can provide enough of an emotional boost to sometimes save a career for the team newbie. The doubts, fears and wavering concerns along with the yet to be developed “juggling ability” of the newbie are so weak that the disappointment of a bad day or two can be such that calling it a career can appear as the most viable option. But every coach knows that a team is not made up of all superstars. It is the second or third echelon of talent that not only fills out the team pictures but also adds emotional depth and spirit to the team. These teammates may harbor dreams and aspirations that exceed their abilities but their dedication and diligence can represent a standard of effort and behavior that can also be a personal example to any and all.

If one were to take a moment and study the 10 Simple Things one of the common denominators is that they are simple to understand, easy to implement and free. Sometimes that becomes the

obstacle. I think from time to time we all try to make things harder than they need to be.

If you allow yourself a moment to let your mind wander—what would practices be like if, en masse, the team adopted these principles? There would be smiling faces, an “I can do this” attitude, excitement for the day, fearless preparation for coming competitions and a forever readiness that would build and build and build. These are traits that would benefit the team from top to bottom. Even the coaching staff could pump up their level of enthusiasm with attention to these details.

It’s an age-old question every coach mulls over from time to time – what makes one person succeed, sometimes against all odds, while other times a more gifted individual never seems to realize his or her potential?

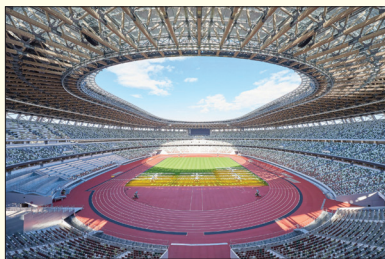
One thing that all successful people share is attitude, the belief that the glass is half full and that things can, at the very least get better. What would your day be like if you, the coach, the

assistants, captains and your second and third echelon athletes all showed up to practice and were on the same page as far as the 10 points go? I have a feeling you’d breeze through the day, with smiles, laughter and accomplishment. Not a bad way to live. Ten simple things. Moses had quite a bit of success with a similar idea.

Maybe Coach Vermeulen was an “early adapter” and he is onto something profound here. It has all the makings of classic thought – simple to understand, easy to apply and free. The free part may be a stumbling block. If there was some way to monetize this concept—then maybe it could catch fire. In any event, time will tell, or at least TikTok will.

One not so simple thing is the decathlon. We are fortunate this issue to have an interview with Frank Zarnowski who has spent a lifetime coaching, announcing and reporting on the CEs (combined events). His dedicated involvement has allowed him to develop a unique perspective that offers insights and honors the world’s greatest athletes.

2025 World Championships



The 2025 World Championships in Tokyo will give you a chance to visit the stadium built specifically for the 2020 Olympics, the stadium that hosted the Games in 2021 without foreign spectators. The Japan National Stadium has a seating capacity of 60,000. Of course, the 2025 Worlds will be the year’s premier track meet—join the TAFNOT tour now and secure your spot for 2025. The meet dates are September 13-21, and the required deposit is just \$100 at this time.

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INTERVIEW WITH FRANK ZARNOWSKI

Doctor Z, Mr. Decathlon, Zeke—Frank Zarnowski would respond to any of these sobriquets. He is certainly Mr. Decathlon, as author of books on the subject, coach, statistician, historian, TV commentator, stadium announcer for the multi events, and USATF Hall of Fame member. This wide-ranging interview covers multi-event history, training and competition information, and just plain nostalgia.

BY RUSS EBBETS

1. Frank, for those who don't know you, what has been your involvement with track & field over the last 40+ years?

I started as a small college coach, ran a few decathlon meets in the 1960s and fell into PA announcing by chance. The first decathlon meet I organized was in 1968...56 years. Began PA announcing in 1970 (at NCAAs). I found that PA announcing for CEs (combined events) requires one to fill a lot of time ("I often said that watching a decathlon was like watching grass grow") so I decided to research the event (history and records) to fill in those time gaps. That evolved into history books (first book in 1988) and record books. I'm a numbers kind of person and the decathlon provides the opportunity for number crunching and innumerable records. I've been accused of making up

records. Well...I'd prefer to use the term "create" or "establish". The event is numerical.

2. The evolution of the decathlon went in several directions, both in event content and scoring methods, before the present format firmed up in the 1920s. It seems both the Swedes and Germans were major driving forces in this regard. Do you have any insights why?

Actually, the Swedes began experimenting with 'tiokamp' (ten events) around 1900 and annually conducted a national champs from about 1902 until they were awarded the Olympic Games for 1912. They had been running a decathlon rather similar to the present format and, along with a 5 event pentathlon, appealed to have them included in



Frank Zarnowski at his USATF Hall of Fame induction in 2016.

the 1912 games. Approved, so they experimented with a few meets with the present format beginning in fall of 1911, which is why IAAF progression decathlon records start then. Initially they were one-day meets (5 in morning, 5 in afternoon) but the size of the potential '12 Olympic

field encouraged them to make it a two-day meet. CEs had had a long history and most were conducted in a single day, for instance, the American All-Around.

In fact, at the turn of the century all Scandinavian nations were very CE active. Finns had many different CE formats. Norwegians had a pentathlon champs as early as 1890, I think. Danes adopted the American All-Around. But the Swedes were the leaders.

3. Do you have any reasons as to why the currently-used events were chosen? And why a two-day order was finally agreed upon?

I do know....the Swedes took the lead from the American All-Around which was a one-day ten-eventer (with scoring tables by 1890s). Many questions about the make-up and order of events can be found thru the All-Around, e.g., 3 jumps, 3 throws, 3 races, one hurdle race... no two types of events consecutively, ergo run, jump, throw, run, jump, throw, run, jump, throw, run.... always start with the sprint and end with a distance race. The Swedes just sort of copied that philosophy for the decathlon...that is, never have two of the same types of events in a row. The Swedes monkey-keyed with the order of events for a few years and finally decided on the current make up, making it a two-day event in anticipation of a large '12 Olympic field. For example, each nation was able to enter NINE decathletes in 1912—and Sweden and USA did so, so much so that they had to extend the decathlon schedule to three days in 1912 where a large field started and many dropped out along the way, in no small measure after they saw Jim Thorpe.

All-Around — one day — 100yds, shot put, high jump, 880yd race walk, hammer, pole vault, 120yd hurdles, 56 lb wt, long jump, mile run (events chosen as the most popular events at its inception, in 1884).

Decathlon: two days — 100 meters, long jump, shot put, high jump, 400 meters.

Day two: 110m hurdles, discus, pole vault, javelin, 1500 meters.

(Events chosen were metric in length and measurement since the metric system was more universally practiced, and classical throws—discus and javelin—replaced Scottish strength events (hammer and weight))

Notice the similarity...begin and end each day with a race...in between → jump-throw-jump or throw-jump-throw.

My book on the All-Around explains much of this. See—“All-Around Men: Heroes of a Forgotten Sport,” Frank Zarnowski, Scarecrow Press, Landover MD, 2005. (For those interested in the history of CEs, this read is a must.)

4. The All-Around competition seemed to be a big thing in the United States, but not much in other parts of the world. Why did that competition fade away around World War II? Did the Scandinavians not contest it?

For the record, only four nations conducted an annual All-Around... USA, Ireland, Denmark and Canada. All other countries (including Germany, which should not be seen as much of a leader here) had various CE versions...# of events, order

of events, length of meet, how scored, etc.

OK, this is tricky but, again, my book on All-Around history helps. Off and on, From 1912 thru about 1923 the AAU conducted **two** ten event CE champs each year...the All-Around and the decathlon...dueling CEs!! There was very little crossover and a debate ensued over which was the better measure of versatility. All-Around premiered endurance (as only 5 minutes were allowed between events) and strength. The decathlon emphasized more speed and athletic agility. Decathlon won out (in spite of much lobbying from Brundage) because it was an Olympic event. All-Around was dropped but picked up again by a cult of athletes around 1950 and stayed on the books as a national championship until the AAU cleaned house around 1980 and ditched many events.

5. Coaching trees can be an informative study into how practical knowledge gets passed along from one generation to the next. Could you trace some American coaching trees that have contributed to the remarkable success the US has enjoyed in the decathlon over the last century?

Yes, I can think of one, but it's an important one. In 1920 Brutus Hamilton, U. of Missouri, won the silver medal in Antwerp in a very closely contested decathlon. He later became one of the nation's best coaches. In 1932, as coach at U. of Kansas, all three of his athletes made the U.S. Olympic team, and went 1-4-7 at the LA Games, and Jim Bausch set a world record. Hamilton moved to Berkeley around 1950 and coached Sam Adams, claiming that Adams was one of

the finest athletes he ever coached. Sam took a job coaching at UCSB around 1959 and became America's de facto national decathlon coach, opening his track to all CEers. Worldwide, athletes flocked to Sam (Bill Toomey, Jurgen Hingsen, Daley Thompson, Jane Frederick) and UCSB became sort of a national/international training center with Sam its coach and expert...and a great human being. In 1969 one of my athletes went to Santa Barbara to train with Sam...Harry Marra. Of modest athletic ability (at 5-4, 140) Harry's size mitigated against him, but Sam taught him technique.... technique...technique...always reminding him that competing in the decathlon required "doing things correctly" (his mantra). Marra, after a stint as a college coach, founded the VISA US decathlon team program in 1990 and even today, is the nation's, if not the world's best CE coach. He coached Ashton Eaton at Oregon to a WR and two Olympic golds and three World champs. He has coached more 8000+ performances than any coach in history.

Hamilton→Adams→Marra is the USA decathlon coaching tree...they should give an annual award to best CE coach (call it the Hamilton-Adams-Marrathe HAMY)

Here's another one: In 1936 Hamilton helped a young coach at a Cal junior college (L.D.Weldon) coach Jack Parker who eventually placed 3rd at '36 Games in Berlin. Weldon waited 30 years for another good athlete while coaching at Graceland College in Iowa, and got one with Bruce Jenner....'72 Olympic team, '76 gold..

6. In a list of remarkable individuals the event has produced, I think the achievements of Harold Os-

born would make anyone's short list. Not only is he an Olympic decathlon champion but he is the only decathlon champion to also win an individual event gold medal and he also held a world record (in the high jump). Additionally, he won numerous titles and medaled at the US national championships in nine different events over his career. Of particular note was the fact that he high jumped 6'8" at age 37. Do you have any background for his remarkable ability and career longevity?

Yes, he was a pretty smart guy who took care of himself....I interviewed his wife back in 1980s (in her 80s and still living in Urbana, Illinois). She met me at the door with (no lie) 20 cats, showed me Harold's medals and his wool singlet from 1924 Games (he was the real star of those Games, not "Chariots of Fire" Harold Abrahams...the movie got the wrong Harold.) His uniform (this was about 1984 or so) was still red in places where he had fallen on the red brick track in Colombes. She hadn't washed it in 60 years!! When she died a few years later the family offered me his two (actual) gold medals. I declined and tried to get U of Illinois to put them on display....don't know where they are now.

Osborn kept himself in shape, was fortunate to have had Canadian Harry Gill (yep, that Gill) as a coach who himself was a top level All-Around performer at the turn of the century. He introduced Osborn to many of the events and prepared him as a decathlete. Osborn was a clever jumper....knew how to pin the crossbar back on the standards with his shoulder while clearing the bar....a technique soon banned,. He was an osteopath by trade but

helped Gill coach the UI team for years, keeping him active. Very smart guy.

7. It seems that several decathletes benefited when the scoring tables were periodically revised. Has the IAAF/World Athletics traditionally made the table revisions? In your opinion how much politics influences how the revisions are made?

Only once, when we went to the 1964 tables, was there any appreciable rearrangement of who the top people were. Using newly developed equipment decathletes took advantage of new fiberglass vaulting poles in early 60s, pushing C.K. Yang to the top of the world lists. When the tables were revised to correct the huge amount of points that went to vaulters, and put into place immediately before the '64 Games in Tokyo, Yang went from being the overwhelming favorite to just a medal contender.

Revisions usually occur when there are technical advances (equipment, timing) but not much politics.

8. Could you review for us how points are awarded in the decathlon? Some events follow a linear progression while others use a logarithmic or exponential progression (please correct me if I have this wrong).

The initial All-Around tables, written in 1893 by Alexander Jordan, awarded 1000 points for equaling the open world record in each of the ten events. This is why so few points were awarded for the mile and the heavy events....CEers could not come close to the WRs in those events. When the IAAF did something similar in 1912 (making 1000



Dave Johnson, 1992 Olympic bronze medalist.

points equal to the Olympic Record), those inequalities persisted. But, in fact, this is a non-issue. The most important part of the tables is their SLOPE, the first derivative....how many ADDITIONAL points one receives for improvements in performance. Everyone receives fewer 1500m points or fewer throwing points, so in that sense the tables are fair to all. It's the additional points for improvement (slope) that's crucial and those slopes were initially sketched by Jordan and pretty much copied by IAAF in 1912 and that's a concern. The decathlon tables have been revised so often that, adjusting the points for a performance but keeping the slope the same makes no sense.

You are correct that the running events slopes are logarithmic and field events are exponential and that's because of the way performances are measured...higher numbers are poorer marks for runners, better marks for field events. But, in fact, today's table are only slightly progressive/regressive...and, within a broad range of ability, marks are virtually straight line.

9. Do you see point progressions influencing training decisions in terms of emphasis on an event?

I don't see the progressions as much of an influence as the idea that a decathlete has to have balance in training...one is not going to win a decathlon on a single **good** event performance, but one will surely lose a meet with one **bad** performance. So you work or everything but especially weak events or events where 'no marks' are common, like the pole vault or long jump.

10. It seems odd today to see that many of the decathletes prior to 1950 came to the event from a throwing background, and some were world class in spite of not being exceptionally large when compared with today's throwers. Can you supply some examples and why that happened?

Before the era of PEDS, CE throwers were closer to elite throwers. After PEDS the open throwing records improved at a faster rate. That is, PEDS have made CEers relatively weaker in throws....relatively. We live in a world of specialization.

11. What was the Hollywood connection between the decathlon and Tarzan?

I can only think of one. In 1938 Glenn Morris played Tarzan after his '36 Berlin win and before he began an NFL career. I've seen the movie "Tarzan's Revenge" and it was not the worst movie ever made, but it was close.

Lots of other decathlon champions had movie roles (Bob Mathias, Rafer Johnson, Bruce Jenner) but no Tarzans. The only other track guy I knew who wanted to be Tar-

zan was '60 Olympic vault champ Don Bragg. He actually practiced "Yaoooooooooooooooooooo" yells and built swinging vines at his South Jersey camp to practice swinging, but he never got a movie role.

COACHING THOUGHTS

12. How did you coach an athlete to get past a "bad" event performance?

Dave Johnson (of '90s Dan and Dave fame) used to have a technique which mitigated against bad events. He once told me that he goes into each event with five goals in mind, five marks, any of which would be acceptable to him before moving to the next event. If I recall, his goal for an individual event was either to set:

- 1...a meet record,
- 2...or a personal record
- 3...or a seasonal best
- 4...or a mark indicative of his conditioning or workouts
- 5...or some minimum mark that would be just OK.

Usually he got one of those, so it precluded "bad" events. But this was just mind games and this was his way to stay positive throughout. But, "bad" events happen. Sam Adams used to say that there are no excuses for "bad" events, just rational explanations for why they happened. And he'd wait and deal with the athlete/bad event at the end of the day/meet, not during the competition. Plenty of time later for introspection.

This goes for "no heights" also. Every athlete experiences an NH at one time or another. I once saw Jenner 'double no height,' failing to make the opening bar in BOTH the

high jump and pole vault.

But it happens. Generally, you tell them to move on, it's history and the result can't be changed...focus on the next event. But, realistically, it depends on how early or late the "bad" event is..... If it's the first or early event you move on...it's history and can't be changed. If the bad event is in the 1500 meters, that can be dealt with in future training. But in all cases the attitude has to be positive.

As a coach one has to be practical. One can't expect your athlete to PR in every event. That just does not happen. Sometimes the bad event has more effect on the coach than on the athlete, via verbal response or body language. The athlete already feels bad enough that he did not live up to (someone's) expectations. Don't make it worse via screaming or body language. I once witnessed a coach (who had driven his athlete about 8 hours to our meet), get so irate about his athlete's distance run performance, that he rushed the athlete, who was standing just past the finish line and trying to catch his breath, and asked him, "Son, how are you gettin' home?, cause it ain't with me." When I say "move on," that goes for the coach too.

13. What three events do you feel give the best indication of talent for a combined event?

The regression (correlation) studies say that the closest numerical relationship between one single event and the total score is the long jump. I think that's because the event combines speed, leaping ability (leg strength) and agility. So I say, first, the long jump.

Second, I always look at the hurdles, because it requires a combination of skills. It's one of the toughest events to teach and coaches have a head start if the athlete has some hurdling experience. And remember, the tables reward speed more than anything else.

Third, I always looked at the size of the athlete's hands. Little hands can be deadening...the shot feels too big, the small hands have a harder time controlling the discus which is frequently a crucial and score turning event.

**WE ENCOURAGED
ATHLETES TO DRINK
EARLY AND OFTEN,
ESPECIALLY WHEN THE
WEATHER WAS REAL
HOT.**

Hurdles, long jump and hand size.

But remember, when attempting to identify potential decathletes, it's just as important to look for the right attitude and the willingness to train over an extended time period and have the patience to learn the events.

14. How did you handle communication and coaching between events?

Any way you can. Depends on the formality of the meet. With small, informal meets there is no problem with access to the athlete. In many cases the coach can be on the field. But in championship meets (say Olympic Trials, Olympic Games or World Champs), the coach may not have perfect access to the athlete. So lots of planning has to go into the coach moving around stadiums

to be able to communicate. At many of the international invitationals (e.g., Gotzis) we use designated coaching boxes. But the positioning of the coach has to be worked out well in advance.

95% of the time the communication has to be positive. Occasionally you may have to scold. But don't overdue negative messages.

Best communicator I've seen...Cliff Rovelto (Kansas State). Good with cues, everything made simple.

15. What about competition nutrition and hydration? Any go-to foods or recommended snacks to keep an athlete's energy levels up? Did your snacking/in-competition meals change much between a smaller decathlon competition and national championships or Olympics?

There are plenty of over-the-counter energy bars and drinks. Just recommend the athlete pack enough of them. Stray away from acidic stuff. Bananas were always a favorite. Weather and temperature were always important. We encouraged athletes to drink early and often, especially when the weather was real hot. Sometimes, during very hot summer meets hydration was particularly important. If one did not drink early and often, by the time of the 400m or 1500m it was already too late.

16. How much did you recommend an athlete keep track of their scoring progress during a competition? Or did you shy away from that?

I didn't. That can be a source of distraction more than a source of motivation. They pay others to keep



Daley Thompson, Olympic champion 1980 and 1984.

score. Let them do it. I've seen a situation at a U.S. nationals when a (very good) athlete went to his scorebook and tables after each event with others gathered around to see if he was on pace. Next thing you know there was a crowd gathered around him after each event...it resembled a parade...became very distracting.

Only time when this is appropriate is before the 1500m. I think it is helpful (depending on the athlete) to know what he needs to run (and pace) in 1500m, often for a PR, place or record of some sort. The number of times I did this over my career is legion (from Jenner to Eaton). And, of course, as a PA announcer, I conveyed the same information to spectators.

17. Did you do much with two or three event totals to keep motivation high? What about jump totals, throwing totals, running totals? Or was all this information more generated after a competition and used for a competition debriefing?

No, I did very little of this as a

coach. That's for the record keepers. But I often did it for my own gratification...just to know and it often became useful after the meet as a PA announcer. Last time I did this was for Zach Ziemek where his jump totals at a major international were off the charts (LJ-HJ-PV). Turned out it was the highest three event jumping total ever.

18. How did you recommend an athlete maintain focus throughout a competition? Were there specific cues used for the different events?

Athletes get tired and sometimes the mind wanders. This is hard and athletes get better at it as they age. In fact, the more important issue is how to turn your focus on and off during competition. Since there are usually 30+ minutes between events it is hard to stay focused. You have to refocus, refocus, refocus. Best ever at this was Daley Thompson, who seemed to have a switch he turned on and off. When it came time for his attempt, race, whatever, that switch was "on."

I can only say that this can be

practiced in training. Coaches develop their own cues...from gentle reassurances to screaming. I've seen every type of cue. One notable coach used to point to the top of his own head after getting the athlete's attention after a weak performance. The cue was "you're making me go bald." Enough said.

19. What was your timeline after the 400m? Take me through warm down, hydration, snacking, bodywork, stretching, mealtime, debriefing, next day's discussion and bedtime.

After recovery (and assuming no injury)...hydrate...walk...hydrate...keep walking...slow jog (at least 800m)...stretch, stretch and stretch and walk some more...hydrate...if ice is available, ice bath...retrieve all gear and clothing/equipment. Head to bus/car. Eat after at least one hour from competition. Stay away from acidic fruit. Debriefing well after meet.

20. In a similar vein, what was your timeline for a 9am day 2 start? What time did you like your athletes to get up, meal options, warm-up, etc.

Get as much sleep as you can. Sometimes internationals start early in the morning. I always thought one should be up a minimum 3 hours before day two start. Don't eat too much and warm up and warm up and warm up. In early '90s I began to subscribe to athletes running a full set of hurdles 20 minutes out from competition after watching Eduard Hamalainen run a 14 second warm-up race. Today most athletes do virtually a full set of hurdles before the actual race. You have to be ready!

Now, having said all of that, one has to adjust to the realities of the time schedule. And at times the time schedule is not athlete friendly. For example, at '96 U.S. Olympic Trials in Atlanta, the decathlon time schedule for a Friday-Saturday meet was determined solely by TV preferences. A late afternoon start on day one (so that the 400m could be shown late in the evening in prime time). Day two had to start very early so that the 1500m could be televised live early the next afternoon. The whole decathlon was completed within 26 hours....virtually a one day decathlon! In these extreme cases there is no easy recommendation for warm-down, recovery, rest, warm-up, etc.

I always liked early day one starts and late day two starts because there was more rest time between days.

The only thing I can recommend is that, if there is going to be an early start (on either day), get used to it by scheduling workouts early as well.

Athletes have to accept the fact that, when scheduling CEs, the athlete is not the primary consideration. So, deal with it. This is why I was always in favor of having CEs separate from the remainder of the meet. Then the scheduling could be practical/friendly. When that gun goes off, you have to be ready to compete.

21. The pole vault and high jump are the only events that allow for more than three attempts. How did you determine an opening height, both to get a legitimate mark and avoid a no height? How many attempts did you shoot for? What were your recommendations for those days when it was all "clicking," and a personal

best was happening? Spend it or save it?

First, the incidence of "no heights" is no greater in decathlons than open events. I always advocated a CE starting height which would be used for open events, or possibly one bar lower to take into consideration the amount of work in earlier events and the number of run-throughs. Go with a bar the athlete is used to starting at. I know that some coaches advocate low bar starts and use lower bar starts to iron out step issues, especially if warm-ups did not go well.

For me, I usually recommended a starting bar equal to one's normal starting height or one bar lower (3cm for HJ, 10cm for PV). I usually applied this guideline indoors but this could be adjusted outdoors depending upon the conditions, e.g., wind, rain, size of field, injuries and how well warm-ups went.

Average number of high jump or pole vault decathlon attempts is 8/9 (I kept records). When the number reached about a dozen I would start getting concerned about energy used. I once saw a guy take 28 vault attempts (clearing most bars on a 3rd try) in a decathlon... all-time record. He was not worth much in the succeeding events. Aim for 8/9 jumps.

Most coaches don't equate vertical jump improvements with running improvements. I think it's useful to know that one more bar in the high jump is roughly worth 6/10th of a second in the 400 meters. And one more vault bar (@ 30 points) is worth 5 seconds in the 1500 meters.

One suggestion.....even if things are going well, don't pass PR bars. And get familiar with the

metric system. No one will convert meters to feet/inches in international meets. If you do CEs you have to get used to the metric system,

22. How did you develop aerobic qualities in a decathlete without an excessive amount of running? What aerobic alternatives did you use – elliptical, stairmaster, rowing ergometer, circuit training or something else? How did you quantify those efforts?

The decathlon is, first and foremost, a running event. Running is an important component in eight of the ten events. Athletes who only exhibit field event expertise, won't do well in the decathlon. One has to learn to run! You don't have to like it, but you'd better accept it. We'd try to finish each workout with running, and often it was pace running, e.g., 150s at 400m pace, 400s at 1500m pace. Run.

As far as doing some "different aerobic alternatives" there was not much. For one athlete whose speed was in question a big guy who "lumbered" while running, we tried some downhill runs. I found a smooth country road that was slightly downhill and we did some of his speed work there. (speed defined as a combination of stride frequency and stride length). We were trying to slightly lengthen his stride. Ambiguous results.

Incidentally, we used back roads in off-season just to stay away from the track which often is too systematized. Country roads can offer better scenery and less structure with same results.

23. I once read that the only fear Bruce/Caitlyn Jenner had about the decathlon was the first hurdle

of the 110H. How did you prepare your athletes, potentially sore and tired, to aggressively start off the second day on “the right foot?”

Good warm-up and see answer to Q.20 about flat out practice race. A related issue with Jenner.. after getting over that first hurdle cleanly the meet was over. Jenner had a higher opportunity cost for nailing the first hurdle than anyone else. If he managed to get through the hurdles in good shape, the meet was over. His final four events were his best four and he knew it, and his rivals knew that he knew it... and he knew that his opponents knew that he knew it. He relished those “final four” and had the psychological advantage at that point. He knew that he’d cook the field if he just got a decent hurdle performance.

24. Were there any pre-event rituals that you found particularly useful? From packing the competition kit, review of the weekend’s time schedule or something else?

I don’t have much to offer here. For 100m and 110mH we always suggested an all-out effort (e.g., 50m sprint or nearly full set of hurdles) about 20 minutes out. For field events always check the jumping/throwing order and check runup steps. Ask for a practice start and watch the starter’s cadence in earlier sections.

I never did much with imaging but many swear by it.

I once knew a prominent athlete who prepared a notebook which he read before each event. It contained a list of reminders, a 1-2-3-4 checklist. This might be helpful for novice CEers. After a few years the pre-event prep becomes second nature.

25. In your athletes’ non-decathlon competitions how many events would you recommend your athletes competing in?

I always thought two or three was plenty, no more, because some were weaker events and there was a need to concentrate, to learn the event. Too many events would be distracting. Unless it was the end of the meet and we’d put decathletes into a 4x4. A lot of positives about doing the 4x4....leadoff runner is in lanes all the way (just like the decathlon) and oftentimes the runners have to run without much surrounding competition, just like the decathlon.

I once saw an athlete contest 12 (!) events in a dual meet. Small college and the team needed his points. But I’m unsure what the athlete got out of all that? Way too much.

26. Most decathletes are close to world-class in one or two events and can give representative efforts in several others. For the non-decathlon competitions did you more focus on an athlete’s “weaker” events or play to their strength?

The coach has to balance this... meaning schedule some weak events and some strong events. Not all of one or the other.

27. Regarding the “weak” events. Did you push for competition here or limit any test efforts to practice sessions?

No, I usually liked the competition. One has to get used to the regalia of competition...commands, throwing/jumping order, time limits, false starts, etc. They are tougher to duplicate in a practice session.

And, make sure the athlete knows the rules...when can you step out of the throwing circle?...how many marks can be placed on runways, time limits. At the highly successful VISA USA decathlon team camps we conducted in the 1990s, we used to have a rules session (always conducted by Rick Sloan of Washington State University). We’d even give them a paper and pencil test. You’d be surprised how little the athletes (and occasionally coaches) knew of the rules.

IF JENNER MANAGED TO GET THROUGH THE HURDLES IN GOOD SHAPE, THE MEET WAS OVER. HIS FINAL FOUR EVENTS WERE HIS BEST FOUR AND HE KNEW IT.

28. The rush to early specialization can be injurious to an athlete’s development. What type of timeline do you recommend here for a teenager who aspires to compete in the decathlon?

First, convey that one needs to be in CEs for the long haul, not just through the scholastic years. One has to learn the correct way to approach, train and contest each event. One has to ‘learn’ each of the events, understand what they are all about. And this takes time and requires patience (read: years). Too many decathletes are in a hurry to get to certain performance levels quickly without understanding what they are really trying to do. It would always amuse me to watch the decathlon discus during Bryan Clay’s career (2008 Olympic champ). At 5-9 he was always the smallest thrower but he’d always outdistance the 6-6 and 6-7

throwers badly (usually from that unnamed country between France and Poland) who were 40 pounds heavier, 9-10 inches taller, and with much longer arm-span (pull). Clay simply understood what the event was all about. While his rivals were marking at 150, he'd throw 180 feet. The discus is misnamed. It's not a "throw." It's a sling. While others "muscled" the implement, Clay, always with perfect balance, "slung" it. There's a certain amount of physics to slingshots. Few understood this then, and few understand it now, Clay knew.

OK. Timeline...give yourself 4/5 years in college and a few years after college. Timeline: minimum 8 years. One just can't learn all the events overnight. Compete in as many events as one is allowed in high school and in open meets. But, to keep one's motivation/incentive up I always recommended that a high schooler (NEVER EARLIER) contest one or two summer decathlons with the goal of just getting through them. No expectation of high scores. Just complete the 10 events. Even Dan O'Brien's early high school dec scores were in the 3000-4000 point range.

29. What do you feel are the most common trouble sites for potential injury? How did you prepare your athletes to weather these challenges?

If one has a way to pre-test for muscle imbalances, that would be very useful. First, adequate warm-up and adequate warm-down. Hydration. And an attitude of not trying to do too much in a workout. To the coach, plan for an adequate amount of work, don't overdo it. I frequently watched a coach have an athlete strain or pull a muscle

because he was asked to complete one more rep...one more sprint. The coach's mantra was, "Keep working out until I get tired." Invariably the athlete got hurt. The first goal for any coach ought to be, "get your athlete to the starting line." Better to be underworked than overworked.

30. What was the recovery time you liked to see in between decathlons? How many decathlons a year did you plan for? What about non-decathlon competitions following a full decathlon, how long would you wait?

Three meets per year is fine. Maybe a fourth. I always thought one month was adequate time to recover. But we don't live in an ideal world. I was at a small school that had a number of European athletes and one had to factor in

- a) Indoor season....usually two hepts/pents
- b) Outdoor season...one early season dec in March, one late April meet, D-II nationals, if qualify, then D-I nationals.
- c) Then go home and compete in junior, national meets, then European Cup or other invitations.

That's way too many meets..... some of our athletes were doing 7 decathlons a year. We even ran fall meets. The point is, one has to be very careful about how many and the spacing. But, as I say, it's not a perfect world. When our school was NCAA D-II, national winners would qualify for the NCAA D-I meet a week later. Once our decathlete WON both (two important decathlons in 9 days...not recommended.) He had to take a month off (with

active rest) to recover before starting training for the World Champs.

Incidentally, immediately after this happened the NCAA banned D-II and D-III athletes from advancing to the D-I meet. Frankly, it saved the athletes from potential injuries, and D-I programs from no little embarrassment.

My coaching at an Ivy League school more recently was much more reasonable...one early season meet, then a conference champs, then the NCAAs. On occasion the athlete would continue with USA nationals or Olympic Trials in the summer. So 3-4 meets usually. And that's plenty.

But that's all for the best athletes. I found that if one had athletes who were not national class, they would not get into invitations nor qualify for conference/NCAA champs. For those guys I ran plenty of meets so they would have an opportunity to compete. I usually ran 2 or 3 per year. One year I conducted 6! Yikes.

31. What do you feel was the most important transition to master in the decathlon event schedule? I'm asking about a run to a jump or a jump to a run. And was there one that you feel had the highest chance for producing an injury?

This is a management question. At first glance, the first two events are similar and pulls/strains happen more frequently. But I find there are more injuries on the 2nd day rather than the 1st. Athletes get tired. Inadequate warm-up. Much waiting around (which happened frequently with the vault). And more of a chance of an accident in the hurdles and vault than other events.

Sam Adams used to teach “sequence training.” That is, if you are going to do a 400m workout, high jump and throw the shot, train in the order they are contested. Start with shot put, high jump drill next, then 400m. Doing sequence training also practices the transition.

Also, for good vertical jumpers, the transition from shot put to high jump and from discus to pole vault are most daunting because there may be a long wait between warm-ups and your first attempt.

Actually, the toughest transition is probably between javelin and 1500m simply because the athlete is tired and would like more than 30 minutes rest. The first successful 9k score allowed 90 minutes at this point of the meet, at the request of the leader. I once ran a small meet trying to qualify a decathlete for Worlds (his nation only required a certain score) and he needed about a 4:20 1500 clocking to do so. We completed the javelin event in early afternoon, so I sent him home for a six-hour break, to shower, have a meal and sleep. When he returned at twilight (8 pm) he was refreshed....a new man. The rulebook only says “there shall be a minimum of 30 minutes between events.” There is no maximum rule as long as the decathlon is contested over two days. He ran 4:12.

32. How did weight training or resistance work fit into your overall training scheme?

When I first started coaching in the late 1960s I was not much of a weight training fan. I changed my mind over the years but mostly confined it to the fall (pre-season). The expert on weight training for CEs is Carl Wallin at Dartmouth.

There we did significant weight work in the fall, did a max day in December, and then scaled it back during the competitive season. We had an athlete, 5-9, 158lbs, who was an excellent runner/hurdler (10.61, 47.8, 14.09, 4:18) but who also threw 50' in the shot.

ACTUALLY, THE TOUGHEST TRANSITION IS PROBABLY BETWEEN JAVELIN AND 1500M SIMPLY BECAUSE THE ATHLETE IS TIRED AND WOULD LIKE MORE THAN 30 MINUTES REST.

33. I am sure you witnessed some memorable competitions. Is there any one or two competitions that stand out? It could be where the competitors were evenly matched, were the “third” opponent or some other memorable factor.

I've been lucky to have watched/ officiated or announced a lot of meets over the years, some of them great and a lot more mediocre, probably well over 1000 CE meets. A reporter once asked me how many points I have seen in my career. I nonchalantly told him,....”just over two billion.” I had no idea, but it got reported! Who knows? I called five world records. The first was Jenner's WR in a tri team meet in 1975 in Eugene, Oregon. USA-USSR-Poland. It matched the American team against the reigning Olympic champ, the Olympic runner-up, the Olympic bronze medalist, and the reigning European champ. And the USA team (Jenner WR) cooked them....five Americans over 8000 points. That was a big deal in 1974.

The most tense moment I recall came at the 2004 U.S. Olympic Trials in Sacramento, a war for the 3rd Olympic spot, between Phil McMullen/Western Michigan and Paul Terek/Michigan State. Here was the brave McMullen, with legendary endurance skills, attempting to run his rival off his feet in the final event and Terek desperately hanging on... it was not decided until the last few steps of the 1500 meters. It went into the books as the “Battle of Michigan” Whew...Terek on the team by a step. Oh my!

I juried the first 9000 score in Gotzis in 2001 and will never forget how Roman Sebrle willed himself to that score....9026. But the final world record that I announced—2012 U.S. Olympic Trials in Eugene. Ashton Eaton, with 20,000 of his closest friends going nuts, is indelibly etched in my memory. Eaton, going for 9000 points and Sebrle's world record.

Recall, this was 2012 and we were celebrating the decathlon's 100th anniversary, an event which traced its lineage to the 1912 Games of Stockholm, won by Jim Thorpe. Every living U.S. Olympic decathlon champion plus the two surviving sons of Thorpe (both were in their '90s) were guests at Hayward Field that day watching. And, oh my, that final 1500m lap. As he came off the final turn, forerunners Curtis Beach and Joe Detmer parted like the Red Sea to let Ashton through. I had a pretty good call on that last straight, but unfortunately, no one heard the call because the noise at Hayward Field could be heard in Springfield. It was so loud, no one heard the call. It was bedlam. That's OK, I heard it. 9039 and a world record! That's what I remember.

That night I emailed Sebrle who conveyed a very nice congrats message to Ashton that I read to the crowd the next morning at Hayward (I was announcing the start of the women's heptathlon). No one heard that announcement either, there were so few people in the old grandstand that the announcement went virtually unnoticed. But that's OK...I knew. That's what I remember.

34. What about a solo performance? It seems from time to time an athlete arrives who completely dominates the event. Which athlete left an indelible mark in your mind in this category?

Well, for certain the 1988 heptathlon performance by Jackie Joyner-Kersey in Seoul was special. Not only a WR over a pair of East Germans, a gold medal, but she won by 400 points, an unheard-of margin. Not only that, her 7291 WR score has never been approached, after 36 years. (12.69, 7.27m, 2:08, etc!). I said then, "she's 50 years ahead of her time." I guess that gives the world another 14 years to catch up to JJK.....that would be the year 2038!

On the decathlon side, Roman Sebrle's 9026 score at Gotzis in 2001 was a one man show. Estonia's Olympic champ Erki Nool was more than 400 points behind. Event after event Sebrle gave the supreme effort in perfect weather and ideal conditions. I stood on the infield for two days and watched that guy PR event after event and destroy a great field.

And, in 2006, a performance by Bryan Clay over a terrific Gotzis field went mostly unnoticed. But

in two days of driving rain Bryan beat back the world's best, leading by more than 500 points after nine events. Given the conditions his winning nearly 8700 score was worth at least 200 more (probably two more high jump and pole vault bars, and more foregone points due to slick throwing circles and wet track which made him run carefully over the hurdles. I'm unsure I ever saw anyone dominate an international field the way he did on those two days in the Austrian Alps. Few track & field followers took notice because we are a statistical sport and all that most care about is the final tally. Had he had the conditions from 5 years earlier, they would have taken notice!

35. What do you foresee for the next 10 or 20 years in the event? Will the scoring tables be revised anytime soon and how will the performances change?

I don't know. If I could tell the future I'd be working on Wall Street. The records, of course, will improve. But much of that will be a result of improved equipment and tracks. In the U.S. what we need in CEs to stay ahead or just keep up with world progress are "event" programs, akin to the VISA Decathlon program of the 1990s...national coach, national team, international meets, camps and clinics.

And it is the alterations in equipment that force powers to be (World Athletics) to change the tables. Frankly, there is no schedule for table changes. They normally come about with equipment advances and upgrades, sort of what is happening now with developments in track surfaces and especially the shoes. Everyone is a bit faster.

I'll end with what Milt Campbell, the '56 Olympic champion at Melbourne, told a reporter (Milt was 60 years old at the time) who asked a similar question. "With all of the new technology, the tracks, the spikes, etc.," said Campbell at a Penn Relays, "I could see myself in the 100 moving so fast that by the time I got to the end of the straightaway I'd simply take off and fly away.

36. Any reflections you'd like to add?

Each coach/athlete needs to read... read...read. The best CE training manuals are in Dutch. I don't think there are English versions. The best read for a lot of the non-technique questions and situations that come up with CE training or competition, obtain a copy of "Stories from the Passenger Seat," by Harry Marra, Coaches Choice, 2022. You can order it via Amazon. It's a paperback, about 180 pages. Coaches/athletes often feel that they are somehow unique. Well, guess again. In 50 years of coaching, Marra has seen it all. His first-person account of CE situations, from the lowest level to the Olympic stadium, will be useful, instructive and entertaining. You can learn a lot.

Finally, each athlete needs a mantra with which to strive. CEs are a challenge...physical, emotional, personal. CEers have to be fit, anxious and ready to compete. One has to "go for it", (not "just do it."). One doesn't "just do" CEs, you hit'm hard. "My favorite mantra (one could do worse) comes from an old Dylan Thomas poem... "Do not go gentle into that good night...rage rage against the dying of the light."

THE DECATHLON

BY HARRY MARRA

From the archives. This valuable piece by Harry Marra, longtime coach of Ashton Eaton and Brianne Theissen, is a good follow-up to the Frank Zarnowski interview. The article first appeared in *Track & Field Quarterly Review* Vol. 86, #2, Summer 1986.

INTRODUCTION

This paper will try to highlight, in very simplistic form, all of the basic elements that need to be understood and put into practice in order to have success in the decathlon. When looking at the order of events, one would have the tendency to look at the event in a very complicated way:

Day#1

100m Dash
Long Jump
Shot Put
High Jump
400m Dash

Day#2

110m High Hurdles
Discus Throw
Pole Vault
Javelin Throw
1500m Run



Harry Marra and Ashton Eaton

However, a closer look will indicate that the order of events in the decathlon are really not that complicated. All of the throws, (shot put, discus and javelin) have some very basic similarities. The same holds true with the jumps

(high jump, long jump and pole vault). A thorough look at the event as a whole indicates the decathlon is comprised of a series of events that require short, explosive bursts of energy. To be successful as either a decathlete or coach of the

decathlon, these similarities must be the starting point for training. The last Olympic Champion produced in the USA was former World Record-holder Bruce Jenner during the 1976 Montreal Games.*

The 1984 Olympic Trials found 55 United States decathletes having met the 7625 (FAT) standard. It is very clear that we have better depth in the event than ever before; but, none of this “cream has risen to the top.” We in the USA need more commitment by decathlete, coach and administrator if we are going to once again produce an Olympic Decathlon Champion.

**THROWING THE DISCUS
IN THE DECATHLON,
AFTER FIRST RUNNING
THE 110 HIGH
HURDLES, IS CERTAINLY
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WHILE FRESH.**

ATHLETIC QUALITIES

Today a world class (8350+) decathlete is, and must be, a superior jumper, sprinter and thrower all in one. No longer is there room to have a weak event or two along the way. In fact, the newly approved decathlon scoring tables “penalize” the decathlete who has a weakness. History has shown that the very best decathletes have been very fast, agile athletes with tremendous explosive power who had the willpower, persistence and competitiveness to survive in the

face of all obstacles. Obviously, the first half of my last statement is a must if any decathlete is to find elite level success. But, just as important, is the second half of the statement that speaks to “desire.” Bob Mathias, a 17-year-old Olympic Champion in 1948, succeeded in the games despite many, many obstacles (15-hour days, rainy, cool weather and a pulled muscle). The same holds true for both Bill Toomey (1968) and Bruce Jenner (1976). The later two decathletes were probably the most “competitive” in United States history. All things being equal, the decathlete who “wants” it the most and is willing to commit himself toward this goal, will be the best.

Mental toughness and mental training are important for developing the successful decathlete.

BASIC TRAINING CONCEPTS

Concentrated Training. Plan the training for the future. Once an athlete makes a commitment toward the decathlon, his final goals should be centered over perhaps 4-6 years down the road. It is unrealistic to believe one can master the ten events in a shorter period of time. Spend the initial years selecting one or two of the decathlete’s weak events and center the training around them. For example, it is important for an 11-foot pole vaulter to master the event so heights of 15’6” and above become possible. Of course, once these “weak” events are brought up to respectable levels they must be developed further over the years. During this “focused training” time, the events that do not have priority must not be completely neglected. The young decathlete must train as

a decathlete and not simply as a specialist in one event. Events like the pole vault, hurdles and sprints should be given this priority early in the training years, while at the same time filling in practice hours with the other events. As the decathlete becomes more advanced he can focus on 3 or 4 events, as he should be in better physical condition and have more experience than the beginner. The West German decathletes and coaches have used this approach with outstanding results.

Sequence Training. Development of the ability to achieve best results within the framework of the decathlon should be another target of both athlete and coach. We are all well aware of the concept of “specificity of training.” That is, try to simulate the final performance of the skill in all lead-up situations. The same would hold true in the decathlon. Throwing the discus in the decathlon, after first running the 110 high hurdles, is certainly different than throwing the discus while fresh. The legs have been fatigued from not only the prior event, but also from the five events of the previous day. These same relationships and others also exist within the decathlon events. A sample day of training using the sequence method might be as follows:

- Warm-up Period
- Long Jump Runway Approach and Pop-ups
- Shot Put Drills
- 400m Training
- Warm-down Period

There are many, many possibilities here. Sequence training should be a very important part in the training of all young, inexperienced

**Later Ashton Eaton won Olympic decathlon gold medals in 2008 and 2012. Harry Marra was his coach.*

decathletes. The 1972 Olympic champion and then world record-holder, Nikolay Avilov, trained for years using the sequence system. An exact routine may be followed or another imaginative one can be designed. For example, decathletes can throw the discus later in the week in training (perhaps on Wednesday, Thursday or Friday), as usually their legs are fatigued at that time of the week.

IMPROVING CONDITION

Running Conditioning. As indicated earlier the decathlete should not train according to the plans and methods of specialists in individual event groups. Hence, the decathlete should design a program to improve his athletic conditioning in order that all 10 events benefit. The decathlon is an event that uses short spurts of explosive speed in nearly all of the events. Speed training should be of utmost concern to the coach and decathlete. Again, do not overlook aerobic conditioning early in the decathlete's career and then again early each season. This is important for maturing physically as a decathlete. Proper sprint mechanics, along with movements that can help develop sprinter's speed and explosiveness should be used quite often in decathlon training. A coach can design programs whereby a decathlete is developing his speed and running form without his being aware of it. For example, long jump approach work is an excellent way to reinforce both sprint mechanics and speed work while working on another event.

As a matter of adaption, decathletes can do two or three of their warm-up accelerations on the long jump runway as they prepare for

the 400 event later in the decathlon competition. Not only do they get loose, but they also get a "feel" for the approach in the second event. The pole vault event is another good way for a young decathlete to develop some speed work while working on another event. Of course, as coaches, it is imperative that we do not overlook mechanical efficiency of the runners as we work on speed development. The hurdles event is another example of this.

THE WORDS "COMMITMENT" AND "WILL-POWER" ALWAYS COME UP IN PREPARING FOR THE 1500.

It is important to understand that speed is one thing, speed endurance (400 events) is another. The 400 event should be looked upon as a "key":

- The decathlete who is in good shape physically for this event will be well on his way to being in good physical shape for the total decathlon.
- There is a tremendous "mental lift" at the end of the first day when a decathlete finishes the 400 with a strong performance.

We need look no further than Bill Toomey's 45.6 at Mexico City in 1968 or Bruce Jenner's* 47.5 at Montreal in 1972. Not only did their outstanding times set them up for a strong performance on the second day, but they had a tremendous amount of psychological damage

**Now identifies as Caitlyn Jenner*

on opponents when they finished on such a strong note. High school and university coaches should encourage their decathletes to run a leg on the 4 x 400 relay at the end of each meet, not only to develop conditioning for the event but also to develop a feel for how to run the event correctly. Workouts which emphasize the 400 training program can be planned three times a week (usually at the end of the training session).

The 1500! So much has been written and theorized about how to go about developing success here that it is mind boggling. In sorting everything out, some very basic principles come to the forefront:

- Do not try to develop an outstanding 1500 runner in the decathlon at the expense of the other nine explosive events. This could be disastrous.
- Take a long term approach to the event. Do not expect a young, 4:55/1500 decathlete to run 4:10 the next season. That may be a realistic goal in 4 or 5 years.

The words "commitment" and "will-power" always come up in preparing for this event. More 1500 runs are done poorly in a decathlon, simply because of a lack of the aforementioned qualities. That is not to say that desire alone will get you down to 4:10. Take a logical approach to this event. A decathlete cannot be expected to put in 75-80 miles a week as some of our better 1500 men do. Instead, develop a solid, broad-based aerobic foundation in your decathlete and then train him specifically for the event. Example: At the end of the regular Monday,

Wednesday and Friday training sessions, place emphasis on the 400 event.

Thursday can be reserved for specific 1500 work:

- Run an 800@ 75-75 (2:30).
- Take a 20-second rest and run a 400 @ 75.
- Jog across the infield and blast a 300 all-out.

The acute fatigue that builds

up here is tremendous. The decathletes may be totally spent. However, within 75 minutes they should be feeling fine. Two goals are accomplished:

1. The decathlete's legs are not "heavy and flat" from excessive LSD work, which does little if anything to aid the 1500 anyway.
2. The decathlete is able to experience first hand the sense of how a

1500 will feel in a regular decathlon.

Remember, it is Thursday and they are generally tired at that time of the week; however, encourage them to finish fast in that last 300. This prepares them physically and psychologically for that portion of the event. Many 4:40-1500 decathlete has improved to the mid-4:20's with this type of training. Periodically you can use fartlek training and different types of intervals for this.

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INCORPORATING A SUBJECTIVE EXERTION FEEDBACK (SEF) SCALE INTO FIELD EVENTS PERIODIZATION

BY NILS OLIVETO, M.S., CSCS

ABSTRACT

This article suggests a way to incorporate a Subjective Exertion Feedback (SEF) scale into a periodization plan specific for field events athletes in track & field. This paper will also compare Borg's RPE scale with this proposed SEF scale, discuss central nervous system (CNS) fatigue, highlight signs of subjective exertion specific to field anaerobic event athletes and demonstrate SEF data applications in various case scenarios for competitors performing in the jumping and the throwing events.



ABOUT THE AUTHOR

Nils Oliveto is an Olympic analyst for CBC Radio-Canada television,

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INTRODUCTION

Periodization can be defined as the manipulation of the body's adaptive mechanism to facilitate an improvement in performance (4). High performance sports must follow a training methodology that is meticulously adapted to the physical properties required for optimal outcome (21). Although it is a widely accepted training strategy, traditional periodization is nonetheless an unpredictable discipline in which its results can be uncertain (25).

Some experts like Verkhoshansky (30) believe that periodization is not able to provide precise long-term preparation for an athlete. In addition, the traditional use of periodization can also display qualitative restrictions (32). An adequate yearly training plan should therefore be monitored by constant scrutiny of physiological and psychological indicators during training (26).

It is important to accurately quantify all power event training parameters into a periodization program (20). Training variables such as volume and intensity must constantly be manipulated all the way until the most important date of the competitive season.

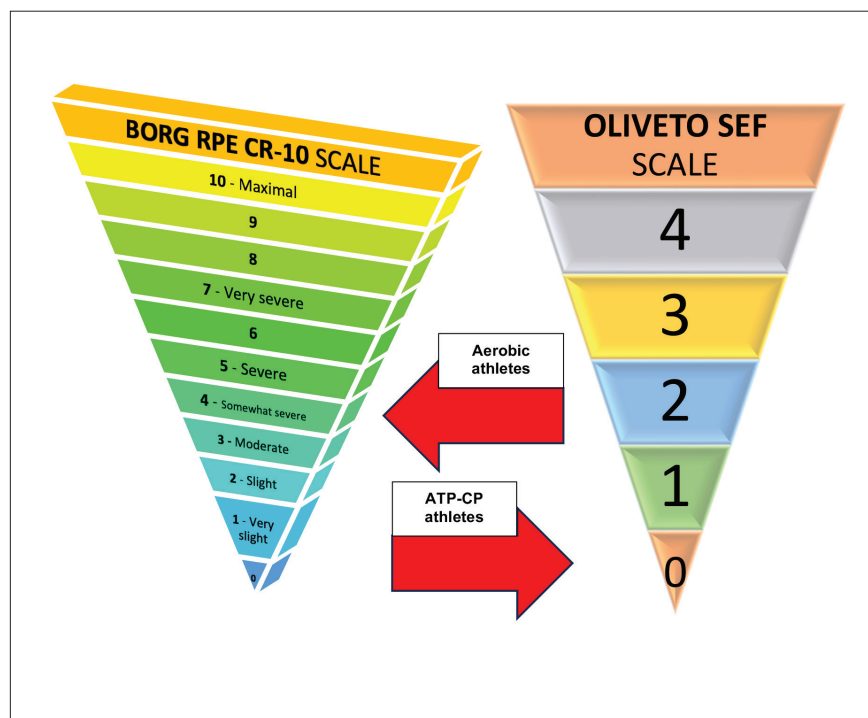


FIGURE 1: Comparison between Borg's RPE CR-10 and Oliveto SEF scales

The field events in athletics (jumps and throws) make no exception to the significance of selecting a suitable periodization (20). Using quantitative calculations as the only indicator of establishing volume loads and intensity can possibly overlook the fact that it does not take into consideration the jumper and thrower's subjective perception of the training magnitude (27).

This article suggests the inclusion of a subjective component, named for the purpose of this paper the Oliveto Subjective Exertion Feedback (SEF) scale, into a periodization plan specific for field event athletes in track & field. This additional parameter can be used by the coaching staff to monitor and quantify an athlete's own subjective fitness level and neuromuscular fatigue more meticulously in an attempt to ultimately reach the desired performance.

DIFFERENCE BETWEEN BORG'S RPE AND OLIVETO SEF

Perceived exertion during physical performance has been on the scientific radar for over half a century. It has been observed that symptoms of exertion and subjective estimate of the work intensity are unique to each athlete (17). Developed by Swedish scientist Gunnar Borg, the Borg Rating of Perceived Exertion (RPE) CR-10 scale is a tool for assessing an individual's effort and exertion (5). The RPE CR-10 scale has been repeatedly used in the past in conjunction to monitoring aerobic intensity under laboratory exercise testing and prescription (2). It demonstrates a high correlation between heart rate and the level of perceived exertion (16).

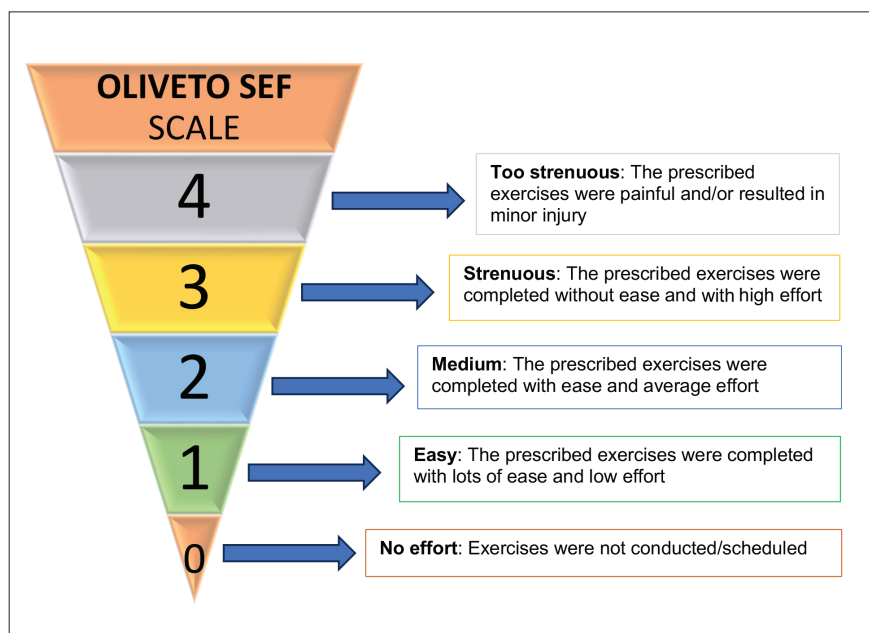


FIGURE 2: Oliveto Subjective Exertion Feedback (SEF) scale

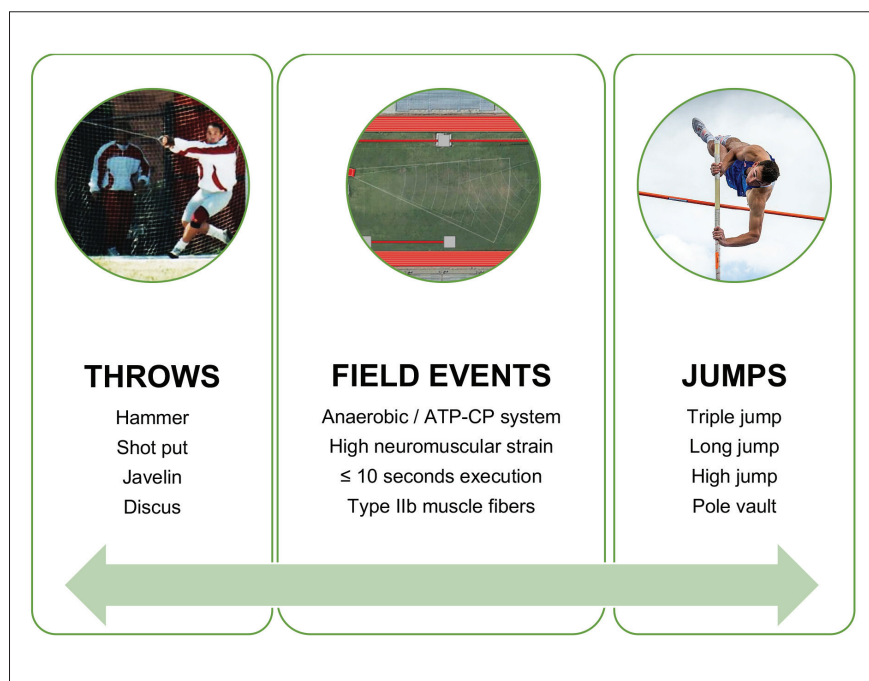


FIGURE 3: Field events in athletics

Subjective feedback information coming from the athlete may be a valuable source of data in the planning of subsequent volume and intensity in a periodization scheme. Siff states that “traditional periodization can often be limited since all loading is based upon a

fixed original input; hence the value of introducing a method of enhancing overall control and efficiency of performance” (27). Introducing a scale similar to Borg’s RPE CR-10 in the prescription of training could therefore overcome the restrictions of standard periodization.

Although the Borg scale is a valuable tool for aerobic / cardiovascular athletes relying on VO_2 max-related performances, it cannot be appropriately applicable for field events athletes like jumpers and throwers in regard to their perceived effort since intensity for anaerobic events is not measured in the same matter. The Oliveto Subjective Exertion Feedback (SEF) scale is specifically adapted for ATP-CP power event exercises prescription and its scale ranges from 0 to 4 (see Figure 2).

FIELD EVENTS ANAEROBIC PROFILE: JUMPS AND THROWS

Anaerobic parameters are the basics of all field event athletes in athletics. Jumpers and throwers utilize fast and explosive motions which reflect the usage of the ATP-CP system during the execution - less than ten seconds - of their respective event (see Figure 3). These athletes typically have a higher percentage of fast-twitch / type IIb muscle fibers. Their needs to execute high intensity actions, which augment motor unit recruitment and program specific neuromuscular patterns, are therefore crucial (12).

The success of a jumper/thrower athlete is achieved via a demanding series of speed drills, power/strength development, plyometrics, as well as countless of hours of technical jumping/throwing sessions (4). The event-specific volume (number of jumps/throws) and the event-specific intensity (measured distance jumped/thrown) data must also be well documented and incorporated into the periodization design (20).

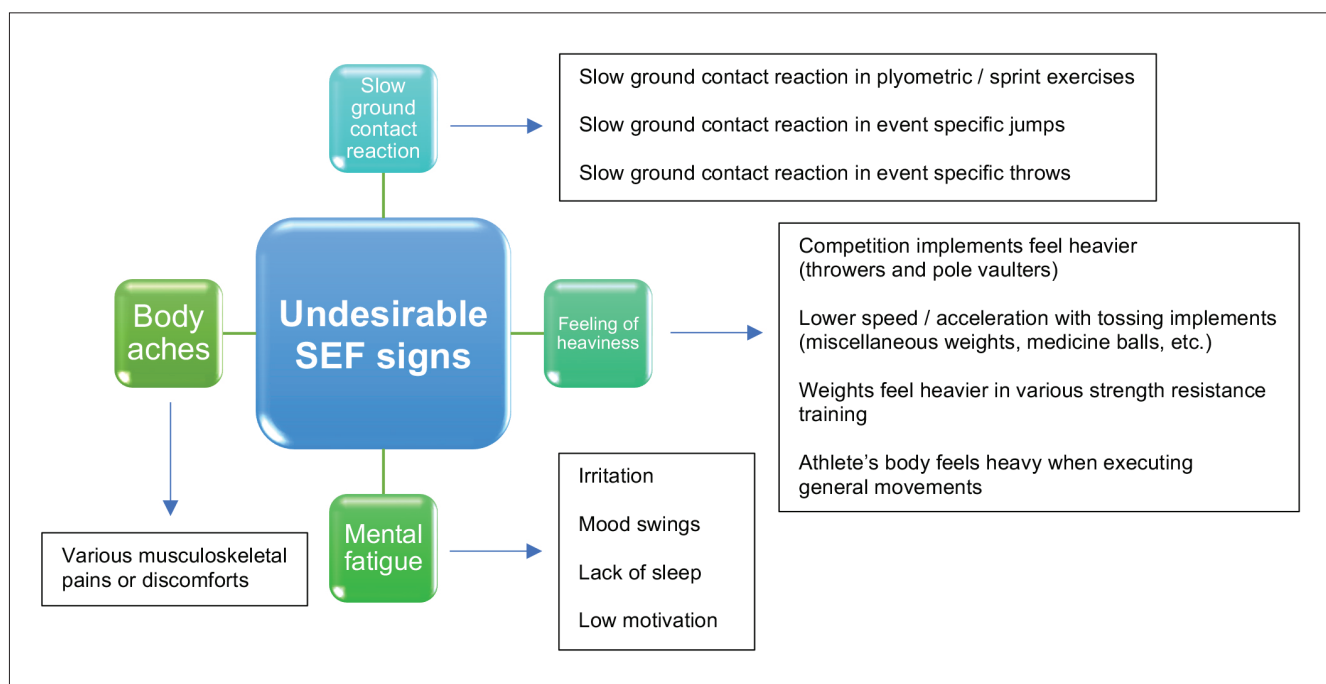


FIGURE 4: Undesirable SEF physical and mental signs

To illustrate the importance of a power athlete's subjective exertion feedback, we can look at the power/strength training component of a field event competitor. It is a common method for strength coaches to establish volume (number of sets and repetitions) and intensity (amount of weight) by using the percentage of a 1 RM maximum lift (18). However, this approach of determining subsequent training loads is not always accurate since it rarely reflects the exact fitness and/or mental state of the athlete on the day the 1 RM testing was recorded (26). This is the reason why athletes of the successful Bulgarian national weightlifting team, amongst others, establish their daily training intensity magnitude at a "daily-perceived maximum load" (29).

A growing level of micromanagement must systematically be applied as the athlete is improving over the various periodization

phases. Perceptive elements from the athlete can therefore be helpful in making cautious modifications during the establishment of training load parameters (25).

CENTRAL NERVOUS SYSTEM FATIGUE

Central Nervous System (CNS) fatigue is triggered by a decrease in individual motor neuron response, a diminution in motor neuron activity and a rise in inhibitory afferent feedback. Unlike peripheral fatigue, central fatigue affects the whole body. It is therefore harder and longer to recover nervously than muscularly (11).

It is obvious the neuromuscular strain resulting from all facets of the field event athlete's anaerobic preparation cannot be overlooked when assessing a top performance periodization (23). This neuromuscular stress can lead to fatigue, which in return is deemed

a subjective experience prompted by a variety of characteristics (30). A breakdown of the internal homeostasis causes fatigue and causes an upsurge in energy production required by an external stimulus. It leads to a decrease in performance related to an increase within the real/perceived exertion of an exercise (1).

CNS fatigue can also be linked with anxiety, personal difficulties and/or a decline in general stimulation (14). Impaired subjective perception of fatigue and general increase of CNS lethargy can be caused by outside factors connected to a stressful stimulus, including sleep deficiency (13).

Figure 4 illustrates a variety of undesirable SEF signs, specific to jumpers and throwers events, that field event competitors should subjectively monitor when giving feedback to their coaches following an exercise session.

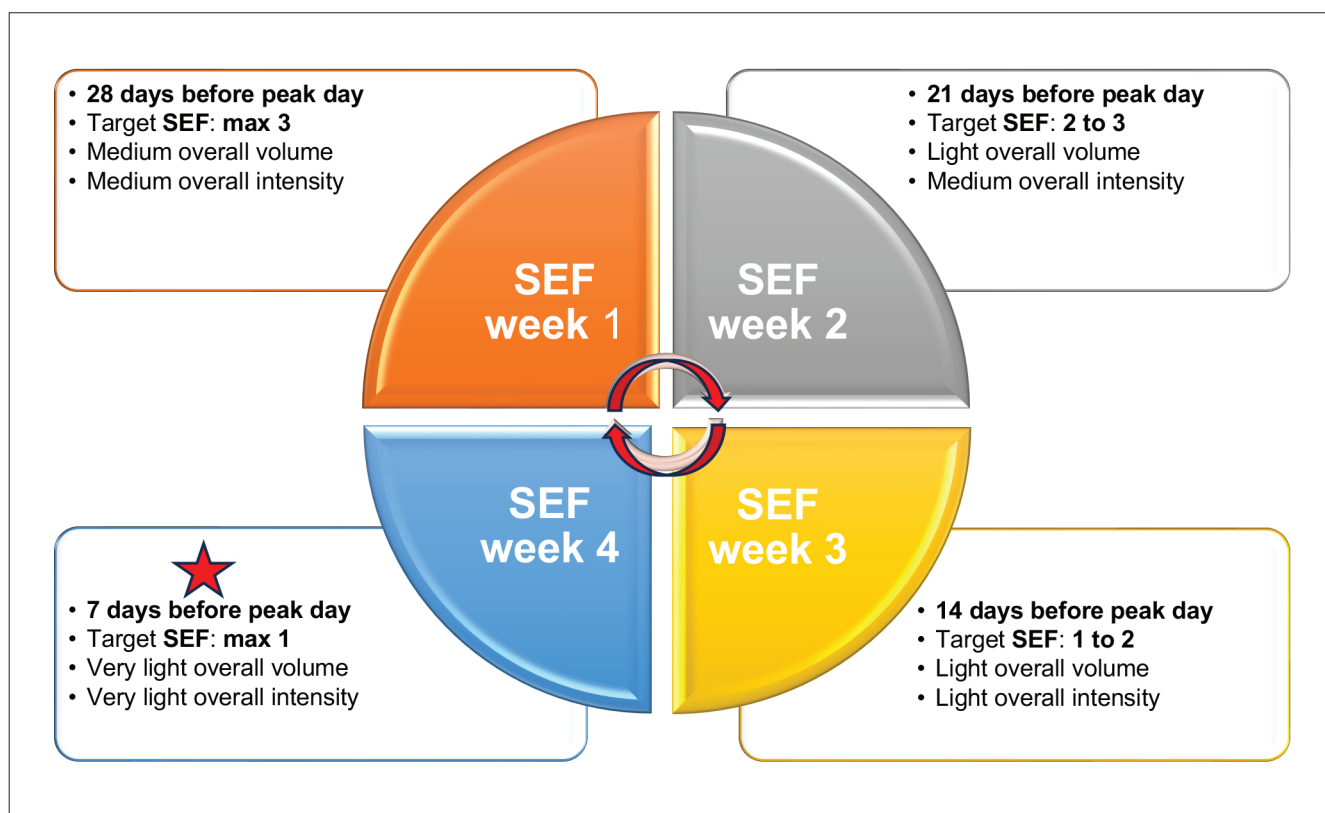


FIGURE 5: Suggested SEF target range for a 4-week competition phase mesocycle

SEF SCALE PERIODIZATION APPLICATIONS

Periodization is the division of training phases within a training macrocycle. It comprises various mesocycles commonly known as the general phase, the preparatory phase, the competition phase and the transitional/active-rest phase.

As a hypothetical case scenario, we can demonstrate the application of the Oliveto SEF scale for field event athletes tapering for a peak performance mesocycle (competition phase) four weeks before the Olympic Games (see Figure 5). The SEF scale method can of course be used all year round in different periodization phases and cycles.

The following field event characteristics should be underlined when

tapering for the season's main competition, like the Olympics:

1. Volume and intensity are gradually lowered in the last four weeks before the main event at the Olympic Games.
2. Most field events athletes will cease competition and strictly focus on fine tuning two weeks before the Olympic Games.
3. Volume and intensity are very light in the last seven days before the main event in order to maximize full recovery and supercompensation.
4. The SEF's target range values established by the coaching staff (which can obviously vary on a case-by-case basis) should correlate with the

training volume and intensity described above.

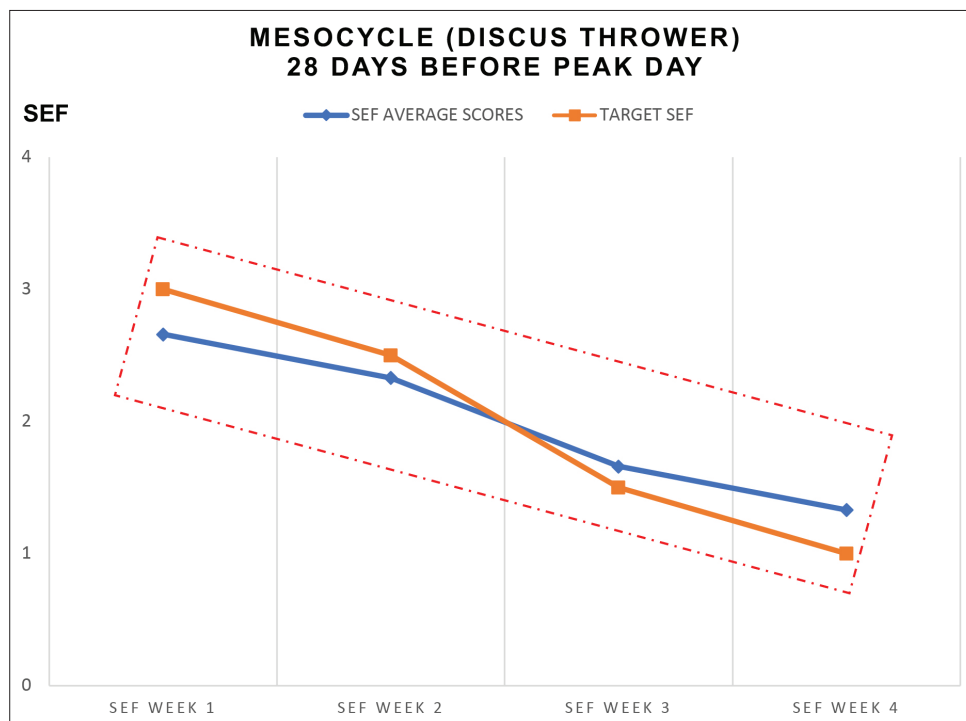
The following four hypothetical cases will be used as examples for SEF applications:

- **4-week mesocycle (discus thrower)**
28 days before peak day
(Table 1 / Graph 1)
- **4-week mesocycle (triple jumper)**
28 days before peak day
(Table 2 / Graph 2)
- **7-day microcycle (high jumper)**
7 days before peak day
(Table 3)
- **7-day microcycle (javelin thrower)**

Table 1: 4-week mesocycle (discus thrower)/ 28 days before peak day

| TRAINING COMPONENTS | SEF week 1 28 days before peak day | SEF week 2 21 days before peak day | SEF week 3 14 days before peak day | SEF week 4 7 days before peak day |
|------------------------------|--|--|--|---|
| Target SEF scale | max 3 | 2 to 3 | 1 to 2 | max 1 |
| Plyometrics / Speed work | 2 | 3 | 1 | 2 |
| Weight / Resistance training | 3 | 2 | 2 | 0 |
| Discus Throw | 3 | 2 | 2 | 1 |
| SEF average | 2.66 | 2.33 | 1.66 | 1 |

Graph 1: 4-week mesocycle (discus thrower)/ 28 days before peak day



7 days before peak day
(Table 4)

At the end of each training session, the athlete can share his/her SEF scale value with the coach, who now possesses a complementary “athlete’s subjective SEF data” that can be useful when re-establishing volume and intensity parameters for the subsequent workout sessions. It serves as valuable information and can influence the coaching staff’s choices of training loads for upcoming exercises.

To calculate the **SEF average** for each weekly microcycle (as computed in each of the four tables below), we can use the general formula:

$$\mu = (\sum Xi) / N$$

and convert it into the following Oliveto SEF mathematical expression:

$$\mu_{SEF} = [\sum SEF_{ps} + \sum SEF_{wt} + \sum SEF_{es}] / 3$$

where:

$\sum SEF_{ps}$ is the total plyometrics/speed training subjective exertion feedback,

$\sum SEF_{wt}$ is the total weight / resistance training subjective exertion feedback and

$\sum SEF_{es}$ is the total event specific training subjective exertion feedback.

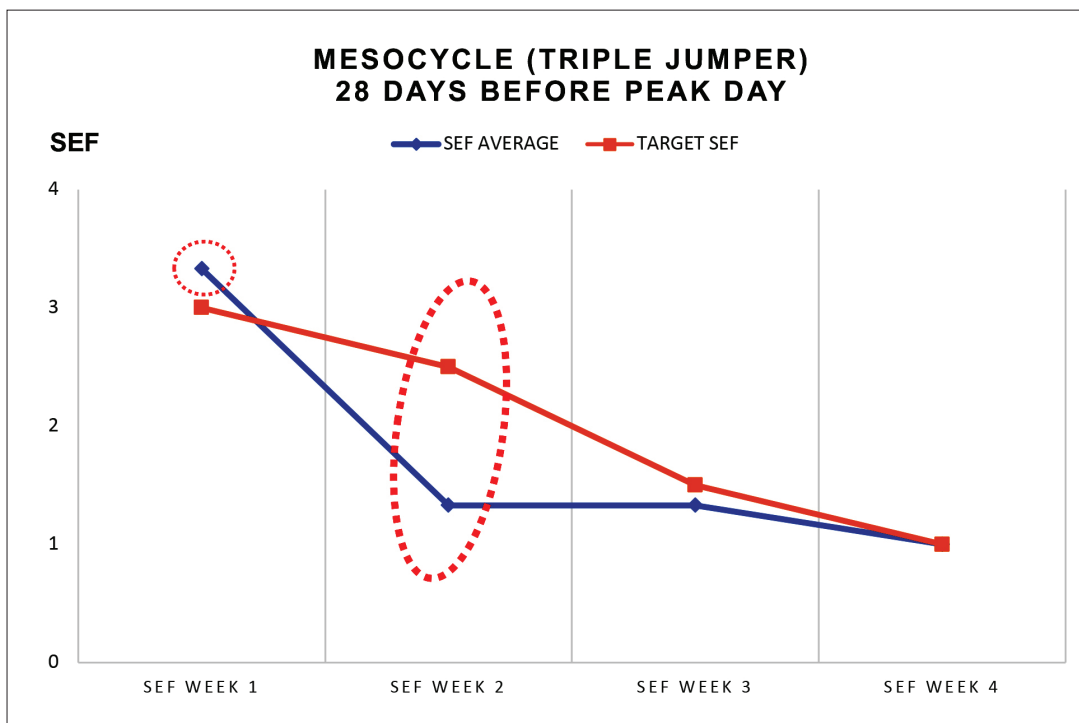
It is important to insist that these tables below are only examples. All “Target SEF scales” can be modified depending on the coach’s strategic approach in relation to specific training methodology and performance needs.

The discus thrower’s case demonstrates an ideal SEF leading up to the peak performance day. All SEF averages scales for all training components fall appropriately within the suggested target SEF scale corresponding to each weekly microcycle. Graph 1 clearly shows a high correlation between the SEF Average values and the Target SEF values.

Table 2: 4-week mesocycle (triple-jumper)/ 28 days before peak day

| TRAINING COMPONENTS | SEF week 1 28 days before peak day | SEF week 2 21 days before peak day | SEF week 3 14 days before peak day | SEF week 4 7 days before peak day |
|------------------------------|--|--|--|---|
| Target SEF scale | max 3 | 2 to 3 | 1 to 2 | max 1 |
| Plyometrics / Speed work | 4 | 0 | 1 | 1 |
| Weight / Resistance training | 3 | 2 | 2 | 1 |
| Triple Jump | 3 | 2 | 1 | 1 |
| SEF average | 3.33 | 1.33 | 1.33 | 1 |

Graph 2: 4-week mesocycle (triple-jumper)/ 28 days before peak day



SEF scale, except the SEF average for the specific high jump training component (SEF average = 1.14) which can be argued it is slightly too high. However, the overall Microcycle SEF average (0.90) doesn't surpass the SEF target scale of 1, which works as intended in this case.

The javelin thrower's case shows problems leading up to the peak performance day.

The triple jumper's case demonstrates glitches with its SEF results. This SEF for the "plyometrics / speed work" in week 1 is too high (SEF = 4). We can argue the prescribed workout was too strenuous and the athlete could have, for instance, reported muscle or joint pain. As a result, the SEF average for week 1 was also too high (SEF average = 3.33). Consequently, an adjustment in training was necessary for week 2 in order for the athlete to recu-

perate and rest. Graph 2 clearly shows this discrepancy between the SEF average values and the Target SEF values, particularly on week 2, following the necessary adjustment resulting from the high SEF in week 1.

The high jumper's case demonstrates an almost ideal SEF leading up to the peak performance day. All SEF averages scales for all training components fall appropriately within the suggested target

The SEF average for the "plyometrics / speed work" component is a bit high. The main concern comes from the javelin SEF (=4) seven days before the peak which indicates the event specific intensity workout was perceived by the athlete as too strenuous. This early specific javelin component microcycle difficulty led to a high SEF average (= 1.43). These two issues resulted in an overall microcycle SEF average of 1.14, which is slightly higher than the

Table 3: 7-day microcycle (high jumper) / one week before peak day

| TRAINING COMPONENTS | SEF 7 days before peak | SEF 6 days before peak | SEF 5 days before peak | SEF 4 days before peak | SEF 3 days before peak | SEF 2 days before peak | SEF 1 day before peak | SEF average (target scale: max 1) |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|--------------------------------|--------------------------------------|
| Plyometrics / Speed work | 2 | 0 | 3 | 0 | 0 | 1 | 0 | 0.86 |
| Weight / Resistance training | 0 | 2 | 0 | 2 | 1 | 0 | 0 | 0.71 |
| High Jump | 3 | 0 | 2 | 0 | 1 | 1 | 1 | 1.14 |
| Microcycle SEF AVERAGE: 0.90 | | | | | | | | |

intended SEF average (max 1) for that microcycle.

OVERTRAINING

Overtraining can be defined as the decline in performance consequential of the incapacity to endure or adjust the intended training magnitude (19). It can be the result of psychological and physiological stress and, if not resolved, may eventually have a negative effect on performance (22). Stress is not only affected by the aimed magnitude of the training load, but is also influenced by the athlete's perceived strain of that load during a workout session. A proficient coach should attempt to decrease the risk of overtraining by being

aware of the athlete's immediate response of that aforementioned workout (24). Extra after-effect levels of fatigue will overlay the existing ones if training takes place under an already pre-existing fatigue state (3).

One of the great advantages of using a SEF scale is to possibly reduce the risk of overtraining. If overtraining occurs, the training strategy needs to be re-evaluated in order to permit the athlete to return to the previous training state. The coach should also modify the exercises by reducing the volume / intensity of training and add recovery methods. An athlete can be fatigued to the point that a typical recovery period of a few days be-

comes insufficient. If a training load is excessive, overtraining recovery can take many weeks, and in some cases months to occur (28).

CONCLUSION

An athlete using a Subjective Exertion Feedback (SEF) scale to quantify the perceived field event intensity training magnitude efforts can result in:

- Reducing the risks of injuries
- Reducing the risks of overtraining
- Increasing the chances of continuous improvement
- Increasing the chances in realizing the targeted performance

An athlete's training strategy should

Table 4: 7-day microcycle (javelin throw) / one week before peak day

| TRAINING COMPONENTS | SEF 7 days before peak | SEF 6 days before peak | SEF 5 days before peak | SEF 4 days before peak | SEF 3 days before peak | SEF 2 days before peak | SEF 1 day before peak | SEF average (target scale: max 1) |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|--------------------------------|--------------------------------------|
| Plyometrics / Speed work | 3 | 0 | 3 | 0 | 0 | 2 | 0 | 1.14 |
| Weight / Resistance training | 0 | 3 | 0 | 2 | 0 | 1 | 0 | 0.86 |
| Javelin throw | 4 | 0 | 3 | 0 | 2 | 0 | 1 | 1.43 |
| Microcycle SEF AVERAGE: 1.14 | | | | | | | | |

take into consideration fitness and fatigue after-effects in an attempt to make the most of the training load (6)(9)(10). Since fatigue is an expected outcome of training stress, fatigue management tactics are essential to a reliable periodization plan (7)(8)(31). One of the suggested tactics in diminishing the probability of fatigue can be the use of a training feedback scale like the SEF. Coaches can keep an even closer eye on all training empirical data for progress to occur and for injuries to be avoided (15). It is an accepted reality that periodization is not an exact strategic science and its predicted outcome can vary greatly. The exclusive use of quantitative parameters can very possibly lead to stagnation or to a decrease in the sought-after results. Taking into consideration the subjective exertion feedback of a field event athlete's perceived rating of effort can potentially assist in enhancing overall control and efficiency of future performances.

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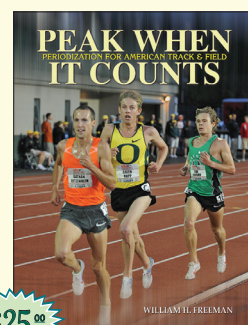
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USATF COACHING EDUCATION NEWS & NOTES

The USATF national office and USATF Coaching Education Executive Committee are excited to announce the following new courses and professional pathway program changes.

<https://www.usatf.org/programs/coaches/coaching-education>

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- The USATF Level 1 Program is evolving to a blended delivery format. In the new format, the sport science units will now be delivered in a self-paced online course before members complete the event-specific training live on Zoom or in person*, minimizing scheduled contact hours. The new experience will also feature updated lessons on athlete development models, instructional strategies, nutrition, insights from USATF National Team Coaches, and more.

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USATF LEVEL 2 PROGRAM ANNOUNCES CHANGES AND UPDATED CURRICULUMS

- USATF Coaching Education will no longer seek individual program accreditation for the USATF Level 2 Program through the National Committee for Accreditation of Coaching Education (NCACE). While re-accreditation for the USATF Level 2 Program was initially pursued, the recently revised accreditation standards presented a substantial burden to USATF members seeking to earn their USATF Level 2 certificate and upheaval to the USATF Professional Pathway/CECS. USATF Coaching Education proudly maintained two dually NCACE accredited programs from 2017-2023, with the USATF Level 1 Program originally earning accreditation in 2012, and re-accreditation in 2020. However, member coach needs, and evolving programming with greater autonomy are paramount concerns. Moving forward, USATF Coaching Education will place a greater emphasis on the newly revised USOPC Quality Coaching Framework, releasing NGB specific American Development Model (ADM) resources, and exploring new programs for increasing mentorship opportunities and fostering connections amongst coaches.
 - o With this decision, the following USATF Level 2 Program changes will also be implemented:
 - The field experience assignment, added in fall 2022, is eliminated for all Level 2 participants effective immediately.
 - Years of track and field, cross country, club, or personal run coach experience has been lowered to two (2) years from three (3) years, effective immediately.
 - Effective January 1, 2025, all USATF Level 2 certificates will be valid for a period of eight calendar years, expiring on December 31. Level 3 certificate holders will be exempt from Level 2 recertification. A listing of approved courses for recertification will be forthcoming.
- Announcing updated USATF Level 2 curriculums:
 - o The USATF Level 2 Combined Events program will return summer 2024 following completion of a

curriculum update by project team members, R. Craig Poole, Chris Richardson, and Richie Mercado.

- o The USATF Level 2 Youth Specialization discipline has been renamed to Under-20 (U20) and curriculum updated by Dr. Matt Lydum. The updated curriculum is set to debut at the summer 2024 USATF Level 2 School, along with additional instructors.
- o The USATF Level 2 Endurance discipline was updated by a project team of Kathy Butler, Dave Mills, and Scott Christensen, and debuted in summer 2023.
- The next USATF Level 2 School will be July 9-13, 2024, Indianapolis, IN. Applications will open soon on the USATF Calendar of Schools.

USATF INSTRUCTOR TRAINING COURSE (ITC) RETURNS IN 2024

- The Instructor Training Course (ITC) is the pathway to becoming a USATF Level 1 Instructor and recruiting a new cohort. Applicants should have completed two Level 2 event disciplines prior to applying or at least one USATF Level 3 or World Athletics Academy event discipline, hold at least eight years of coaching experience, and must be a member of the USATF Coaches Registry. Prior public speaking experience and advanced degree/training in a sports science discipline is preferred. ITC will be offered May 7 - July 8, 2024, in a hybrid format, with the first eight weeks in an online environment and culminating in a day of in person instruction in Indianapolis, IN. Seats are limited to 16 participants and early application is advised. Apply now on the USATF Calendar of Schools.

USATF JOINS MILLION COACHES CHALLENGE PROVIDING FREE SOCIAL, EMOTIONAL SKILLS TRAINING (ONLINE)

- A good coach can change everything. While most coaches recognize the key role, they play in promoting youth development and social and emotional skills, they often don't feel supported in doing so. The Million Coaches Challenge aims to train one million coaches in youth development techniques by 2025. USATF members, fans, parents, and supporters can access the three 30-minute training for free on the USOPC platform.
- Modules include:
 - o Module 1: *Making the Connection*
 - o Module 2: *Connecting with my Athletes*
 - o Module 3: *The Power of Your Presence*
- Coaches that hold a USATF Level 1 certificate expiring in 2024 can complete and utilize the courses as their renewal course (must complete all three modules).

NEW E-LEARNING PLATFORM SET TO RE-LAUNCH AND INTEGRATE WITH SPORT80

- USATF Campus courses have been reformatted and will now be delivered on a new platform within their Sport80 profile. The new platform features single sign on (SSO), matching members Sport80 login credentials, and will instantly push USATF course completion data to their Sport80 profile under Coach Certifications. A previous or current USATF membership number is required to access the course catalog/resources.

Learn more about each program under Programs – Coaches - Coaching Education on USATF.org.





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