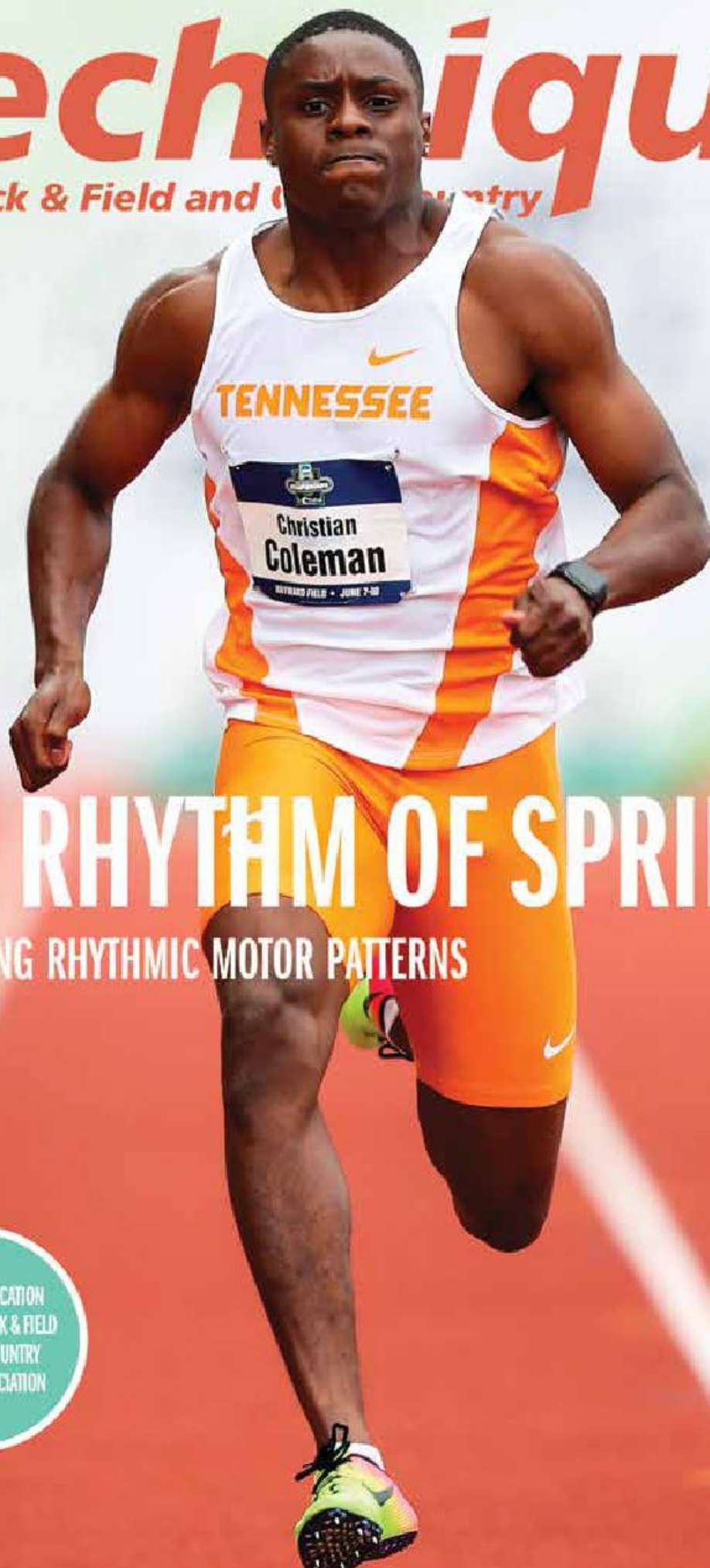


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SIMPLIFYING THE POLE VAULT

A NON-VAULTER'S APPROACH TO SUCCESS

ELI SUNQUIST

The purpose of this article is to share a different approach to the teaching and coaching of the pole vault, so that vaulters (and their coaches) will be able to learn the event quicker and more effectively. I was not a pole vaulter myself and I have been coaching the event for less than five years. However, I do believe that I have a unique outlook into the event, as my first group of vaulters were decathletes. I had to teach them how to vault in a limited capacity, as they had nine other events to train for. So I looked at what was necessary for safety and success, and focused only on those things. This approach to training worked quite well, and I have stuck with it in the coaching of pole vaulters of all levels.

To the outside observer, new coach, and nervous parent, the pole vault looks like a very complicated and dangerous event. People are running really fast, jumping high into the air, and using a pole (that might or might not break) to fling themselves up into the air. However, I believe that the “complexity” of the pole vault has become one of a self-fulfilling prophesy. In reality, the event is no more difficult to learn than learning how to throw the discus, run the hurdles, or even make an omelet. It is all about how we TEACH the event that makes the difference. The purpose of this article is to simply the vault for the athlete, the coach, the nervous parent and the track and field community in general.

Richard Lavoie, world-renowned educator of children with special needs, once said that the key to learning and reinforcing a new skill was that the individual “needed opportunities to practice skills in authentic situations”. Is what we are doing, the drills we are practicing having the sort of carry over to the whole skill as we would like? Or are they just cool, fun, or complicated looking drills that really do nothing to progress of the event? A lot of debate has gone on about whole or part learning. Since the pole vault, much like the triple jump, is very much a serial event it has to be practiced as a whole. Sure, there are times for drills, but the drills need to have a direct influence on what you are trying to accomplish and if they don't then you are wasting your time.

When I start with a vaulter for the first time, whether they have been vaulting for five years or five minutes, I go over the goals of the vault with them. I make it very clear that the purpose of the event is to jump as high as possible, in a safe manner. That is it. The goal of the event is not to “get upside-down” or get on the biggest pole possible, to bend the pole, or even “get vertical”. These are all great things to aspire to but do not make up the purpose of the event. The goal of the hurdles is to run as fast as possible, the goal of the javelin

is to throw it as far as possible, and the goal of the pole vault is the exact same goal of the high jump. To jump as high as possible, in a safe manner. If you always keep this in mind your list of drills will shrink and your ability to keep working on the event as a whole will help you achieve the goals of the vault much sooner.

JACKSONVILLE ATHLETIC CLUB (JAC) TECHNICAL MODEL / VOCABULARY:

The semantics of different aspects of the vault are extremely important when coaching the pole vault. For instance, if you tell a vaulter to “get upside-down” then they might try to turn upside down as soon as they can (i.e. right off the ground) thus killing pole speed, making it very difficult to vault high and safely.

The following are my thoughts on a sound technical model, as well as the vocabulary that I use when teaching and coaching the vault. (For the purpose of this article I will assume the vaulter is right handed, jumping off of their left foot.)

Approach Run: The purpose of the approach run is simply to produce as much speed as possible, under control, so that at takeoff the vaulter will be able to put as much energy from the run into the pole as possible. The length of the approach run is very individualistic and the coach needs to spend a lot of time working with their individual athletes to determine the right length. Speed at takeoff is vital so the coach needs to make sure that the athlete has a distance that fits their needs and ability levels. Having high school girls run from nine lefts, when their 100m PR is over 14 seconds really isn't the best idea. Most high school vaulters should start with a 12 step approach (six lefts) and then move back if they are able to handle that approach. The cue I use is “speed at takeoff” so that they think about speeding up into their last few steps and takeoff.

Pole Drop: I will talk about running with the pole in a later section, but make sure that at the start of the run

the pole carry is relative to the length of the run. Yes, Bubka had his pole almost perpendicular to the ground at the start of the run but he also had a run of right at 40m and a very heavy pole. Make sure you keep in mind the length and speed of approach first when determining the start position of the pole as well as how to gradually lower the pole as you are approaching the takeoff.

Transition from run to takeoff: As the vaulter is approaching the box, the feet should be speeding up and the arms should be lowering the pole in a sequential way. This means that there will be a natural lowering process using the left hand as a fulcrum to steady the pole which allows the right hand to move up the body and forward. Do not complicate this any more than it needs to be. Simply put, as the vaulter gets closer to the box, lower the pole. Hands moving up and forward at takeoff is what needs to be practiced.

Takeoff: As the pole vault is a jumping event, much time needs to be spent on learning and teaching that the takeoff is an aggressive jump off the ground. The harder you jump off the ground, the easier it will be to move the pole to vertical and put energy into the pole. For the right handed vaulter they will push forward and up off the ground with their left foot while both arms also push up on the pole up and forward in an attempt to get the whole unit (vaulter and pole) moving both up and forward. The cue that I use here is “Get the top of the pole to vertical / out in front of you as fast as possible.” The main goal of the takeoff is to move the pole forward, and drive the body forward. This is why talking about getting upside at takeoff can be dangerous as it instills in the vaulter's mind getting the shoulders back at takeoff, which is the opposite of trying to move everything forward at takeoff. Any talk of arms moving back at takeoff, or shoulders / head moving back at takeoff should be eliminated. Takeoff up and forward

and your arms, shoulders, and body need to be doing the same.

Swing: After takeoff, which should be an aggressive jumping and pushing motion, the fast, aggressive swing comes next. The swing is a simple movement, and can be performed by the youngest and most novice vaulters. The left leg, which is now left behind the vaulter after an aggressive, forward jump at takeoff, simply swings to the top of the pole as fast as possible. Let me emphasize using simple cues when coaching the vault. After the takeoff comes the swing. There is no cuing of shoulders getting back, getting upside-down, or getting into a rock back position. All of these cues are what coaches see as a result of a good swing. If you swing aggressively to the top of the pole, your shoulders will automatically move back as your legs and hips move up. Most of the time spent in coaching this phase should focus in on the left leg, not the head or shoulders.

As the vaulter's leg is swinging up to the top of the pole, the arms should still be trying to put pressure against the pole. Pulling should only occur once the athlete gets to the top of the pole (i.e once the swing is completed). Keep reminding the vaulter that the vault is a "pushing" activity from takeoff until they get to the top of the pole, then immediately switches to a "pulling activity" only AFTER they get to the top of the pole. Pulling in early will reduce pole speed which is detrimental to jumping high. Swing to the top of the pole FAST, then pull up the pole FAST.

Pull / Turn: This aspect of the vault is also quite simple, but is directly correlated to the run, takeoff, and swing. Once the vaulter swings up to the top of the pole, they pull (this should be the first time they are pulling at all) their body straight up the pole. Feet and legs go up while the head and shoulders go back. Alan Launder simply says "The legs go up, and the shoulders go down". Much like a long jump landing or the arch over a high jump bar, most of the time in training should be working on the aspects BEFORE this happens. A good landing or arch or pull up the pole are a direct result of what happens before that.

JAC TEACHING PROGRESSION / DRILLS WE USE:

Pole carry- We always start with a small pole to work on the fundamentals. Once the vaulter is proficient in a correct pole carry, we then add in walking drills, followed by jogging drills, then sprint drills with a pole. We also do a series of pole carry drills as part of our cool down on certain days to help force proper



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mechanics when the athlete is tired. This is a great way to kill two birds with one stone. The main goal is to get the athlete not just comfortable carrying the pole, but also improve their coordination.

Running with the pole: Running with the pole is a learned skill, so it must be rehearsed regularly, both on and off the runway. One day a week we do acceleration development work with a pole. This is separate than pole runs (which mimic the approach) as the goal of the acceleration development work is to increase power output and work on the first one third of the approach. We cue the athlete to push as hard as they can down the track without worrying about the full approach run rhythm. The vaulters usually use a pole two bigger than their big pole. This allows a small bit of resistance that will help build confidence later when it does come time to get on a bigger pole. We follow the principles of speed development throughout the training week, doing one-third of the work with a pole, and two-thirds of the work without a pole.

Plant and takeoff: The most important parts of the plant and the takeoff are jumping up and forward at takeoff as well as having the hands high to push the pole forward and up and takeoff. The movements need to happen in a uniform manner and we do most of our takeoff work on a stiff pole. This ensures the athlete focuses on moving the pole to vertical and being aggressive on the jump off the ground. We start holding about halfway up the pole (a big pole) from four total steps (two lefts) and gradually work our way up the pole. The challenge is to see how high they can hold on a

SIMPLIFYING THE POLE VAULT

very stiff pole from an approach of four to five lefts while still making it in the pit safely. The athlete will run faster, jump harder off the ground and use their hands very effectively in order to do this. The adjustments that we use if they are making it into the pit easily are to go up a handgrip, and then by going back six-inches on their run. We use a big pole for this, as it helps the athlete be aggressive and get them used to running and jumping with a big pole.

Swing: To work on the swing, we stay with the straight pole drills. We see how high the athlete can hold but still making it into the pit safely. The jump off the ground needs to be very forceful (up and forward) and as soon as the takeoff leg leaves the ground the athlete is cued to swing their leg up to the top of the pole as fast as possible. Simple movement, simple cue. The faster they swing the more energy it adds to the pole / vaulter system which will then help to increase pole speed. We start with two lefts and go back to four lefts on this drill. Same adjustments are made in terms of grip and run on the drill described above.

Getting feet up over the top of the pole: To work on the athlete getting their feet up the pole after the swing we vault from three-five lefts on a pole that is comfortable for the athlete and they try to get their feet to touch a bungee that is up at a challenging height for the athlete. Usually this is one to two inches higher than the athlete's current PR.

PROBLEM SOLVING:

What to do if your athlete can't takeoff?: One common error in pole vaulting practice is to allow athletes to run through and not takeoff. If the athlete is not taking off there is a reason for it. It is not because they aren't "tough enough" or "weak" but rather it is because something is off. Do they

feel too far away? Do they feel that the pole is too stiff? Are they thinking too much? We have a strict three strike policy at our practices. If an athlete runs through three times in a row we do what we call a "re- boot". The athlete gets on a bigger pole and does straight pole takeoffs from six steps (three lefts). The athlete is encouraged to run very fast, jump very aggressively off the ground and then swing very fast up to the top of the pole. This reinforces jumping off the ground, being aggressive (bigger pole) and swinging fast. The athlete is then moved up a handgrip each time and the run is moved back six inches at a time until the athlete feels confident enough to jump again from a short run. We have had a lot of success in terms of fixing athletes who couldn't takeoff. Once they get their confidence back up with the straight pole they are able to jump again in practice. You should never have your athletes run through more than three times in a row in a practice session. Fix it and then get back to jumping.

A few years ago I had a high school jumper who had a hard time taking off from any run longer than four lefts in practice. I started working with him in February and he had been stuck at his current PR for over a year. There was a stretch of six weeks where all we did in practice was pole runs, straight pole takeoffs, and straight pole jumping from a short run. In April he PR'ed by two feet. The work we did in practice was very mundane, very boring, yet very beneficial. He trusted the system, put in the work, and saw the improvements. Make sure you are always doing something in practice to help your vaulter improve.

Have a sense of urgency about getting better. No one gets better when they spend a whole practice running through.

Pole Selection: A big topic in the vault community is pole selection.

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What size pole should my vaulter get on? Shouldn't they jump on the biggest pole they can get on so that they can vault higher? Can they vault on poles rated less than their body weight? The answers to all pole selection questions are beyond the scope of this article but one thing that must be mentioned is that of getting on a bigger pole. All things the same (speed, technique, strength) the athlete who can get on the bigger pole will jump the highest. However, this is only after a certain level of technique and experience has been achieved. Always work on full vaults on a pole that the athlete can comfortably jump on.

Pole selection for any day, whether it is a small meet, practice, or big competition, is very dependent on numerous factors. Weather, adrenaline, injuries, length of run, all are factors that must be in play when determining what pole to use. Don't get caught up in the numbers. If the athlete trusts you as a coach, you should be able to put them on the right pole for the situation and they will be able to jump just fine on them.

In practice, we jump from two, three, four, or five lefts. Very rarely will we jump from an approach farther back than five lefts in practice. The main reason is that this allows the athlete to take more jumps in a session. I never try to get vaulters on challenging poles in practice from a longer run. All we work on is good technique from a short run and then over time this will allow them to get on bigger poles in practice from the same run. Our kids leave their competition poles in the shed during practice. The whole goal of practice is to improve technique, speed, and strength. Trying to get on a big pole in practice is a recipe for frustration and injury.

FINAL THOUGHTS:

If you are a youth or high school coach, please spend a lot of time on teaching the fundamentals of the vault to your athletes. The ultimate goal for your vaulter is to learn great

fundamental technique so that they will be able to continue to improve in college and beyond. The pole vault takes years to master so there should be no reason that your vaulter should not have a very enjoyable and successful career. IF you teach them how to vault safely and correctly. This does mean spending time on smaller poles so the athlete can learn the technical model. Over time, as they get faster, stronger, and more confident, they will be able to progress on bigger poles. Moving to a bigger pole should not be a frightening thing for a vaulter rather it should be the next logical move (i.e. they are doing everything correctly and moving into the pit easily) and one that is understood as such by the vaulter. The pole that they should be vaulting on should be directly related to their approach run, how they are feeling that day, etc. Vault them on the poles that they can comfortably vault on and then make adjustments accordingly.

I have seen too many high school vaulters coached to instant gratification only to have very poor and dangerous technique. They can only jump as high as they are holding, which means that there will be a point of diminishing returns. What is worse is that they go to college and never improve. A vaulter should continue to improve every year IF they have a technical model that is sound.


If you simplify the vault in your teaching and drill selection, you will allow your vaulter to learn quicker, safer allowing your vaulter to have a more successful long term career. A state championship is a great accomplishment, but that should not be the ultimate goal for you or your vaulter. The ultimate goal should be for your athlete to have a technical model that will allow them to continue to improve year in and year out, and do so in a safe manner.

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Your improvements were an inspiration to me, and it was a pleasure to watch every single one of you get better. 🙏



Coach Eli Sunquist founded the Jacksonville Athletic Club in 2013 where he works extensively with athletes in the pole vault, javelin, combined events and jumps among other disciplines.