BFS POSITION PAPER

Unification

BFS guidelines on why and how to implement this important training concept

Unification is the concept that all high school and middle school athletes, and even some college athletes, will follow the same basic training philosophy. This means that regardless of the sport, all athletes will perform the same core weight training exercises, the same speed and agility exercises, and the same flexibility and plyometric exercises. BFS is a strong proponent of unification.

Unification provides a model of organization that reduces teaching time, prevents many administrative hassles and personality conflicts, and improves athletic performance year-round. Unification creates a positive environment that facilitates success for all participating coaches, teachers, athletes and students. Although unification is used primarily in the training of athletes, it is also appropriate for physical education classes.

The Specificity Challenge

Along with the benefits of unification, there are challenges; the greatest challenge is *specificity of training*. Specificity of training is defined as "the principle that physiological adaptations in response to physical training are highly specific to the nature of the training activity. To maximize benefits, training should be carefully matched to an athlete's specific performance needs." (1) In other words, coaches face a tough time in determining the "best" training for their athletes because every athlete is unique and "performance needs" differ from athlete to athlete.

One factor that must be mentioned in any discussion of strength training for sports and how it applies to specificity of training is in the area of motor learning. To reach top levels, gymnasts and figure skaters spend large amounts of training time, starting at an early age. Michael Jordan was an exceptional basketball player, but he did not excel in baseball to the same degree because he did not practice baseball extensively at a young age. Regardless of how good a strength program is, if athletes in some sports do not practice this sport at an early age, they will probably not achieve the highest levels in their sport.(3)

Although determining which activities have the best transfer of training to a spe-

cific sport can be difficult, there are many sports in which sport specificity is easier to measure. One example is powerlifting.

In the sport of powerlifting, which consists of three lifts (squat, bench press and deadlift), the skill component is relatively low, whereas the quality of strength required is relatively high. Further, the basic tool used to develop strength (i.e., the barbell) is also used to perform that sport – you could say that the barbell *is* the sport. If a powerlifter wants to improve their bench press performance but also wants to avoid overuse injuries by only performing bench presses with a barbell, they could perform similar movements such as "bench press with dumbbells" or "incline bench press with a barbell." After devoting one month to separately concentrating on each of these exercises, the powerlifter could test their one-repetition maximum (1RM) in the barbell bench press. If the bench press with dumbbells exercise produced a higher increase in the 1RM than the incline bench press with a barbell, the dumbbell exercise would be considered more specific.

It should be noted, however, that performance in the bench press often can be achieved with nonspecific movements – that is, focusing on *training muscles, not movements*. Here's an example from the training of elite athlete Jim McKenzie, a professional hockey player who was trained by strength coach Charles Poliquin. McKenzie went from a 280-pound close-grip bench press to 380 pounds in less than four months by focusing on corrective exercises – and for the first three months of this program he did not perform any bench presses. Coach Poliquin believed that McKenzie was able to achieve such unusual results because he had started out with low levels of strength in the muscles that externally rotate the shoulders, and this weakness had interfered with his ability to bench press.(5) Likewise, a swimmer who has round shoulders because she hasn't performed dry-land exercises for the muscles that externally rotate the shoulders might be more susceptible to shoulder injuries – and obviously, a shoulder injury would affect the swimmer's performance.

The fact that so many young athletes now train year-round in one sport – some high school hockey players, for example, will play year-round on club teams and practice more than 15 hours a week – has increased the likelihood of developing muscle imbalances from a large volume of sport-specific training. Thus, although performing activities with a high level of specificity is important to reach the highest level of performance, there may be a place for corrective exercises that are not specific to sport movements.

The Value of Auxiliary Exercises

To meet the needs of athletes who want special weight training exercises to improve a specific aspect of athletic performance or to correct muscle imbalances, BFS recommends applying the concept of specificity of training with the use of *auxiliary exercises* that are performed after core exercises are completed. These are usually emphasized during the pre-season, when it is possible for athletes to devote more time to weight training.

In swimmers, for example, for the upper body the prime movers are the pectorals and latissimus dorsi; so lat pulldowns, chin-ups and dips would be the most sport-specific auxiliary exercises in the weightroom. However, to avoid the round-shouldered posture common with overdevelopment of these muscles, seated rowing exercises would be a good choice for an auxiliary exercise.

Another example is volleyball. Volleyball places tremendous stress on the shoulders, from both hitting the ball overhand and blocking. To develop power for the serve, lat pulldowns and various forms of chin-ups and pull-ups will be effective; to strengthen the shoulders for blocking, power snatches should be used rather than power cleans. For the ankles, use both standing and seated calf raises.

One final example is wrestling. Many coaches believe that the best strength training for wrestling is wrestling. While wrestlers can achieve high levels of strength in the sport without touching a barbell or dumbbell, they can reach higher levels much faster with a program such as BFS. For auxiliary exercises, neck exercises are obviously important, followed by exercises that improve pulling strength (rows and pulldowns) and grip strength (wrist curls and wrist rollers). Lunges would also be valuable for many types of takedowns.

Diversifying the Athletic Portfolio with Unification

In an effort to achieve the highest levels in sport, athletes are specializing in sports at younger and younger ages. In a sport where most champions hit their

Photos by Alan Hedric USAFA

Keg bench presses and tire flipping are ways that strength coaches have tried to apply the specificity-of-training principle.

peak in their late 20s, Naim Süleymanoğlu broke his first world record in weightlifting when he was just 15 years old. Soccer prodigy Freddy Adu was earning a half-million dollars a year when he was 14. Women's tennis and women's golf are flooded with teenagers eager to become the next Maria Sharapova or Michelle Wie. And who would have predicted LeBron James' spectacular success in the NBA as a teenager? Although early specialization can produce spectacular success, this approach to training does have a price.

While the aforementioned athletes might never have become as successful had they been multi-sport athletes, the average athlete who tries to emulate them by focusing on one sport often ends up quitting sports altogether. In fact, studies have shown that approximately 70 percent of athletes will quit organized sports by the age of 13! (6) At BFS, we believe that most high school athletes should play multiple sports, and there are many good reasons for this.

Most young kids do not know what sport they will eventually be best at. An athlete who matures early might have an advantage in youth football because of his size; but as his peers mature over time and begin to equal or exceed him in size, he might discover he has more natural talent for wrestling. Perhaps that tall, lanky girl who was put in basketball because of her height would be better off in swimming or a track and field event.

Of course, there are natural athletes who can seemingly excel in any sport. Dylan Rush, our 2005 High School Male Athlete of the Year, decided to accept a college scholarship for football, but he could have played at the Division I level in wrestling. (7) And the truth is, he intentionally chose a college without a wrestling program because he thought it best to avoid the temptation of trying out for the wrestling team. But physical phenoms such as Dylan Rush are the exceptions to the multi-sport rule that seems to hold for our kids: It is only by trying several sports over several years that young athletes will find out which sports they enjoy the most and which best suit their natural athletic gifts.

Sometimes it's best to train muscles, not movements. For example, rotator cuff exercises, such as the one shown here performed on a PowerPlate® vibration platform, can help prevent shoulder injuries.

Injuries are another issue. Al Vermeil, a professional strength coach who has earned world champion rings in both football and basketball, says he is alarmed at the ever-increasing number of sports medicine clinics being established in this country. What is causing the rise in injuries that creates the need for these clinics? Coach Vermeil believes one of the factors is the misguided tendency to encourage kids to concentrate on one sport at too early an age. (8) And he's right. According to a study by the Centers for Disease Control and Prevention, from 1997 to 1999 the highest rates of sports-related injuries were among kids ages 5 to 14. (9) And it's gotten worse since then.

Each year an estimated 3.5 million children under the age of 15 are treated for sports-related injuries, and 20 percent of school-age athletes miss at least one day of school due to sports-related injuries! (10) In the '70s and early '80s, millions of Americans were training with the goal of competing in a 26-mile marathon. As the number of chronic injuries to these athletes skyrocketed, many runners turned to triathlons, because dividing their training among three events (running, biking and swimming) reduced the associated training risks compared to focusing on just running. Specialization has its price.

Another advantage of multi-sport training is that it elevates the overall performance in other sports. The best young athletes in football may go on to help the basketball, baseball, wrestling and track

teams at their schools. Because BFS stresses the benefits of multi-sport training, after our clinics we find not only does the football team do better but also that all sports – both men's and women's – benefit. Also, because these athletes play other sports, their teammates from other sports will often come out to support them at games. Everybody gets along. Finally, multi-sport athletes are often healthier from a psychological standpoint, as coaches do not fight over the best athletes in the school. It just isn't right to put athletes in the center of these power struggles, as the extra pressure takes the fun out of sports and may even be responsible for causing athletes to give up sports entirely. Sports should be fun.

A high school may have as many as seven different strength-training programs! The same goes for each broad area of training: speed, warm-up, endurance, agility, plyometrics and flexibility. Even the decision to *not* address some of those areas in a conditioning program is a coaching philosophy. For example, the baseball coach who does not make strength training an integral part of the in-season program and who never works with the athletes on how to run faster sends a negative message to his or her players.

Territorial struggles among coaches unnecessarily test the loyalty of the athlete. The result is that the coaches often force athletes to participate in only one sport, which adversely affects the overall quality of the school's athletic program. The unnecessary tension between coaching staffs is often the rule rather than the exception for high schools and small colleges.

With more than 30 million young people involved in organized sports, let's face it: Very few of our kids will wind up playing professional sports, playing on a Division I sports team or making it to a national level in amateur sports. That's why high school coaches should encourage most of their athletes to experience a variety of sports to find activities they can pursue for a lifetime. That way, everyone can be a winner.

With unification, a two- or three-sport athlete is able to move smoothly from sport season to sport season without interruption. Let's take the example of a football player who is also on the basketball team. After the football season, this athlete would not have to wait four to six weeks to get started on some unique basketball-specific strength training program. He would just stay on the team's in-season program. Athletes don't have the Tiger *basketball* in-season program, they just have *the school's* in-season program. This approach makes the job easier for coaches because they don't have to waste time teaching several new or different lifting exercises. Also, the same warm-up (for example, the BFS dot drill) and flexibility exercises just naturally continue.

Junior high school athletes would follow the same guidelines. After they learn proper technique, seventh graders can do the same workouts as high school athletes. In fact, because the level of competition at the high school level continues to reach higher standards, athletes must get into the weightroom as soon as possible so that they don't fall behind. Just think of the advantages those young kids, who are maturing and developing on a unified, total program, will have when they get to high school!

When coaches adopt the Bigger Faster Stronger system, all athletes perform the same basic program throughout the entire school year and during the summer. Confusion disappears, and less time is required to mentor coaches and physical education teachers. Coaches will also enjoy a spirit of teamwork with their colleagues, and the result is that athletes more easily achieve their goals. That's why it's no surprise to us at BFS when a school's athletic program does an immediate turnaround after we've set up a unified program for them at a BFS clinic.

From a financial standpoint, the BFS program enables each sport and the physical education department to combine their budgets to purchase the highest-quality products to achieve their goals. Further, having the entire physical education and athletic training staff unified presents a positive image to students, parents, administrators and the public. The school's reputation will be that "Everyone is on the same page!"

The BFS program combines the best of strength and conditioning from all over the world. The system recognizes the great differences between elite, pro and college athletes compared with those at the high school level. The BFS program is perfect for large numbers of athletes, block schedules, female athletes, junior high schools, in-season and off-season transitions, and the multi-sport athlete; and it creates great self-confidence and massive voluntary participation.

Unification: It just makes sense! BFS

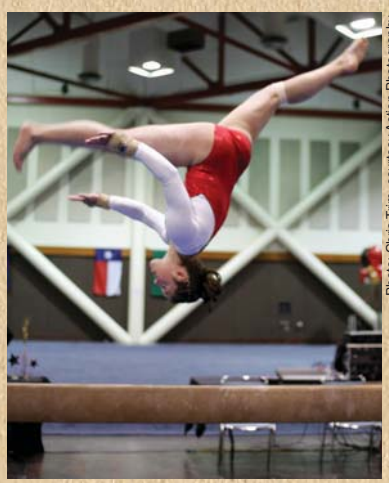

Photo: Chris Trim, courtesy Action Photography

Performing exercises that use multiple muscle groups will help athletes reach the highest levels of physical superiority. Shown here is Maegan Snodgrass performing a difficult flip on the balance beam and clean and jerking a heavy weight.

Note: The complete position paper, including references, is available for download at www.biggerfasterstronger.com.

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