

Challenging Convention

At the University of California, a new philosophy is forcing staff members to communicate and collaborate in ways they have not before.

By Keith Power



Cal Athletic Director Sandy Barbour talks to Head Athletic Trainer Ryan Cobb (far left) and Head Strength and Conditioning Coach Mike Blasquez, while High Performance Director Keith Power looks on.

S

OMETIMES, SMALL OBSERVATIONS EVOLVE INTO REALLY BIG IDEAS. During her career as an athletic administrator, Sandy Barbour had always been bemused by how little strength and conditioning coaches and athletic trainers communicated and collaborated with each other. Since becoming Athletic Director at the University of California in 2004, that observation has evolved into a

unique philosophy on how to achieve top performance using a model of practice quite unlike other collegiate athletic departments.

Called Cal High Performance, this philosophy challenges conventional ways of thinking about and delivering services to student-athletes. It demands collaboration among all staff, strives to maximize efficiency, and challenges everyone to be innovative. It is an initiative Cal has invested in

to build a competitive advantage and ensure a world class student-athlete experience.

The Cal High Performance philosophy has been seven years in the making and almost all of the pieces are now in place with the opening of the Simpson Center for Student-Athlete High Performance in 2011. At the same time, it is a dynamic process that we continue to improve on every day.

A DIFFERENT MINDSET

Cal has had its share of athletic success and academic achievement. It has produced professional athletes like Jason Kidd, Kevin Johnson, Aaron Rodgers, and Marshawn

We strive to share information at every turn so our student-athletes receive the exact support they need at the time they need it. Our academic counselors pass on observations to strength coaches, who collaborate with athletic trainers, who talk to coaches, and so on.

Lynch and standout Olympians like Natalie Coughlin, Nathan Adrian, and Alex Morgan. In its ranks are a dozen coaches who have been chosen to work with Olympic and national teams of elite athletes. Cal is also ranked as one of the top 20 academic universities in the world.

Upon arriving at Cal, Barbour wanted to take the athletic program to an even higher level. She asked fundamental questions about how strength and conditioning coaches and athletic trainers could better work together. This evolved into discussions about sports performance, and then how all support services and coaches could collaborate more effectively.

Without the deep pockets that some NCAA Division I athletic programs have, Barbour needed to be creative in implementing a new philosophy. She looked to best

practices in sport worldwide and thought about what would fit the culture at Cal.

Cal High Performance is the philosophy that now guides our athletic department. At its core, it is about aiming to be world class in all that we do at every level of support. Along with having high expectations for our athletes, we have high expectations for our leadership team, marketing department, business and finance office, custodians, and interns—everyone in athletics has to be invested.

Just as important, it's about all staff members communicating and collaborating. We strive to share information at every turn so our student-athletes receive the exact support they need at the time they need it. Our academic counselors pass on observations to strength coaches, who collaborate with athletic trainers, who talk to coaches, and so on. Everyone works hard to be on the same page.

In 2009, I was asked to direct this new initiative, which was a huge honor and privilege. The position is actually fairly commonplace in Olympic sports across the globe and many professional sports outside of the U.S., although I believe I am the only High Performance Director (HPD) in collegiate sport in the U.S.

My job as HPD requires expertise in three key areas. The first is organizational development—the ability to help the department be excellent in planning, organization, and leadership/management, as well as develop a high performance culture. To this end I also serve as one of seven people on Cal's Leadership Team. The second is expertise in coaching, including coach education and coaching science. Third, I oversee strength and conditioning, sports science, and sports medicine.

Day to day, I serve and integrate 29 sports, 850 student-athletes, 80 coaches, and 40 support staff members (strength and conditioning, sports medicine, and sports science) in the pursuit of providing a world class experience for our student-athletes. I'd say that my role is akin to that of the conductor of an orchestra. All parts of the orchestra sound good on their own, but having the conductor bring them together produces music that sounds truly great. Similarly, coaches, athletic trainers, strength and conditioning coaches, and sports scientists can all perform well independently,

but getting them to perform together like an orchestra can produce enhanced performance.

PIES & PLANS

Before I describe how we've implemented Cal High Performance, let's go back a step. To get everyone on the same page, it was important to develop a model of what high performance entails. We developed the Cal High Performance Pie to use as a communication tool when talking to our staff members about our new philosophy. The pie consists of five key performance factors that most directly impact student-athlete performance:

Skills: sport specific skills and academic skills

Fitness: sport or position specific fitness requirements and wellness

Mental toughness: resilience, coachability, focus, and confidence

Lifestyle management: organizational skills, study habits, and developing life skills

Culture: the student-athlete, team, and departmental environment.

There are several things to note about these performance factors. First, each area impacts the others. For example, mental toughness has a huge impact on the ability of the student-athlete to maximize skill development and fitness, and to study effectively.

Second, all five factors are important. Teams that have great physical talent but a rotten culture often underachieve. No amount of time dedicated to skill development and fitness will ever make up for not fixing the culture.

Third, the level of importance student-athletes place on each factor may vary. For example, in a sport like golf the time allotted to mental toughness training will likely be greater than the time allotted to strength and conditioning. Likewise, a freshman entering the tough academic atmosphere at Cal may need to focus on lifestyle management while the senior with professional aspirations is focusing on sports skills and mental toughness.

Each student-athlete's Performance Pie is unique, and we strive to develop performance plans for that individual accordingly. That's something I've really emphasized to our coaching and support staff. How can we maximally individualize the performance plans of our student-athletes using the resources of their sport?

Consequently, a central goal of Cal High Performance is to work with coaches to implement and support customized performance plans for each sport as well as each individual student-athlete on their team.

Keith Power is the High Performance Director of the Intercollegiate Athletics Department at the University of California, coordinating the areas of sports medicine, strength and conditioning, sports science, and coaching development. A former international track and field athlete and bobsledder, he has coached Olympians, consulted for globally renowned business organizations such as EDS, Hewlett Packard, Motorola, and Toshiba, and published articles in academic journals and presented at conferences in the area of performance psychology. He can be reached at: keithpower@berkeley.edu.

Head coaches direct their teams based not only on their coaching philosophies, but also through a customized plan developed through very specific, evidence-based information.

DELIVERING HIGH PERFORMANCE

So how do we implement our High Performance philosophy on a daily basis? The delivery mechanism is based upon being excellent in four key areas throughout the entire department: communication, information, collaboration, and innovation. The expectation is that each department has specific goals and strategies for how it will excel in each area.

Communication: In an intercollegiate athletics environment, over 90 percent of every individual's time is dedicated to some form of communication. It comes as no surprise then that poor communication can easily obstruct performance, whereas great communication creates and sustains high performance. It never ceases to amaze me how important communication is in any organization and yet how little emphasis is put on doing it well!

Two ways that we are striving to be world class at communication are through High Performance Team Meetings (HPTMs) and annual High Performance Plans for each sport. The HPTMs involve a weekly or twice monthly meeting of all staff on a particular team who directly impact student-athlete performance. The goal is to keep the year-long plan on track and maximize communication with all of those who are part of the program, including the coaching staff, athletic trainers, strength and conditioning coaches, sports scientists, nutritionist, operations staff, and academic advisors.

Our Head Men's Water Polo Coach, Kirk Everist, likes to assemble his group at least every two weeks. "We manage a lot of kids and some of them might communicate more openly with different staff members," he says. "Being able to get together and talk is import-

ant because I might hear something from an academic advisor at the meeting that relates to performance in the pool, such as an athlete's workflow or stress level.

"Maybe the athlete is in the middle of doing applications for graduate school and

Another critical part of the process is for everyone to continually ask, "What's the evidence and what's the best practice?"

I didn't know," he continues. "Or maybe I knew it but wasn't really paying attention."

The annual High Performance Plan dictates that we vigorously review each sport team and its coaching staff. Performance reviews aren't always popular with coaches. They want to coach and recruit, which is only natural, and sometimes taking the time to build in better efficiencies can appear a chore rather than a benefit.

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A look at another performance initiative, which we covered in the inaugural issue of *(College) Athletic Management* and is still going strong.



Back in 1987, University of Texas Assistant Women's Swim Coach Randa Ryan thought health issues in women's athletics weren't getting the attention they deserved. More questions than answers surrounded topics like eating disorders and nutritional supplements. Her solution was to create the Performance Team for University of Texas women athletes. In 1989, we detailed the unique program in the pages of our first issue, explaining it this way:

"Based on the idea that the needs of elite women athletes are different from those of men, the Performance Team considers health problems that occur more frequently with females and concerns that have been previously studied from only the male viewpoint ... [The Team] utilizes university and community resources as well as private industry sponsors to thoroughly research questions in the following areas: health and nutrition, how to improve athletic performance, and how to reduce health risks and athletic injuries."

Comprised of coaches, sports medicine professionals, and athletic support staff, the Team delved into previously unexamined areas. "Women's sports really picked up in the late 1980s," says Ryan, who became Performance Team Director in 1988 and now also serves as Senior Associate Athletic Director for Student-Athlete Services. "But it wasn't to the point where we could call someone and ask, 'What are you doing with supplementation in regards to female athletes?'"

To get answers to such questions, the Team tapped into University resources. "UT is a tremendous research university with an expert exercise physiology department, and we took advantage of that," Ryan explains. "Our sports medicine experts would begin by researching a women's health issue. They'd then formulate their findings into a recommendation and we would communicate with every facet of the athletic department to implement their suggestion."

In 25 years, a lot can change and a lot can stay the same. The Performance Team still exists, but its role has expanded to cover both female and male athletes, and it has greatly increased its scope.

"It's no longer practical to get the entire team together to synthesize everything," Ryan says. "Instead, we've developed pods to tackle specific issues like post-concussion syndrome or safety in the sporting environment. We've also expanded to include areas outside of sports medicine. For example, we now we have a pod solely dedicated to UT's APR."

At the same time, the Team has stayed true to its original purpose of utilizing university research. "One thing I hope we will continue to improve on is actually something we've been working on since the beginning of the Performance Team," says Ryan. "We want to shorten the time between when research and technology is developed and when it can be made applicable. Past studies conducted at UT's campus haven't trickled down to the athletic departments until 18 months after they were completed. The quicker we get the research, the quicker we can make it applicable to our athletes."

— Mary Kate Murphy

STILL GOING STRONG

But having each sport program go through a review process to understand where strengths lie and improvements are needed is critical to high performance. In the reviews, head coaches sit down with me, Barbour, and their sport supervisor at the end of each season for an analysis of the program, their own performance, and the performance of their assistants. Very importantly it is a 360-degree process, which allows head coaches to give feedback about how the department can better support them.

From the review, we develop an annual High Performance Plan. This involves me working with the coach to understand the performance needs of the program, including recruitment periods, fitness testing, sports science needs, periodization, and more, and building a blueprint accordingly.

"I think all of us tend to plan for the year, but sometimes you get caught up putting out fires," says Everist. "Keith gives us the framework for an overall season plan that, as a coach, you are going to make work for you specifically. I think the overall structure of it is really good. It was something I hadn't seen."

Information: Another critical part of the process is for everyone to continually ask, "What's the evidence and what's the best practice?" When analyzing and diagnosing performance challenges, we do not base our solutions on gut feeling and experience alone, but rather on evidence. The more data driven we become, the better the quality of the decision. Why guess when you can know?

To these ends, we are committed to Evidence Based, Best Practice (EBBP). EBBP is in direct contrast to using information based upon rules of thumb or tradition. By using the best and most reliable information possible to inform our decisions, we will ultimately arrive at better outcomes.

When I first arrived here at Cal, I challenged my staff to look at ways we could get better by using data. "Keith sat us down and said, 'Let's create structure and integration,'" says Head Strength and Conditioning Coach Mike Blasquez. "Part of this was to implement a much more sport specific and scientific approach to how we are measuring and monitoring fitness. We have also developed a great tracking system that allows us to run reports and continually direct progress for coaches on a day-to-day basis."

Here are some of the specific technologies and data we have implemented:

- > Medical screening to assess potential muscular-skeletal weaknesses
- > Best practice fitness testing and monitoring protocols specific to each sport

- > “Cloud based” performance logs where student-athletes can report sleep, academic load, stress, and perceived training loads
 - > Heart rate recovery tests (HRRT) and IGA (Immoglobuin) “real time” collection to monitor training responses and adjust training loads
 - > Game film and video analysis
 - > EEG (electroencephalogram)-based biofeedback to establish and develop areas of mental skills development
 - > Staff and coach education support based around the latest sports performance research
 - > Kiosks in weightrooms, which electronically track and monitor every lift made by every student-athlete
 - > Nutritional data to enhance student-athlete performance

With our women’s soccer team, we identified three critical areas—performance monitoring, performance analysis, and sports psychology. These areas were developed in an integrated, collaborative manner, and not in isolation of each other, to produce enhanced outcomes.

> The development of a sports IT platform for every program in which there is a one-stop shop for data analysis and monitoring of all aspects of student-athlete performance.

Our sports medicine team also took a hard look at how it ran itself, recognizing that it needed to implement EBBP in every area of its work. This meant continually asking itself the question, What works and what doesn’t? It also meant delving into the basics of the profession. How do we cover sports? Do we need to have experienced athletic trainers on the road all the time, or are their services better used on campus?

“Where Keith really started to fill in the blanks was not only with evidenced-based practice, but best practices from around the world,” says Head Athletic Trainer Ryan Cobb. “College athletics tends to look inward. Keith brings to the table a very broad perspective of what works around the world.”

Collaboration: Prior to coming to Cal, I spent a fair share of time involved in collegiate programs, where I found support staff often worked in silos and felt disenfranchised from their coaches. There has always been a huge emphasis on team in U.S. sports when it comes to the performers, but somehow being a team with your support staff isn’t often a priority. I cannot emphasize enough the power of collaboration and integration in athletics.

The five key factors of student-athlete performance—skills, fitness, mental toughness, lifestyle management, and culture—do not exist in a vacuum. My job is to ensure we integrate these factors for each team and individual. The aim is for coaches and support staff to continually assess and monitor student-athletes’ performance needs, then work jointly to improve strengths and address areas needing improvement. How well we work together can make the difference between a good and great performance and a good and great student-athlete experience.

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One example of the collaboration process is with our women's soccer team. Working with Head Coach Neil McGuire, we identified three critical areas—performance monitoring, performance analysis, and sports psychology—as being good investments for helping his program perform more consistently on a national level. These areas were developed in an integrated, collaborative manner, and not in isolation of each other, to produce enhanced outcomes.

“Performance monitoring allowed us to have a better sense of how our athletes were recovering from their training and games,” says McGuire. “We used an Interdisciplinary Performance Log, which provided information on training loads and lifestyle factors, including academic stressors, to assist in monitoring the health and performance of each player. We also used the HRRT and IGA saliva testing to understand each athlete's fatigue level and then determine the intensity of their training for the week to make sure they would have fresh legs for games.”

The logs, HRRT, and IGA salivary monitoring are collected by a sports science intern and monitored and analyzed by our sports

physiology expert Joe Dunbar. Dunbar then communicates the information to the soccer coaching staff, strength coach, athletic trainer, nutritionist, and me. Individual and team training adjustments are made as a result.

In addition, to improve analysis of team performance, McGuire has worked with Professor Mike Hughes, an advisor to Cal and one of the world's top experts in the area. “Performance analysis through video has become more specific with a deeper understanding of the layers you can explore,” says McGuire. “We also used video to educate the players, which allowed for significant improvement in team cohesion, ultimately leading to a better understanding of individual and collective roles by position.”

The women's soccer team has enhanced its mental game in several ways. As well as being the HPD, I am also an AASP-accredited Sport Psychologist and work with several of our programs, including women's soccer. “Our use of sports psy-

chology has very simply created a more mentally strong and mature team,” says McGuire. “Teaching our players how to manage stress, create positive self-talk, and use imagery as a means to better prepare for games gave us an edge. It also showed up in our training—players took a much more

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disciplined approach to their development.”

Innovation: Cal is known globally for its research innovations and producing thoughtful leaders, and we strive for this in our athletic department, too. Innovation can happen in two different ways. One is a novel idea or approach. The second is being creative with the resources you have.

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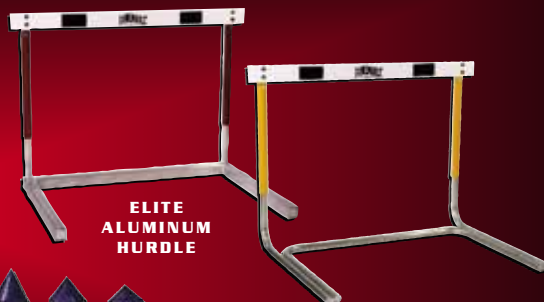
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One coach who exemplifies the first approach is Teri McKeever, our Head Women's Swim Coach, who served as the Team USA Women's Coach at last year's London Olympics. She is recognized as an influential innovator in the sport because of her unique training methods and for turning unnoticed or burned-out swimmers into champions. In the early 2000s she questioned the conventional wisdom of high yardage and almost exclusive pool work in collegiate swimming. She cut yardage, built in significant rest during the week, and put a big emphasis on other training modes like Pilates, circuit training, dry land drills, and weight training—with great success.

"As the head coach of the program," says McKeever, "I am constantly managing my athletes by asking myself questions. 'What do they really need in this workout? What do they have on their plates with school? Are they rested enough to be engaged mentally but at the same time being challenged constantly?' For me, the answer to each of those questions results in daily progress and a high performance culture."

In the area of student-athlete welfare, this year we have launched an innovative High Performance Lifestyle Support Program in collaboration with our Department of Education. In balancing their athletic, academic, and personal lives, student-athletes face a daunting challenge in self-management. Revolutions in Internet and mobile technology have produced a world of unprecedented distraction that is literally reshaping their brains. Our support program offers a re-assessment of how our student-athletes can get the most out of their day—to cut through the clutter and focus in on what really matters.

On the sports medicine front, Cal is one of the first athletic departments in the country to make diagnostic musculoskeletal ultrasound available to student-athletes in the athletic training room, and even on the sidelines. Musculoskeletal ultrasound makes use of sound waves to image muscles, tendons, and ligaments without radiation and with greater resolution than MRI. In addition to immediate diagnoses, ultrasound allows our sports medicine providers to make safer return to play decisions and offer cutting edge treatment options.

THE CHALLENGE OF CHANGE

There has been an enormous amount of change in Cal athletics over the past seven years, and it has not always been smooth sailing. Changing the behavior of stakeholders has been challenging. It would be disingenuous of me to claim otherwise.

The key has been to not force change on anyone, but rather to collaborate and discuss ideas. Cal High Performance is not a top-down philosophy. That never works if you want to achieve sustained high performance.

Working with our 24 head coaches and 70 assistant coaches is a huge part of what I do on a daily basis and is both an exciting and very challenging part of the job. It is challenging because in many respects we are putting a man on the moon. No one has done what Cal is doing in college sport.

It is exciting because we are seeing results.

Over the past five years we have been in or around the top 10 of NACDA Directors Cup standings, placing third two years ago, and have won over 20 NCAA individual or team titles. It would be erroneous to attribute this to Cal High Performance alone, as many of our programs have been successful for years. However, every day, we see how improving communication, collaboration, information, and innovation pushes our student-athletes forward. As in business, a world class system and process combined with world class people will produce world class results. ▀

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