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Neil Snowball, director of operations, England Rugby 2015



ATHLETIC PERFORMANCE CENTERS
BY GERARDO PRADO

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Sports performance centers must incorporate a thoughtful design and integrated facilities in order to truly benefit the next generation of student and professional athletes



Over the past few years, there has been a wave of new collegiate athletic training centers. Often these beautiful, high-tech facilities rival or outpace anything the NFL could offer.

However, it is a concern that many of these multimillion-dollar training facilities claim to be sports performance centers when they are, in fact, little more than recruitment tools. Although recruiting is very important to collegiate sports programs and a training facility's 'wow' factor can help the college attract top high school athletes, for the same cost these facilities could be so much more.

The way a building is designed and the philosophy that informs that design will not only get top prospects through the door, it will help turn those student athletes into top performers on the field and in the classroom.

"The sports performance field deals with all areas affecting an athlete's performance – strength and power, conditioning, movement and speed development, sports medicine, physical therapy, injury prevention, nutrition, recovery and regeneration, flexibility, clinical and sports psychology, genetic testing, vision, etc," explains Brandon Marcello, director of sports performance at Stanford Athletics. "By having these areas work in concert, we can optimize player performance."

Sports performance centers, such as EXOS and the Australian Institute of Sport, were built on the premise that integrating multiple disciplines under one roof increases the performance potential of athletes. That same model is slowly being applied to the collegiate setting. The academic requirements for student-athletes on the college campus support a movement toward an Olympic training center model, where many support functions – coaches, doctors, personal trainers, nutritionists, physical therapists, life skills coaches, etc – are integrated or in close proximity to each other. Universities can better serve the student-athlete by minimizing injury and injury recovery time, which translates to less time off the field and away from class, fewer missed assignments and higher productivity academically and athletically.

Take Stanford University, for example. Its program has evolved from strength and conditioning to a more holistic approach that includes sleep education, yoga and pilates training, nutrition, recovery and regeneration, all of which are now widely recognized as major contributors to an athlete's success.

The University of California at Berkeley (Cal) is strengthening its sports program by reaching out to the tenure-track faculty for its research – in physiology, kinesiology, psychology and nutrition – to capitalize on the latest thinking and breakthroughs.

At the University of Kentucky, UK Athletics partners with UK HealthCare Orthopaedic & Sports Medicine to enhance the care and treatment of student-athletes by providing individualized treatment plans. When talking about sports performance, integrating support areas for these specialists is essential to achieving optimal results. At Kentucky, specialists from this group spend approximately 40% of their time working with student-athletes.

These institutions view their training centers as more than flashy recruiting tools. They understand that through integration, their training facilities have the potential to become tomorrow's authorities on sports injury prevention, rehabilitation and nutrition.

Instead of turning to well-known hospitals and clinics for advances in sports performance, people may be turning to Cal's Simpson Student-Athlete High Performance Center and the University of Southern California's (USC) John McKay Center. These are the facilities that have earned the right to call themselves integrated sports performance centers.

Common ground

Universities continually assess and benchmark their facilities against their competition. Despite historic rivalries, schools, such as Ohio State University and the University of Michigan, often tour each other's facilities to learn about the newest trends and practices. Often, the visiting university will return home and supplement its program with new services and amenities. After a few years of add-ons, the sports program outgrows its existing space and a bigger facility is required.

Whether colleges and universities realize it or not, this open-door policy and camaraderie within the sports industry is fostering a culture of continuous improvement that is propelling the sports performance center's creation. In fact, most colleges and universities will expand or build a new facility every three to five years. Call it an arms race if you like, but there also is a real need to modernize and continually support high-performance goals for all facets of a sports program.

USC's US\$70m McKay Center serves most of the college's student athletes and includes strength and conditioning, a speed and agility turf area, a sports medicine area with a special soft tissue room, rehabilitation areas, nutritional fueling stations, and a 20,000ft² academic support facility, as well as football offices, players' lounge, meeting rooms and locker rooms.

"The previous facilities were terrible," says Joe Diesko, project director, HNTB. "Now USC's McKay Center is among the top 10 football facilities in the country."

ATHLETIC PERFORMANCE CENTERS



The University of California at Berkeley's 145,000ft² Simpson Center helps to optimize the performance of its 450 student-athletes by housing all student services under one roof



450

students are based at Cal's Simpson Student-Athlete High Performance Center

153M

US\$ was invested in Cal's fully integrated, state-of-the-art facility

17

medals, including 11 gold, were won by Cal student-athletes at London 2012

Cal's Simpson Center is among the latest to enter the arena of integrated facilities. Its goal is to consolidate services for the student-athletes and set the table for the next 30 to 50 years of success.

"We needed the center to serve 13 university-sponsored sports teams and respond to the growth of women's sports in college athletics," says Bob Milano Jr, assistant athletic director at Cal. "It was long overdue."

Cal's new 145,000ft² facility serves 450 student athletes and includes a major strength and conditioning space, sports medicine facilities, a biomechanical and performance testing area, a training table area with a full-service kitchen, plyometric and dance areas, a cardiovascular conditioning area, nutritional fueling bars, an academic study center, locker rooms, offices and team meeting rooms.

Milano feels it also serves as a nice 'front door' for the college campus. "Cal's brand is about excellence in everything we do," he says. "These facilities play a huge role in the overall impression of the university, its commitment to excellence, and the program's vision."

All under one roof

Facilities at Cal and USC are the precursors of tomorrow's fully integrated sports performance centers. However, some universities have spent millions of dollars on flashy new training facilities and now want to retrofit the 'sports performance center' label to them. Despite the multimillion-dollar price tags, these facilities fail to optimize athlete performance.

Why? They don't meet the criteria inherent to an integrated sports performance center. Following are three hallmarks of a true sports performance center, which also serve as indications the university has maximized its return on investment.

Firstly, the center strives to maximize a student-athlete's time. Integrated sports performance centers are becoming one-stop shops that strive to help the student-athlete be more productive.

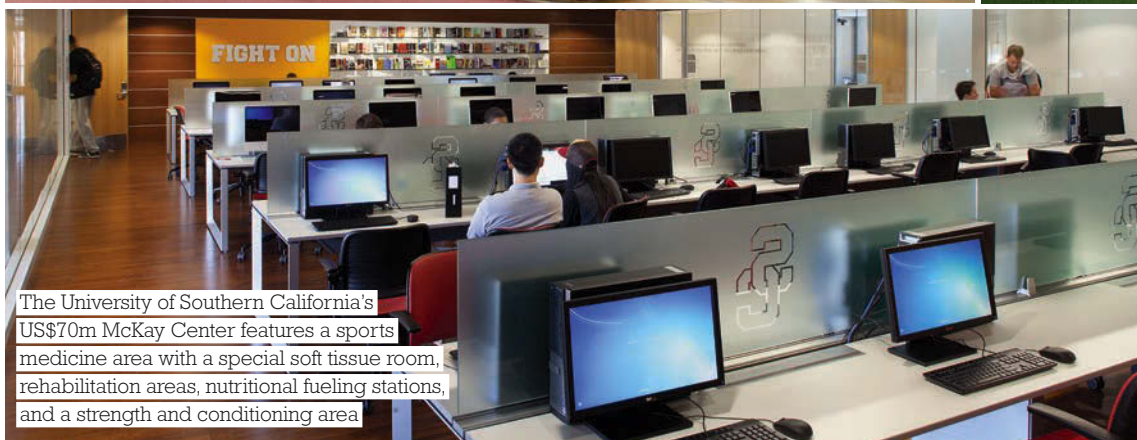
"Wasted time is the enemy of the collegiate athlete," says Milano. "Student-athletes are required to spend 20+ hours a week on their sports. When you add the academic rigor of a campus like Cal and the social needs of young adults, the amount of time in a day is extremely limited."

If each student-athlete wastes two hours a day traveling from his or her residence hall to various classes, to their training facilities, to practice, to see doctors and specialists outside of campus, and then to tutoring sessions, he or she then must stay up two hours later that night studying to compensate for the lost time. Sleep deprivation contributes to fatigue, which, in turn, contributes to injury, which can result in that student being out of the classroom and off the field longer.

"One of our strategies with the Simpson Center was to bring all student services under one roof and have it function like a home away from home," says Milano. Integrated sports performance centers are designed to take the legwork out of a student-athlete's day.



ATHLETIC PERFORMANCE CENTERS



The University of Southern California's US\$70m McKay Center features a sports medicine area with a special soft tissue room, rehabilitation areas, nutritional fueling stations, and a strength and conditioning area



Secondly, the center uses space efficiently. Is the lobby large enough to hold an indoor practice? Could the corridors easily fit five linebackers walking side by side? Does the facility tower over the nearest arena or football stadium? Those are tell-tale indications of wasted space, another enemy of the student-athlete – and the university's budget.

A high-yield sports performance center works hard to maximize the university investment by taking advantage of every inch of available space and providing as many integrated functions under one roof as possible. Can the size of the lobby be reduced to accommodate a performance testing area? Could the corridors be designed more efficiently to add more nutritional fueling stations or a study lounge? Could adjacent program areas be optimized to foster collaboration between staff and minimize travel distances for athletes? Those are the questions sports programs should ask when designing their facilities.

Many colleges and universities come to the planning table with more ideas than budget. The solution is to create a masterplan of the proposed facility that optimizes design, supports operational and performance goals and simplifies the student-athletes' day, while supporting recruiting goals and anticipating future expansions.

"A masterplan acknowledges the facility will change and expand," says Diesko. "When more funding comes available, the plans will be in place and the additions will blend seamlessly with the existing structure."

Finally, the center focuses on building design as a catalyst for performance. "The building should also perform at a high level if it is to be considered a sports performance center," says Marcello. "Designs must include a high-performing exterior enclosure; a focus on reducing energy use, water conservation, high air quality and the strategic use of natural light, color and music to evoke desired moods and performance. If the building is a symbol of performance excellence, it, too, should perform at a high level."

Optimizing the design not only helps to achieve high-performance levels for student-athletes, it translates to meaningful reductions in the lifetime costs to maintain and operate these buildings. Factored over a 20- to 40-year period, such cost savings translate to millions of dollars in resources that could be allocated elsewhere.

Integrated sports performance isn't about pouring millions into a project and calling it good. Training facilities don't become integrated sports performance centers by rite of price tag alone. They become such by better serving the student-athlete through maximized time, space and resources. Money buys prestige, not performance. ■

AUTHOR

Gerardo Prado is a principal architect for HNTB. He has extensive experience in the design of sports facilities, including stadia, arenas and modern athletic training complexes

70M

US\$ spent to create USC's McKay Center

21

sports are housed in the 110,000ft² athletic and academic facility

12

gold medals, nine silver and four bronze won by USC student athletes at London 2012