

WHERE STUDENTS BECOME COACHES

Exercise-science students and professors say learning how to become a coach happens in the gym—not in a lecture hall.

BY EMILY BEERS



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Many college graduates holding degrees in exercise science and kinesiology lack the practical experience necessary to provide clients with fitness.

A dentist, an orthopedic surgeon and a personal trainer—you would expect formal education to teach them how to fill a molar, repair a ruptured tendon and teach a squat.

But when it comes to personal trainers and coaches, college graduates with degrees in exercise science, personal training and kinesiology say the opposite is true.

Jack Langley is one of these graduates.

During Langley's kinesiology education at George Mason University in Fairfax, Virginia, many of the tools needed to become a good coach and personal trainer weren't acquired in the classroom.

Five years of lectures focused on the science behind human movement, on theories about why people should squat and what muscles are active in a squat. While information about

sarcomeres and actin-myosin interaction is valuable, Langley said what was missing from his education was the how.

"We never learned how to actually teach the squat."

Because students aren't being taught how to teach, graduates enter the workforce ill-prepared to become trainers and coaches, Langley said.

Even graduates from highly acclaimed universities such as Pennsylvania State University in State College, Pennsylvania, aren't churning out job-ready coaches, Bryan St. Andrews explained.

Since 2011, close to 20 Penn State kinesiology students have completed their internships under the guidance of St. Andrews, owner of CrossFit Nittany, also in State College. Many of these students have been in their final year of college just weeks away from finishing degrees.

St. Andrews said CrossFit Nittany has become a highly regarded facility for students to complete internships, a requirement of their degree. Each semester, St. Andrews receives as many as 50 Penn State applications, of which he chooses anywhere from one to three.

Still, most graduates of Penn State's kinesiology program don't meet St. Andrews' standard for a coaching job at his affiliate. Their knowledge of anatomy and physiology might be sound, but they don't yet know how to coach when they show up to intern, he said.

When asked if he'd hire any of them upon graduation, he answered with two words.

"No way."

Studying to Study

Holden MacRae, a 27-year sports-medicine professor at Pepperdine University in Malibu, California, said there's a dearth of college-level programs teaching students how to become coaches and trainers.

One reason for this, MacRae said, is because there aren't as many physical-education and coaching programs in universities as there once were. Some of this is due to the post-1950s reformist movement in education, which saw a shift away from physical education toward more academic disciplines, such as exercise science and kinesiology.

In the book "Introduction to Physical Education, Fitness, and Sport," author Daryl Siedentop explained, "Physical educators were forced to begin to redefine their field as an academic discipline rather than as an applied, professional enterprise. It was within that political-intellectual climate that programs for human-movement studies, kinesiological studies, human ergonomics, and exercise science developed."

MacRae said he believes this shift has led to a serious loss.

"How many physical-education programs are there at universities now? Very few. That's where you learned how to become an educator who could evaluate movements among a diversity of individuals, to develop strategies to improve the movements and to learn how to optimize the movements," he said. "I think (this is) one of the tragedies in the area of human movement or exercise science or sports science."

Instead of preparing students to become coaches and trainers, the focus of many of today's exercise-science departments is on preparing students for additional studies, like grad school, explained Tommy Boone, former professor of exercise physiology at The College of St. Scholastica in Duluth, Minnesota, in the article "Exercise Science Is Not a Sound College Investment." "When an academic web page states that the exercise science major provides a pre-professional background for those interested in pursuing physical therapy, occupational therapy, medicine, and other health-related professions, students aren't aware that it is not a career-driven major," Boone wrote.

He added: "Graduates are not being prepared for a job but for 'further study.'"

The College of St. Scholastica's exercise-physiology program isn't specifically designed for students who want to become personal trainers or strength-and-conditioning coaches, explained Joseph Warpeha, a current exercise-physiology professor at the school. At least 50 percent of his students intend to continue their studies in graduate school. However, he said he's noticed a recent trend: More and more students are expressing interest in becoming strength-and-conditioning coaches.

The College of St. Scholastica offers a broad program, Warpeha said. Students are required to take courses in diverse subject areas, such as clinical exercise physiology, biomechanics and nutrition.

"In our program, there's no specializing," Warpeha said.

Because of this, students who know they want to become trainers or coaches might be better off selecting a program at a school that offers coaching-specific classes, he added.

"We don't have any coaching classes. ... We're a smaller school. We can't offer every potential class to students. It's hard to teach coaching skills in a classroom."

Skidmore College in Saratoga, New York, also describes its exercise-science degree as one that prepares students for more study: "The bachelor of science degree in exercise science is designed to prepare students for graduate study and careers in exercise science and allied health fields. The exercise science major serves as the academic foundation for advanced studies in several sub-disciplines of the field, including: exercise physiology, bioenergetics, nutrition, sports medicine, biomechanics, and kinesiology."

Looking at a random sample of 10 post-secondary exercise-science programs—from Auburn University in Alabama

to Southern Illinois University in Carbondale, Illinois, to the University of Scranton in Pennsylvania—four of the schools don't require students to complete a practical internship to graduate. Meanwhile, when internships are required, they're often specified as clinical internships, such as at a cardiac-rehabilitation ward of a hospital as opposed to a fitness facility.

“My education did nothing to help me be a better coach in terms of understanding proper movement, coaching, assessing or teaching.”
—Mike Giardina

Samples of 10 post-secondary personal-training programs and 10 kinesiology or human-kinetics programs reveal a similar statistic. Of the 10 personal-training programs, five of them don't require students to complete internships. Meanwhile, six of the kinesiology or human-kinetics programs either do not require internships or make them optional.

And many schools that advertise themselves as providing practical experience present misleading information.

Mike Giardina, a member of CrossFit Inc.'s Seminar Staff, said his exercise-and-health-science degree didn't live up to the promise of providing students with the necessary tools to become trainers.

“There was very little practical application in both undergrad and graduate school,” he said of his undergraduate degree from Kennesaw State University in Georgia.

[Kennesaw State's department of exercise science website states](#), “The Exercise Science program offers a diversified program that includes both introductory and advanced coursework, laboratory experiences and the opportunity for practical application of knowledge through community and research based experiences.”

This was not the case, Giardina said.

“I was coaching CrossFit (while earning my degree) and my education did nothing to help me be a better coach in terms of understanding proper movement, coaching, assessing or teaching.”

Preaching Without Practice

Strength-and-conditioning classes are common requirements of most exercise-science or kinesiology degrees. This is where Giardina expected to get some hands-on coaching experience.

Instead, his one-credit strength-and-conditioning class was “a joke” as it was almost 100 percent theory-based. Giardina said he thinks a strength-and-conditioning class needs to be based on assessing and teaching proper movement mechanics as opposed to being focused on exercise prescriptions for cardiac-rehabilitation patients.

“The vast majority of graduates don't go on to get a master's or Ph.D. They end up with no practical knowledge on how to train others. This is a problem,” Giardina said.

The Kennesaw State program isn't out of the ordinary.

In 2010, the University of Southern Florida approved a strength-and-conditioning course that required no practical experience. The [course synopsis](#) stated, “field-based experiences” are “not applicable for this course.”

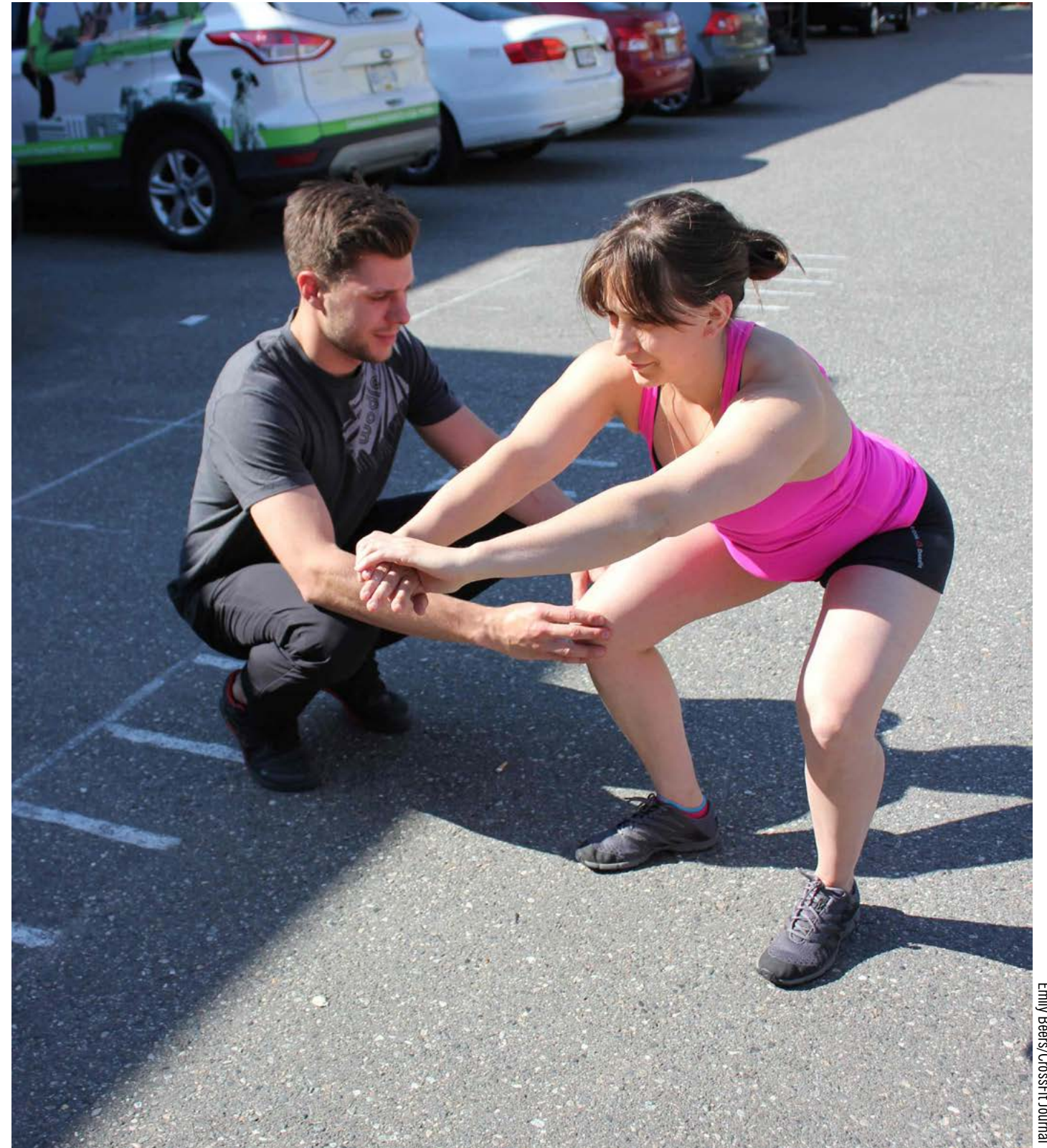
It's a similar story north of the border at the University of British Columbia in Vancouver, a highly regarded research university. UBC offers a strength-and-conditioning class to human-kinetics students. The focus of the class is on “special populations”—on prescribing sets and repetitions for people with diabetes, heart disease or other auto-immune disorders. The only hands-on parts of the class involve evaluations such as a VO₂ max test, Wingate test and so on.

Langley had a similar experience in his strength-and-conditioning class at George Mason.

“We didn't learn much about the regular population. When we did, a lot of the exercises we talked about involved sitting down on machines. There wasn't a whole lot of functional fitness other than running or biking on stationary bikes.”

Students completed the course wanting more knowledge, Langley explained.

“Walking out of my strength-and-conditioning class, if you asked all of those students to teach someone how to do an air squat, they wouldn't have been able to,” he said. “For kids who were studying (kinesiology at George Mason) and weren't getting hands-on experience elsewhere, they wouldn't have been able to teach a squat, even though they would have had the background knowledge of how an air squat benefits you.”



Improving movement is a hands-on task, and many graduates who lack practical experience will quickly find themselves struggling in the field.

Emily Beers/CrossFit Journal

Langley learned how to teach clients to squat, deadlift and press outside school through his experiences volunteering as an assistant strength coach at Georgetown University in Washington, D.C. He also got comfortable with practical application of training principles at a CrossFit Level 1 Certificate Course and by working with Jamie Gallagher at CrossFit Burke in Fairfax, Virginia. Langley has been coaching at CrossFit Burke since it opened in 2013.

“Walking out of my strength-and-conditioning class, if you asked all of those students to teach someone how to do an air squat, they wouldn’t have been able to.”
—Jack Langley



Courtesy of Mike Giardina

It was time spent at a CrossFit affiliate—not in a classroom—that taught CrossFit Inc. Seminar Staff member Mike Giardina how to be a great coach.

At the University of Nevada, Las Vegas (UNLV), Gabriele Wulf has spent 15 years **exploring methods that help people learn physical skills and move efficiently.**

Despite her emphasis on researching tools and coaching cues that best teach human movement, her motor-control-and-learning class at UNLV on the subject does not have a practical component. Students learn about her theories through lectures, seminars and class discussions, in which they’re asked to give verbal examples of how they might apply coaching cues. They do not, however, get the opportunity to practice cueing real people.

“They get several lectures on (the subject), and hopefully they’ll apply it,” Wulf said. “But there’s no lab for them to apply it in class directly.”

She paused before adding: “That would probably be quite helpful for them.”

The Purpose of Coaching

Jessica Newton is a former student at Pepperdine University in Malibu, California, where she completed her sports-medicine degree in 2011. The program required she complete a 14-week practical internship at a fitness or health facility; it contributed three credits toward her degree.

Newton completed her 150-hour internship at CrossFit Malibu. While Newton learned many aspects of her profession in the classroom, she said she believes her four-year degree would have been incomplete without the internship.

“You get the science education in class, but then you get to apply it during your internship. My internship helped complete everything,” she said.

One of the skills Newton learned at CrossFit Malibu was how to train people with different anatomies and abilities.

“In school, you’re taught that certain movements are supposed to look a certain way, but everyone has a different anatomy, so learning how to coach people differently was really important,” she said.

“Coaching is not just about having book knowledge. There are a lot of other factors that contribute to being an effective coach.”

—Holden MacRae

CrossFit Malibu also helped Newton with her confidence. Ordinarily a shy person, her experience at the gym helped her come into her own.

“I feel like coaching and interning helped me find out who I was as a coach, and (I learned how to) public-speak a lot better and not be as afraid in front of large groups,” she said.

MacRae, one of Newton’s former professors, said he believes an extensive internship helps students develop valuable attributes.

“Coaching is not just about having book knowledge. There are a lot of other factors that contribute to being an effective coach,” MacRae said.

Being a great coach also involves being able to adapt to meet individual client’s needs, as well as being able to connect with people socially, which is difficult to teach in a lecture, MacRae said.

MacRae is in charge of vetting internship facilities to make sure students get placed at locations where they’ll learn the tools they need.

Not all students are as lucky as Pepperdine graduates.

St. Andrews completed an internship during his kinesiology degree at Penn State in 1999 but didn’t find it useful. He was placed at a local YMCA.

“I got experience setting people up on machines and telling them, ‘You need to have your seat on a four and your back pad on a three,’” he said. “Unless you did an internship with the football team, you didn’t get much practical, hands-on experience.”

Almost 16 years have passed since then, but today St. Andrews said his gym is one of just a few decent options for students. This is mostly because Penn State is located in a college town of approximately 40,000 people, so there simply aren’t that many appropriate facilities for interns to gain valuable experience.

On-the-floor learning is necessary for becoming a great coach, MacRae said. It teaches students not only how to teach, assess and correct movements but also how to understand people.

Acquiring these skills doesn’t always mean a university degree is required, he noted. A degree might give a coach an edge, but it certainly doesn’t make a great coach, MacRae explained.

“If I was coaching and I have a background in metabolism and functional movements, I might have an advantage over someone who doesn’t. (But) as long as you’re willing to learn, I don’t think having an academic degree makes you a better coach.”

MacRae added: “Ultimately, (coaching) is about helping people be better at what they do. That’s what a coach is there for: To improve human potential. And there are many ways you can go about doing that that doesn’t always require you have an expansive background in exercise science.” ■

About the Author:

Emily Beers is a CrossFit Journal contributor and coach at **CrossFit Vancouver**. She finished 37th at the 2014 Reebok CrossFit Games.