

BRIDGING THE PRACTICE GAP AND BUILDING CAREERS IN BIOMECHANICS

HELEN BAYNE ON THE CHALLENGES OF WORKING ACROSS DISCIPLINES

The world of motion capture contains a multitude of communities, and even within the broader category of sports science there are divergent fields. Helen Bayne has worked across a number of them in her work as an athlete, coach, student, teacher, biomechanist, clinician and scientist, and says that the key to bridging the academia-industry-practice gaps is increased understanding of others' perspectives. Her career has been testament to that approach.



Helen Bayne, Sports performance practitioner, researcher and educator

"You could say I've always had one foot in the lab and the other in the field, just that the weight distribution has varied over time," says Bayne. "I started my career almost 20 years ago as a clinical practitioner, applying exercise-based therapy to treat a wide spectrum of health conditions, but with a particular focus on sports injury rehabilitation.

"I sought to apply evidence-based practice and stay abreast of current research and experienced the challenges that all practitioners face in accessing, digesting, and applying relevant literature. I then went on to do my PhD in sports biomechanics, on the topic of low back injury mechanisms in fast bowlers, and always tried to keep in mind the practical value that my research could and should add.

"Since 2013, I've been employed in various departments at the University

of Pretoria – first as a biomechanist in the sport science unit that was supporting high level University and Olympic sports programmes, and later on as a lecturer in a full-time academic position. During this time I also consulted to sports organizations such as the International Cricket Council, coordinated the establishment of a new biomechanics lab and led a project to implement an electronic athlete management system across multiple sporting codes."

Bayne says that this broad bank of experience has helped her straddle the divide between disciplines. "Dealing with people working in just about every facet of sport science across academia, practice and the broader sports industry really helped me to understand a range of perspectives from the people that sports biomechanics may have an influence on," she says.



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alongside developing skills. “Become comfortable with putting yourself out there, letting people know what you’re about – this could take many forms, such as speaking up during meetings, networking at conferences, or building on online presence.

“All the while, be authentic and stay true to your personal values. A supportive professional network is your greatest asset in navigating these challenges. Identify people that will not only encourage you but will give you honest constructive criticism when needed.”

THE CAREER GAP

Bayne says that as well as cross-pollinating insights across different fields, experiencing a range of different practices within the world of sports biomechanics can help newcomers to build their career.

“Don’t be afraid to sample widely

early in your career – say yes more than you say no. Each role you take on is an opportunity to build your skillset, grow your network, and learn more about yourself and the type of work you prefer.

“So, even if an opportunity that presents itself isn’t your dream job at first or you don’t spend long in a role before deciding to move on, the experience you gain while trying different things will never be wasted.

“But of course, at some point, you do need to start saying no to certain roles and refining the direction that you pursue. Cultivate reflective practices where you regularly evaluate whether the things that you are involved in are fulfilling, challenging you to grow, and moving you towards the person and professional that you want to be.

“Be patient. There is no straight path to ‘success’, so embrace the journey.”

THE PRACTICE GAP

Bayne believes that gaining this broad level of understanding can help practitioners and researchers to bring new insights to their fields.

“The ideal way to build relationships across the different spheres is to spend time in one another’s environments,” she explains. “For example, the researcher could attend training sessions and team meetings, and the practitioner could help out with data collection in the lab. Industry reps and technical support staff could even be encouraged to do the same, to experience first-hand what their users go through.

“In all cases, go in with a mindset of curiosity and listen to understand the new environment, without being too quick to jump in and problem-solve!

“This process not only gives us a new perspective on different demands and

drivers, but can support improved communication as we learn the ‘language’ that varies between people and environments. So often it can just be a simple mismatch in the terminology we use – differences between a coach and scientist, for example – that is an obstacle to building good working relationships.

“Once you start working together, it’s essential to formulate specific objectives that meet the needs of everyone in the team. Keep in mind that practitioners are ultimately judged by on-field performance of the team/athlete and researchers are rated by the publication and citation of scientific outputs. These are two distinct outcomes, but the process of achieving each can benefit the other. If the collaborators understand this from the outset and go into a project with clear expectations, it will set up the foundation for an effective working relationship.”

THE GENDER GAP

Some of these soft skills have been necessary for Bayne when it comes to navigating what continues to be a male-dominated field, particularly as she’s progressed. “I think that there’s more resistance to women taking on senior leadership roles, whereas there tends to be more gender equity at a junior level.

“Early on in your career, a good work ethic, willingness to learn, and delivery of high quality outputs are the main requirements to win the approval of your team/colleagues/employers. However, as you gain experience and skills that should be associated with progressing to higher positions or being regarded as an expert in the field, I’ve perceived that women tend to be overlooked and underestimated compared to male peers.

At the individual level, Bayne says, women can offset some of the difficulties by finding their voices

