

## A PERSONAL VIEW

# Sport science internships for learning: a critical view

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**Malone JJ.** Sport science internships for learning: a critical view. *Adv Physiol Educ* 41: 569–571, 2017; doi:10.1152/advan.00098.2017.—Sport science has gained vast popularity with students who have an interest in both physiology and the underpinning mechanisms of exercise concerning performance and health. The high numbers of graduates each year, coupled with the low number of graduate positions working in sports, has led to a high level of competition between students. To stand out from the crowd, sport science students may undertake an internship placement as part of their course, designed to enhance theoretical, practical, and soft skills in an applied setting. In the present article, we highlight some of the positives and negatives of sport science internships and ways in which they can be implemented and facilitated. Suggestions have also been provided to make students more aware of the reality of working in professional sports, which includes awareness of the potential for long and unso- cialable hours of work.

work experience; education; teaching; pedagogy

## INTRODUCTION

Sport science is a multidisciplinary field, which aims to investigate how the human body functions during exercise, from both a performance and health perspective. The discipline also involves the study of psychological, sociological, and medical subdisciplines, such as biomechanics, psychology, and motor control. Whereas the majority of funding is centered toward health-based sport science rather than the applied sciences (1), many students often harbor the ambition to work within professional sports on graduation. Students who invest in a sport science degree have often either played or currently play sports to a good standard and envisage the opportunity to work among elite athletes. While this ambition should be admired, only a small number of practitioner positions are available, compared with the vast number of sport science graduates and undergraduates in the system each year. To even begin working toward a career in a professional sporting setting, students need to stand out among the crowd and have some luck along the way (although a quote from the great Gary Player “the more I practice, the luckier I get” comes to mind!).

One such way to differentiate students and improve skill sets outside of the classroom is through sport science internships. Such links between universities and sporting teams/organizations can benefit both sides involved. Internships provide an opportunity for students to learn “on the job,” while teams gain

an enthusiastic practitioner for minimal outlay. My motivation for writing this article stems from my own personal experiences of undertaking numerous internships as a junior applied sport scientist up to the present day in my role as a sport science lecturer, helping the next generation get a foot in the door of the industry. The present article intends to evaluate the use of sport science internships within the student learning experience and provide some opinions for future discussion.

## *Sport Science Internships*

In recent years, it has become increasingly important for graduates to be able to transfer the knowledge and skills from their degree into the workplace. As such, there has been a trend within higher education for institutions to incorporate employability skills within their curriculum program. Yorke (9) highlights these skills as having appropriate knowledge, personal attributes, and effective contribution in the workplace. Whereas these skills are common across different subjects, they are quite broad areas and not specific to each degree taught. Curricula often consist of sessions with the university’s employability team in which students learn about things such as curriculum vitae writing and career guidance. However, these sessions are often delivered by staff who do not have specific experience working within the sporting industry. Therefore, the advice provided can be useful but certainly not definitive. One solution to this would be for academic staff in that discipline to deliver these employability sessions. The issue here is that not all academic staff have had previous experience working out in the field, with some going straight from laboratory-based PhD projects into lecturing positions without working within the sector directly. In this instance, it might be wise to bring in external practitioners to speak with students regarding how to get into the industry and recall anecdotes about what it is really like to work within the applied setting.

The majority of the established universities in the UK now run some form of sport science internship across a range of sports, as part of their curriculum. Slep and Reed (8) found that sport science students who undertook work placements further developed their “soft skills,” such as communication, interpersonal, awareness of work culture, and self-confidence. Whereas, overall, most academics and practitioners would agree that internships could benefit all involved, care must be taken when students undertake these experiences. Previous research has reported that graduates see internships as a “career taster” rather than an opportunity to develop a range of skills (5). Anecdotally, some students and practitioners with whom I have spoken have raised concerns that sport science interns are merely seen as “data monkeys” and are expected to perform

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menial tasks. Conversely, I have seen other students given significant responsibility and be routinely asked for their opinion on decision-making topics, despite being neophyte practitioners. I feel this experience depends on the practitioner supervising the student during the work placement. Those who are more experienced and often having undertaken an internship as part of their own development will give students a better platform to learn and develop both theoretical and soft skills. Students are often preoccupied with gaining internships with high-profile teams to receive kudos and work with the top athletes. However, in my experience, some of the best internships are often with lower level teams that can allow students the freedom to make (and learn from) mistakes.

Another possible benefit of sport science internships is helping to establish research projects between sporting teams and universities. Coutts (3) recently referred to the two as “fast” and “slow” workers, in which team practitioners often make fast, intuitive decisions, whereas university-based staff are more slow and deliberate with their work. Eisenmann (4) described the need to “bridge the gap” between science and practice through collaborations among academics and practitioners. Bishop (2) proposed an applied research model in which academics help to define problems encountered by teams and then assist in answering these questions through structured research with high-end impact. This model has been successfully implemented within both the UK and other countries, with the sport science internship being integral to this process. “Embedding” the scientist within the applied environment rather than the laboratory gives him or her a unique insight into the issues faced on a daily basis. The key to making this collaboration work is that all key stakeholders (e.g., coaches and athletes) are on board. Equally crucial is that the student is supervised by an academic who is able to understand both scientific principles of research and the potential restrictions that occur when conducting research in an applied setting.

#### *All Work, No Pay?*

In recent years, student internship placements have become more structured between universities and external organizations. My own first placement involved pestering my MSc supervisor (who worked for a Premier League football team) to get me into the club. After finally relenting, he took me down to the training ground one day and told the manager “this lad will be working here, hope that’s ok!” to which luckily the

answer was “fine carry on.” I was given a club tracksuit to wear and told to get on with it—there were no set guidelines provided or any pay involved. Thankfully, I had two sport science practitioners who mentored me and gave me an introduction into working in a professional sporting setting.

Despite not being paid, I knew this work experience would open doors for my career, so I supported myself financially through part-time work while also studying for my MSc degree. However, some teams have taken advantage of such eagerness from students to get into the sporting industry and offered either minimal or no pay for graduate interns coming out of university with good degree classifications. This led to the creation of the “BASES position stand on graduate internships” (7), which has helped to raise the standards of employment and give sport science graduates the working rights they deserve. There are still some cases of teams taking advantage of the system to save money; therefore, we as a collective sport science community must work hard to maintain the integrity of our discipline. Table 1 provides an overview of criteria for both good and poor practice when establishing a sport science internship program.

#### *Supporting Champions: Is It All That Glamorous?*

Recently I came across an excellent book by Steve Ingham on “how to support a champion” (6) that provides an insightful personal view of what it takes to work as a practitioner within elite sport. The author highlights some of the key moments along his career pathway in which he has worked with the likes of Sir Steve Redgrave, Dame Jessica Ennis-Hill, and Kelly Sotherton. The book describes numerous instances in which he was presented with tough scenarios in which he had to use his scientific background and some personal intuition to solve. When working with Sir Steve Redgrave, he was told, in no uncertain terms, that if he didn’t help make him faster and stronger, then he wouldn’t have a place within the support team. One thing that stands out is the author’s openness about making mistakes throughout his career. However, as he points out, it is the ability to learn and adapt to these mistakes that will ultimately improve sport scientists as practitioners working with athletes. This is something I believe is crucial to the development of sport scientists and can only be truly experienced working out in the field with real athletes and coaches rather than in hypothetical classroom-based scenarios.

Table 1. *Criteria of good and poor practice when establishing a sport science internship*

Good Practice	Poor Practice
Appropriately qualified supervisor: when possible, staff/practitioner supervising will have had previous experience as both an intern themselves and/or as a supervisor	Lack of adequate pay when organization is seeking higher level intern (i.e., those with undergraduate degrees and professional qualifications)
Expenses provided when student is classified as a volunteer	Lack of supervision from both the sporting organization and university
Opportunity to undertake continuing professional development (CPD), e.g., training courses, workshops, conferences	Provision of medial tasks (e.g., data entry) without having additional experience of disseminating information and working with coaches/athletes
Fair recruitment and selection program	Poor safeguarding practice, e.g., bullying, peer pressure, gender discrimination
Roles and responsibilities of the internship clearly identified	Demanding excessive working hours outside of agreed workload for the intern
Employer documentation (e.g., health and safety, Disclosure and Barring Service) completed before commencement of internship	Lack of progression in complexity of working tasks over time
Formal reflection and progression monitoring throughout the internship	Lack of reference if student has performed well following internship period

When I ask undergraduate students what they want to do with their careers, the typical response is along the lines of “work in professional sport.” Students often hear and see existing practitioners working out in exotic countries on training camps, mixing with multimillionaire athletes, and say to themselves: I want a piece of that! However, the reality of the job is working 60+ hours per week, loneliness and isolation living in hotel rooms, and minimal days off to see family and friends. In addition, the relative pay for hours of work is not as rewarding as others outside the profession would think. One major point that is often overlooked is the lack of job stability when working in high-performance sports, as positions are typically reliant on the results of the athlete or team. This becomes an even bigger issue for those with young children and families, as they may be forced to move locations to secure the next position. While this all sounds like doom and gloom, on the flip side, the job can be highly rewarding, as practitioners are working in an industry in which they have personal interest and can feel part of an athlete’s success. Those who manage to get to the very top of the industry are paid well financially and are able to travel the world as part of the job. My personal view is that sport science students should be made aware of these realities when undertaking their studies, so that their heads are not filled with unrealistic promises of “riches and fame.”

### Concluding Remarks

As an academic working with students on a daily basis, I want each of them to fulfill their potential and achieve great things. Due to the increasing popularity of sport science courses and a small number of positions available, breaking into the sporting industry is tough for the emerging neophyte practitioner. Whereas sport science internships have received both positive and negative feedback, overall it is my belief that they should be an encouraged, if not a compulsory, part of every sport science degree curriculum. Internships can help students develop “soft skills” to a level that is restricted with classroom-based teaching that has a distinct lack of authenticity. Whereas student internships are becoming more structured and graduates are being paid, further work must be done

collectively to make sure that students get full employment rights and fair pay for their skill level. Teams and organizations should be open to collaborating with universities to help enhance their athlete program while also benefiting the student. It must be emphasized that a key part of any internship lies with the supervisors (within both the club and university) who are ultimately responsible for developing a structured program of learning and reflection for the student to develop into a strong graduate for employment.

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### DISCLOSURES

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### AUTHOR CONTRIBUTIONS

J.J.M. conceived and designed research; drafted manuscript; edited and revised manuscript; approved final version of manuscript.

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