

Around the World in nearly 80 days: an international look at sport and exercise science, medicine and technology

A few months on from the most interesting, enlightening and enjoyable 10 weeks of my career in sport and exercise science and I am just starting to come back down to earth. Preparation for a round the world tour began back in 2002 following discussions with two significant influences in my career to date, Professor Roger Bartlett (Sports Biomechanics) and Dr Steve Haake (Sports Engineering). Both have considerable reputations and contacts around the world and were only too happy to share these with me. From this point on, the world wide web was to play an important role in this trip - checking out locations, researching academic profiles, booking accommodation, arranging transport, etc. Emails were sent to academics, researchers and organisations around the world, from Singapore to Sydney, Cape Town to Kobe. The response was phenomenal with invitations to visit from almost everyone approached. Web-based route planners helped create the itinerary for the trip with the aim being to visit as many institutions and organisations as possible, whilst ensuring that all visits were productive and at the same time interesting. I was keen to develop our existing links but also to establish new collaborations and opportunities.

So the route was set, Japan, Singapore, Australia, New Zealand, a short recovery in Fiji and finally the United States. 10 weeks, 7 countries, 16 flights!

As well as representing and promoting Sheffield and developing links for our two universities, the trip was also an opportunity for me to further my postgraduate studies. My first port of call was the Tokyo Institute of Technology where I was met by Professor Ujihashi, an expert in impact biomechanics and co-author of 'The Engineering of Sport' with Dr Haake. This book provides in-depth coverage of state-of-the-art sports technology and the latest developments in this area. Despite having been awake for 26 hours, we managed to have a good meeting and finalised arrangements for the presentation I would give the next day. As I left, just before 9pm, the postgraduate students were still beavering away in the open plan work area where there was a real buzz of activity, ideas sharing and research planning - very motivating.

I have no idea what the poster advertising my presentation said, but the talk on 'Sport and Exercise Science, Medicine and Technology in the UK: A Holistic Approach' went well, once we'd worked out the Japanese for 'holistic'. Having introduced Sheffield, our facilities and expertise, I talked about the way in which we adopt an interdisciplinary approach to our work in sport and exercise considering problems as a whole rather in parts. There was an excellent turn-out of students, academics and research staff but discussion afterwards was difficult due to the severe language barrier. English is only just starting to be seen as an essential part of the Japanese school curriculum and unfortunately my Japanese is non-existent. Plenty of visual aids helped.

While in Tokyo I visited the Japanese Institute of Sports Science (JISS) which I now consider to be one of the best operations of its kind. JISS opened in 2002 and is equipped to the highest standards, with large training areas for each sport and an enormous shared training area. The indoor track and extensive, well-designed laboratories are all housed in a light and airy facility, with the MRI scanner on the same floor as the three pools! As well as the usual ergometry, JISS has a specially designed kayak flume, multi-person treadmill and plenty of portable equipment. I was particularly impressed with a simple but comfortable room filled with computers, books and magazines where athletes and coaches were busy reading, analysing technique and watching video footage of performance. Accommodation for athletes is also within the facility and is of hotel standard with a restaurant that can

accommodate each athletes individual nutritional requirements. The quality of the food was second to none. There was a real air of professionalism and purpose about the place and the fact that very few people spoke English added an extra aura.



Trying to stay dry outside the Japanese Institute of Sports Science

Next stop was Kobe where I visited two major sports companies, Asics and Dunlop. At both Research and Development Departments, I met with and presented to representatives of each research team (running shoes, walking footwear, golf shoes, tennis rackets, etc), listened to presentations by them, had tours of laboratories and other test facilities and then had round-table discussions. The technology on display was cutting edge with Dunlop's tennis robot and Asics machine for the 3D analysis of foot dimensions machine being particularly impressive. I left stimulated and with the following thoughts about Japan in general:

- How can we capitalise on Japan's current isolation and the language barrier?
- Can we influence Japan's unfulfilled potential for knowledge transfer?
- What can we learn from the quality of the JISS model, the facility itself and the success of the JISS resource area?

On to Singapore and the National Stadium, home to the Singapore Sports Council. Here I received a good and very slow (temperature and humidity were through the roof) tour of the sport science and sports medicine facilities. Although fairly small-scale, the provision of support is adequate for Singapore's current athlete population but will need to continue to develop as numbers grow and standards are raised. Once again, motivational working environments were observed with plenty of staff interaction evident. It certainly made me realise how much I overuse email and telephone within my own workplace. Unfortunately a visit to Ngee Ann Polytechnic had to be cancelled due to the SARS virus but the short stay highlighted the potential for us to develop productive links with Singapore. Individuals are research active, enthusiastic and motivated but have limited facilities and are keen to develop partnerships with overseas institutions.

The Australian leg of the tour was a West to East crossing, starting in Perth and finishing in Cairns. I was met by one of Sports Biomechanics leading academics, Professor Bruce Elliott, at his University of Western Australia base. Professor Elliott's work in tennis is of particular interest to me as a former player and coach and so discussions were both informative and enjoyable. A visit to the Western Australian Institute of Sport (WAIS) followed and although admittedly only a regional centre, it couldn't match the impact of the JISS.



University of Western Australia Biomechanics Laboratory with Professor Bruce Elliott

After a brief stop at Ayers Rock to fulfil my ambition to run round it, it was over to the east coast and a visit to Olympic Park, Sydney, the venue for the 2000 Olympic Games. I had an interesting tour but was surprised at how underused this facility now seems.

Up the coast to Brisbane and to the home of another leading sports biomechanist, Professor Bruce Abernethy at the University of Queensland. Professor Abernethy provided a thorough tour of his department and shared his latest research developments. What became clear as I visited Australian universities was that we share similar funding problems, but I was encouraged by the realisation that our facilities and expertise are also not dissimilar.

New Zealand was a whistle stop tour with notable visits being to the new Millennium Institute, home of the New Zealand Academy of Sport and the Auckland Institute of Technology, where a former Sheffield colleague is now based. The geography of the country and the spread of the population certainly poses problems for the Academy. However, they are slowly working to establish an environment conducive to the development of elite athletes whilst working within SPARC (New Zealand's Sport and Recreation Department) to increase participation in physical activity in general. SPARC's research portfolio, available on their website at www.sparc.org.nz makes interesting reading.

Fiji provided no educational stimulation or networking opportunities but provided a much needed recovery period before the American leg of the tour. The highlight of this had to be the outstanding sports facilities at UCLA. We don't have a City in the UK with an international athletics stadium and 5800 seater tennis centre let alone a University. Amazing and a fitting end to an incredible trip.



Sports Facilities at UCLA