

## Research to improve performance in top athletes



After working alongside some of New Zealand's top athletes, PhD student Keir Hansen has moved to the United Kingdom to take up the position of strength and conditioning coach of the Worcester Warriors Rugby Club.

Under the tutelage of John Cronin, AUT University's Professor of Strength and Conditioning, Hansen is also completing his PhD while he lives and works in the United Kingdom.

Hansen's research looks at how the grouping of repetitions (clusters) affect the total session force and power outputs for a strength training session.

Following the completion of a Master of Health Science at AUT - which examined training techniques for developing speed in

athletes for resistance sprinting - Hansen was then offered a position as strength and conditioning coach for the New Zealand Warriors Rugby League Club.

Within his new role at the Worcester Warriors Rugby Club, Hansen was motivated to undertake his PhD in power training and development of muscular power, since it is such a vital component to developing training programmes in contact sport.

Hansen describes Cronin, director of AUT's Sport and Performance Research Institute New Zealand (SPRINZ), as a mentor in both an academic and professional sense.

"He's a real valued associate, teacher and leader," says Hansen.

Cronin says Hansen's thesis has exciting implications for athletes.

"He is finding different ways of grouping repetition during a strength training workout to improve the force, velocity, power output of muscle, which should then in turn improve functional performance, for example - sprinting."

Hansen is also confident his work will further benefit athletes.

"I hope it will add to the body of knowledge about the most effective means of developing a particular physical quality in the population which I'm investigating. Hopefully that will have an influence on training practices, certainly at the level that I'm working at, and it will lead to improved performance over time."

## AUT's first Oxford Fellowship

AUT's first University of Oxford Fellowship has been awarded to Jay Reid in the North Shore Campus' School of Education.

Reid will travel to England and conduct research at Oxford University later this year as part of the Association of Commonwealth Universities Titular Fellowships.

'The Practicum - Reciprocal Relationships with Schools' is Reid's research area. Traditional views of practicum see student teachers placed in schools, assigned a mentor, complete a placement and assessed by the educational institution they are working in. Reid argues there may be different ways to conceptualise and organise practicum. For example the Oxford model is a different way. It professionalises the relationship between the teacher education institution and the school.

During his stay at Oxford Jay intends to determine from a school and institutional

perspective how the Oxford model differs by looking at its strengths and what everyone involved in practicum gains from the experience.

He says he will also explore the idea of reciprocal relationships - an experience that benefits not only the student teacher and the teacher education institution but also the school receiving the student teacher.

"I hope this research will inform the future development of practicum in AUT's School of Education and that the exploration of the reciprocal relationship will open further opportunities for developing different relationships around practicum," he says.

The purpose of the Titular Fellowships is to enable universities of the Commonwealth to develop the human resources of their institutions and countries through the interchange of people, knowledge, skills and technologies.

The announcement of funding for 1,580 more university places is welcome and timely. Universities are enrolling now. Given the cap on domestic student numbers most have cut first year intakes. Prospective students and parents are expressing concern and fear at course information meetings.

The Faculty I head (Health and Environmental Sciences) would have to drop 2011 first year student numbers by about 400 to meet government requirements - many in health disciplines where demand is high and future workforce crises predicted. Minister Steven Joyce announced the additional funding as "good news for students and their families" and "good news for the wider economy" as the expected increase in graduates from 2013 "will help create a strong platform to support future economic growth." I agree. However, at Faculty level we would need about a quarter of the total new places just to hold next year's intake the same as this year.

Realistically, the best case scenario might be a reduction of 250-300 instead of 400. Government is in a tough place, endeavouring to contain public expenditure while encouraging and preparing for future growth.

Universities have important roles in society and the economy. It is surprising there hasn't been more public debate about changes to tertiary education funding. Until the change, students who met university entry criteria could enrol. There have always been limited places in some courses so this was not always in their programme of first choice. But they could enter

university. Now many can't. There are differing views on whether or not this is a good thing.

Some vice chancellors welcome it as an opportunity to be more selective - excluding those deemed weaker candidates. The challenge here is that school performance (particularly for adult students) is not a reliable predictor of university success. Restriction might also undermine application at school - why bother to accumulate credits if they no longer guarantee progression to university? If unemployment is a major alternative (young adults have very high rates currently), what are the personal, health, social and financial costs being unemployed relative to being a student.

There is also the ethical challenge when universities encourage international student enrolments while as well, or better, qualified locals are declined entry. New Zealand residents are prohibited from gaining entry by paying full fees. International students contribute much to universities apart from their fees. However, the reality is that tertiary institutions would face huge financial challenges if numbers dropped - and the quality of services to local students would fall. There would be significant flow-on effects to the national and regional economies if there was a dent in export education. These are challenging and important issues.



Max Abbott, Pro Vice-Chancellor, North Shore



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