Excellent, Applied Research in Regional Universities

Presentation by
Professor Caroline Finch AO
Edith Cowan University
Deputy Vice-Chancellor (Research)
Outline

• ECU’s approach to regional research

• My experience as a researcher within a RUN university

• Some thoughts for best supporting research in this context
ECU’s REGIONAL RESEARCH
Edith Cowan University (ECU) Campuses
ECU’s Regional Campus - Bunbury
Managing dredging impacts in coastal ecosystems

- We conduct research to improve management of dredging activities
- Highly relevant globally, particularly regional Western Australia
- Improve impact prediction
- Identify environmental windows
- Develop monitoring & management tools

Led by Kathryn McMahon & Paul Lavery Work with government agencies & industry
Occupational context (WA)
Create a Supportive Environment for Sustainable Food Systems

✓ A support ethos of stewardship of the food system,
✓ Formation of strategies to add value to agricultural enterprises,
✓ Collaboration to protect the environment,
✓ Engagement with other community members to achieve a sense of purpose for future generations.
Aims:
(1) To identify government and community initiatives supporting healthy food availability, access and use (food security) in South West Western Australia, and understand how the initiatives function as a system; (2) To support government and community initiatives to identify and adopt more effective strategies to ensure healthy food availability, access and use in South West Western Australia.

South West Food Community

Embedding mapping into custom-built web platform

Methods:
Mapping of initiatives and partnering organisations conducted via interviews with initiative staff/volunteers. Findings uploaded into online mapping tool to view system of initiatives.

Reference Group formed
State Government, Local Government and non-government representatives to form a project advisory, network linkages, promotion and advocacy role.

Results-sharing and action-planning workshop
Results of mapping process will be shared and initiative-based food security action plans will be developed. Potential new initiatives to increase food security will be discussed.
Using “Utopia as Method” to explore disability, hospitality and the new sharing economy in Margaret River

- Margaret River is a key tourism destination in the South West region of Western Australia, receiving over one million tourists annually (Tourism WA, 2016).

- Airbnb (an online peer-to-peer holiday accommodation platform) is expanding rapidly.

- We used Levitas’s (2013) Utopia as Method to develop utopian future scenarios, but found it impossible to imagine a utopian version of Airbnb, fully inclusive of disabled people, which exists within a society that does not itself endorse full social inclusion.

- The sharing economy appears to be eroding legislative and regulatory approaches to disability access.

- Any recourse to markets as a means of resolving disability access issues needs to acknowledge the limited power of socially excluded groups within both traditional and sharing economy markets.

- It may be helpful therefore to put in place broader legislation for social inclusion rather than attempt to regulate peer-to-peer platforms.

Partnering with Bunbury’s cultural industries.

Fierce and gripping. Incredible what community performers can achieve with a professional creative team leading it.
– Bunbury Regional Entertainment Centre Annual Report
Healing Right Way: an RCT involving Aboriginal Australians after acquired brain injury
NHMRC Partnership Project: 2017-2021

Aims

• Improve delivery of culturally appropriate rehabilitation services to Aboriginal people post-acquired brain injury (stroke and traumatic brain injury)

• Improve overall health outcomes for brain injury survivors

• Establish an economic model to support the business case for funding new rehabilitation services

• Explore the acceptability of the intervention from the perspectives of the Aboriginal participants and health professionals involved (process evaluation)

Project partners

• Western Australian Department of Health
  – 4 regional hospitals in the Pilbara, Kimberley, Goldfields and Midwest regions of WA
  – 5 metropolitan hospitals

• Aboriginal Medical Services in Geraldton, Broome, Kalgoorlie & Port Hedland

• Royal Perth Hospital Medical Research Foundation

• Stroke Foundation

• Neurological Council of WA

Using technology to link with and train project staff in regional sites
‘Some of us would say we have learning difficulties, others prefer to say we have special needs – and the rest of us don’t say anything!’

‘We don’t think we should be separated out from other people, the important thing is to mix in with everyone else and Bunbury and Australia are good places to live if you want to be part of the community.’

‘There is help for people like us who want to get a job or get their driver’s licence but it’s hard to get a job here now.’

‘You have to use a computer for everything – even to get your driver’s licence!’

PhD RESEARCH PROJECT:
How can Bunbury become the Most Accessible Regional City in Australia?

Industry Engagement Scholarship
Industry partner: City of Bunbury
Photo: Co-researchers with disabilities evaluating the Bunbury Show
MY RESEARCH IN A REGIONAL UNI
Grant Funding 2006-2017 (UB/FedUni)

- **2 x NHMRC Principal Research Fellowships**
- **1 x NHMRC Partnership Project Grant ($>1.2 million)**
- **3 X ARC Linkage Projects with 2 RUN unis**
  - International funding
  - Government funding (targeted)
  - Peak body grants (competitive)
Strong Industry Engagement

Existing partnerships with external bodies representing:

- Government
- Advocacy
- Peak sporting organisations
4 Universities, Led by a RUN

NoGAPS
National Guidance for Australian Football Partnerships and Safety

Towards a national sports safety strategy: addressing facilitators and barriers towards safety guideline uptake
Caroline F Finch, Belinda J Gabbe, David G Lloyd, Jill Cook, Warren Young, Matthew Nicholson, Hugh Seward, Alex Donaldson, Tim L A Doyle


We have the programme, what next? Planning the implementation of an injury prevention programme
Alex Donaldson, David G Lloyd, Belinda J Gabbe, Jill Cook, Caroline F Finch

NHMRC Partnerships Grant Decision
- >$1.2 million over 4 years

• “The panel was impressed with the ecological nature of the project and its commitment to work with community groups”

• “The panel agreed this was a very strong, indeed model, partnership with key agencies in sports safety joining and collaborators in the proposed research”
Research Environment According to ARC Reviewers – Funded 2016-2020/2 RUNs

• “In my view the ***¹ doesn't have a particularly strong research environment although it has clearly made some effort to provide support.”

• “The project is embedded in a research centre environment that attracts support from the university. Participants are leading researchers in their universities so attract support. e.g. Prof X at ***¹ and Prof Y at ***²”

• “The research environment of both research units at ***¹ and ***² are both excellent and provide support that will enable such research.”
A sports setting matrix for understanding the implementation context for community sport

C F Finch, A Donaldson

ABSTRACT

There has been increasing recognition of the need for effectiveness research within the real-world intervention context of community sport. This is important because, even if interventions have been shown to be effective in controlled trials, if they are not also safely adapted and sustained, then it is unlikely that they will have a public health impact. There is very little information about how to best conduct such studies, but application of health promotion frameworks, such as the RE-AIM framework, to evaluate the public health impact of interventions could potentially help to address the implementation context. Care needs to be taken when directly applying the RE-AIM framework, however, because the definitions for each of its dimensions will depend on the level of intervention that is targeted at. This paper presents a novel extension to the RE-AIM framework (the RE-AIM Sports Setting Matrix (RE-AIM-SSM)), which accounts for the fact that many sports injury interventions need to be targeted at multiple levels of sports delivery. Accordingly, the RE-AIM components also need to be measured across all levels of possible influence in the rate of uptake and effectiveness. Specific examples are given for coach-delivered and volunteer training interventions. The RE-AIM-SSM is specific to the community sport setting implementation context and could be used to guide the delivery of future sports safety and other health promotion interventions in this area.

BACKGROUND

Recent systematic reviews highlight accumulating evidence for the efficacy of sports injury prevention interventions. These reviews often imply that such evidence is enough to ensure prevention of sports injuries through the uptake of these “practicing” measures. Importantly, however, recent studies are showing that when these interventions are implemented into real-world sports settings, rather than just controlled laboratory settings, they are not effective because they are not used by the target group in the way that was intended. Systematic reviews often only collate evidence from randomized controlled trials (RCTs) that purport to assess the effectiveness of interventions because they use a highly advanced (and sometimes unrealistic) analysis approach. However, these RCTs are by definition, highly controlled and do not necessarily reflect the real implementation context for the intervention, even if they give considerable attention to issues of compliance and adherence to the preventive measure under evaluation. There is a very real need to evaluate the effectiveness of sports safety interventions in the real-world context of sports delivery under natural and unintended conditions, even if their efficacy has already been demonstrated in RCTs. Effective interventions are not widely adopted, compared with a sustained and ongoing practice, then it is very unlikely that any significant public health impact will be made.

In 2006, Finch outlined the Totalizing Research into Injury Prevention Practice (TRIPP) framework (Box 1) and argued that “future advances in sports injury prevention will only be achieved if research efforts are directed towards understanding the implementation context for injury prevention, as well as continuing to build the evidence-base for their efficacy and effectiveness of interventions.” Stages 5 and 6 of the TRIPP model are particularly important for injury prevention because understanding the barriers and facilitators to the widespread adoption and sustainability of prevention measures is vital to identifying targets for specific implementation efforts.

Undoubtedly, it is critical that all implemented sports safety interventions have a strong evidence base. However, it is equally important that they are also effective and able to be readily taken up in the “real world”, as it is only these preventive measures that are adopted as standard sporting practice will actually prevent injury. For example, in a field-based RCT of the effectiveness of headgear and mouthguards in Australian football participants, very few participants wore the headgear, indicating that the best designed protective equipment cannot prevent injuries if participants do not use it. Another Australian football study found that the current scientific evidence about strategies for lower limb injury prevention was not yet being incorporated into coaches’ beliefs and specific practice when delivering training programmes for players. Considered together, these studies highlight a major gap in injury prevention implementation, suggesting that more research is needed in this area.

The issue is not restricted to coaches and participants. Each sports body and their various governing bodies are constantly trying to ensure that any innovations and strategies are taken up at a local level. Despite the availability of evidence-based interventions, it is clear that sports injury prevention efforts are currently hampered by a limited understanding of their implementation context. This issue has been recognized for an international challenge for the field.

Innovating research in this direction will require a major paradigm shift. In particular, it requires the integration of social science methods with the more usual sports medicine and population health perspectives. One way to move forward.
IOC-FUNDED RESEARCH CENTRES

AUSTRALIA
Centre for Injury Prevention and Safety Promotion, University of Ballarat

CANADA
Sport Injury Prevention Research Group, University of Calgary

NORWAY
Oslo Sports Trauma Research Center, Norwegian School of Sport Sciences, Norway

SOUTH AFRICA
UCT/MRC Research Unit of Exercise Science and Sports Medicine, University of Cape Town

2014
IOC Centres of Research Excellence
2010-2019 2015-2019

AUSTRALIA
NORWAY
CANADA
SOUTH AFRICA
SOUTH KOREA
UNITED KINGDOM
DENMARK
QATAR
NETHERLANDS
Professionalisation of junior sports linked to injuries

Increasing numbers of rural and regional children who play sports are being admitted to hospitals or presenting to emergency departments for treatment of sports injuries, including fracture and concussion, new research from Federation University Australia shows.

The increasing professionalisation of junior sports, greater participation, and parents being more aware of the need to get their children checked at hospital to be on the safe side, is driving the trend.

The limited access to a full range of health services in rural and regional areas, especially on weekends, also means that hospitals are the preferred place for injury treatment. The trend is across all sports, not just football and netball, sports injury epidemiologist Professor Caroline Finch said.

“We're seeing an increasing focus on professionalisation and competitiveness of junior sport. Kids who are talented want to play like professionals, so there's a faster speed to the game, greater competition. Parents also want their children to succeed. Unfortunately, these factors can increase the risk of injury,” Professor Finch said.

“Fractured bones, joint dislocations, very serious muscle injuries, concussion and suspected concussion are the most common sports injuries treated at hospitals. In fact, sports injuries are the number one reason why children and young people are admitted to hospital for injury treatment,” she said.

The worrying trend in children and young people being hospitalised following increasingly competitive recreational sports is also reflected in recreational athletes among the 20 to 45 year old age group, again especially in rural and regional areas, and especially in popular sports like football and netball.

“Our research shows that the number of hospital sports injuries is higher in rural and regional areas per population than it is in the cities. Our most recent research shows that this problem has actually been increasing over time,” she said.

The major obstacles to better sports safety in rural Australia are poorly maintained playing fields that are hard, uneven and with cracked earth or without flat surfaces. The lack of pre-season training and preparation before enthusiastic, long-serving but unqualified coaches access to rural general practitioners on weekend sports medicine clinics, and few specialist sports injury doctors and physiotherapists.

Funds earmarked for safety at the peak body level are also not always finding their way down to local level sport in a way that ensures the safety of all participants.
SOME GLOBAL IMPLICATION OBSERVATIONS
RUN university campuses cover some of eastern Australia’s most important regions: white dots indicate university headquarters, black dots other campuses and black stars study centres.
Our true place in the world
Average Citations per Publication

Australian Average Citations per Publication
(All Scholarly Outputs vs Scholarly Outputs with International Collaboration)

Generated by ECU's ORI, based on Scopus

<table>
<thead>
<tr>
<th>Authorship affiliations</th>
<th>FedUni only</th>
<th>FedUni + other Australian Uni</th>
<th>FedUni + International</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of papers</td>
<td>8</td>
<td>27</td>
<td>3</td>
</tr>
<tr>
<td>Average number of citations per paper</td>
<td>6.6</td>
<td>10.0</td>
<td>20.3</td>
</tr>
<tr>
<td>Range of citations</td>
<td>0-23</td>
<td>0-31</td>
<td>16-26</td>
</tr>
<tr>
<td>Items with &lt;1 cite per year on avg</td>
<td>50%</td>
<td>30%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Source: Google Scholar as at 16/10/2018
MAXIMIZING RESEARCH EXCELLENCE AND IMPACT
Future Directions

Move away from dialogue like “Research at regional universities is different because…”

Move towards: “We do things differently at regional universities because…”

“OWN THE SPACE”
Embrace the Difference – Claim the Place

Why must all universities be the same?

“Finding a place in the national innovation ecosystem where some universities and some regions focus on different stages in the innovation process (e.g. late stage knowledge application as distinct from early stage generation of new knowledge)”

Prof John Goddard, Newcastle University, UK. Universities, innovation and urban and regional development: challenges, tensions and opportunities in Europe. 2014. 
Tips For Universities

- Support research/researchers in multiple and different ways
- Conference attendance
  - funding (but with accountability)
  - academic time-in-lieu
- Flexibility with work location of HDRs
- International visiting fellowships
- Nominate researchers
  - awards
  - national panels
- Marketing and promotion
  - Website
  - Social media
- Recognise value in non-Uni co-branding in some instances
  - not always link to teaching strengths
  - allow the research/researchers to be the corporate story
Tips For Researchers

• Attend conferences as presenters
  – every talk is a publication
• Put your name forward for national/state committees
• Publish with others
  – Open Access
  – Approach people from outside your institution
  – Aim for top peer-review journals
• Partnerships
  – With other unis for grants – bring them on
  – End-users/stakeholders – be flexible, make it easy for them
• Be seen
  – Social media
• Be proud of what you do and affirmative in language
Connecting Universities to Regional Growth: A Practical Guide