



Research in Education Network

When is a partnership truly a partnership? Tips for a successful ARC linkage collaboration from Australian education jurisdictions

Introduction

This paper provides an overview of the Australian Research Council (ARC) Linkage scheme, highlighting the key benefits of partnerships and the success criteria for research collaboration between academia and education jurisdictions from a jurisdiction perspective.

The ARC Linkage Scheme

Since its inception in 1946 the ARC was originally named the Commonwealth Universities Research Grants Committee (CURGC), changing its name in 2001. Its role is to advise on the allocation of Commonwealth government research funding, administer the National Competitive Grants Program (NCGP) and support the funding and advancement of research endeavours by academics and researchers.

There are two major programs of funding: Discovery and Linkage. While the ARC Discovery funding schemes recognise the importance of fundamental or basic research in key national priority areas, the ARC Linkage scheme specifically promotes partnership and collaboration between academia and industry:

‘Bringing together researchers, business, industry and other publicly funded research agencies, the ARC Linkage scheme is important in its promotion of national and international research and industry partnerships’¹

¹ Australian Research Council (ARC) (2015). “ARC Linkage Programme”. Retrieved 14th August 2015 from <http://www.arc.gov.au/linkage-programme>.

At the heart of the ARC Linkage Scheme is collaboration – academic and industry partners working together on research to benefit the wider community and help foster greater depth of research.

Proposals for funding under the ARC Linkage scheme must include at least one partner organisation. Each partner organisation must make a contribution in cash and/or in kind over the three to five year project. The combined partner organisation contributions for a proposal must at least match the total funding requested from the ARC. Applications for funding for projects commencing in the following year close in early November and are announced the following June or July.

The scheme is highly competitive with a success rate of approximately 30%. In July 2015, 35% of applications were successfully awarded as part of the 2014 Grant Round – only seven of these related to education.

Brief history and objectives of the scheme

From 1996 to 2001 the ARC Linkage scheme was known as the Strategic Partnership with Industry – Research and Training (SPIRT), and prior to that the Collaborative Research grants.

The scheme has focussed on collaboration between higher education researchers and other parts of the national innovation system, which is vital to acquire new knowledge and advance national interests. This innovation allows for the transfer of knowledge, skills, and ideas between academia and industry as a basis for securing commercial and other benefits of research.

The two key objectives of the ARC Linkage scheme are to:

- support the initiation and potentially develop long-term research alliances between tertiary education organisations and industry, and
- provide opportunities to understand issues at hand and potentially derive national economic, social or cultural benefits.



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These aim to enable researchers to extend their research and become internationally competitive in collaboration with organisations outside of the higher education sector, encouraging a national growth in world-class researchers to meet the needs of the Australian innovation system².

Key characteristics of successful ARC Linkage projects

On reflecting the preconditions for successful engagement on a grant proposal, there are a number of underpinning commonalities or principles:-

Ethical: proposed research is highly ethical and appropriate and will present minimal risk and intrusiveness to participants of the department.

Quality: proposed research is well designed, purposeful and capable of producing sound results relevant to the research goals.

Open and collaborative: proposed research is collaborative and involves an open, respectful relationship between all participants.

Unique and aligned: proposed research addresses gaps in knowledge, aligns with priorities and is of clear benefit to participants, schools, the jurisdiction or wider community.

Accessible: Outcomes and findings will be made available and disseminated widely.

Some jurisdictions report that early engagement (such as pilot research or small commissioned projects) provides an opportunity to **test the partnership, governance structures and most suitable reporting methods on a smaller scale** over a shorter timeframe. This opportunity enables partnerships to demonstrate a track record of successful partnership in their application, which they feel is a consideration by the ARC in short-listing proposals.

Lastly, **early communication is critical for engaging large departments** in a partnership proposal. Approval processes for an ARC letter of support, and any associated cash or in-kind commitments, tends to involve multiple levels of sign-off and may take several months depending on the nature of the commitment sought.

The Research in Education Network (REN) is a national body of research officers across each

Australian jurisdiction and is a useful contact for University researchers seeking advice on research collaboration.

Strong commitment and buy-in from the Industry Partners as well as the researchers.

It is most common for researchers to approach the jurisdiction seeking an ARC Linkage project as their core business is research and they therefore have a strong incentive to initiate partnerships. However, buy-in from the industry partner can be facilitated if the idea for the project originates with them and they seek expressions of interest from researchers.

A project team should be selected to oversee all aspects of the project. The team should be co-chaired by a Chief Investigator from the lead University and a Partner Investigator from the Industry Partner. It is useful if meetings occur in formal and informal settings on a regular basis (perhaps four times per year for a day or two). The team should plan all aspects of the project such as the development of research questions, the methodology, protocols and research instruments for the conduct of the study, financial management and ethics approval processes.

Project meetings should be carefully documented to create a common narrative for the project team. Record-keeping of meeting minutes will create a detailed history of the life of the project. Systematic and well-documented research can help foster a sense of camaraderie, pride and ownership among the project team.

Recognise diversity within the project team. The ability to build on the multiple strengths and identities of team members should improve the quality of the work. Meeting formally and informally can allow the expertise in research of public servants and teachers to be discovered.

Consensual decision-making and equal division of labour. Academic and departmental partners should be equal partners in terms of the conduct of the research and the writing of papers and books. Many Departmental officers have doctorates themselves and increasingly government employees have extensive experience in research, often with a foot in both academia and the bureaucracy.

Collaboration with a range of stakeholder groups should be a factor across all aspects of the research. This needs to occur at all levels of

² Ibid

the educational institution via the intentional identification and explicit involvement of stakeholder groups. Dependencies need to be established through the desire to incorporate stakeholder advice and evidence. Stakeholder contribution should be respectfully valued which in turn is critical to the strengthening of the project.

School perspective

Schools are critical stakeholders in educational research – most often as participants, sometimes as partners or co-researchers and hopefully always as beneficiaries.

The REN sought feedback from a principal, teacher and learning coordinator across three schools involved in two different ARC Linkage projects to seek their experience and perspectives.

In relation to research in general, all were positive about the importance of education research and felt that their school can play an active role in contributing to research for the common good of schools and young people. All insisted the research needed to have a direct benefit to the school or at least be aligned with school priorities, and that the greater purpose does not always warrant the time and resources required by schools to participate.

What worked well when engaging schools in research?

Schools with a strong interest or existing commitment to the research topic were more likely to engage in the project. One school reported a 'transformational and sustained change in the school' where they felt a project became embedded in everything they do.

The school's primary contact who was experienced in research was better able to coordinate research efforts and support other school staff who were less experienced.

High expectations and support from the researchers and jurisdiction encouraged sustained engagement and commitment from the school.

Ongoing opportunities provided by the jurisdiction to the site beyond the life of the project contributed to the sustained impact of the research.

The quality and calibre of the researchers is as important as the research topic when deciding to engage in an ARC Linkage project.

Researchers who presented well considered and relevant survey and interview questions were more highly respected by the school staff.

The research process was enhanced where the university played an active role in facilitating the survey process with students in the classroom.

High quality professional learning as part of one of the projects was reported as one of the best components of the research due to it being supportive, rigorous, relevant, purposeful and differentiated.

What were the benefits for schools who participated?

A rural school reported appreciating the opportunity to put forward a rural perspective.

With support, teacher's aides and students also enjoyed the opportunity to have their voices heard. Teachers reported that the opportunity to build capacity and confidence in leading action research in their school had now made it common practice.

Participation enabled schools to reflect on their progress and consolidate their thinking as it allowed time for focused reflection. Schools reported a range of outcomes as a result of being involved in the project including increased teacher collaboration, greater accountability among teachers for all students, improved student outcomes, increased knowledge, strengthened relationships and collaboration with other schools and the building of general leadership capability.

What could be done differently to better meet the needs of schools when engaging them in research?

All requirements of the school need to be made explicit upfront so that staff can prepare adequately. For example, researchers should not underestimate the time the school contact person needs to "rally the troops together and sell the research project". There needs to be increased understanding by researchers of the demands and contexts of schools involved in the project. Transparency about the time required to undertake surveys and interviews in the information provided to schools prior to their approval of the research and honouring this agreement throughout the project.

Survey fatigue is a particular concern. The principal felt the need to balance data-gathering in schools with getting what information is

critical to the research, especially when working with disadvantaged or marginalised groups. The more closely a research project is aligned with school priorities the more likely it is to be embraced.

Timely feedback of research findings to schools is not consistent. Schools felt this to be a small but reasonable request, given they are ultimately in the best position to act on the findings and drive continuous improvement.

University perspective

Collaboration between tertiary education organisations and education jurisdictions can result in great benefit to the wider community. Schools in particular are afforded a greater depth of knowledge and technology that may not be possible alone, while universities are able to gain access to additional public and private funding via technology transfer activities.³ Schools also benefit from a greater depth of understanding in key areas of learning, and in turn, educational faculties within universities can tailor their programs to meet the needs of schools in a more applied fashion.

One example of academic impact in action is the commercialisation of research through industry collaboration. It represents measurable and immediate impact in the field for academic research⁴.

What are the challenges of a successful partnership between universities and education jurisdictions?

Each organisation can be driven by different incentives and intellectual property can become a factor of contention⁵. Common understanding must be reached before the project commences as to timeframes, expectations and intellectual property terms⁶, as often university and industry

can have different timeframes for project work, with academia utilising more long-term research and industry utilising a short-term cycle of policy agendas. A Funding Agreement (or Collaborative Research Agreement) between all parties must specify the rights and obligations of all parties involved in the project.

There are issues regarding confidentiality and exclusivity with collaborative work as well as organisational and cultural differences within each area⁷.

Changes in school leaders and staff over the life of the project may create tensions and challenges in the ongoing commitment to projects.

Reconciling differing perspectives

The ARC Linkage application process typically involves intense negotiations between the research organisation(s) and partner organisation(s), which may have different interests and research priorities. It is therefore important for partners to co-construct the research project and co-write the proposal.

Due to their different perspectives, universities may have more of a focus on 'theory building', whereas partner organisations may have a greater focus on practical implications. Researchers may be disposed to critique the status quo while the partner organisation may be more inclined to an appreciative inquiry into what seems to be working well, so that practitioners and policymakers can learn from the most successful experiences or cases.

While it is the researcher who generally develops the application it is recommended that partner organisations be involved to assist in the harmonising and reconciling of different perspectives.

Translating research knowledge into policy and practice

ARC Linkage partnerships between education jurisdictions and academic institutions can be extremely beneficial. Successful partnerships require a great deal of commitment, effort, trust and a shared understanding of the key

³ Barnes T., Pashby, I., & Gibbons, A. (2002) "Effective university–industry interaction: A multi-case evaluation of collaborative R&D projects". *European Management Journal*, 20:272–85.

⁴ Markman, G., Siegel, D., & Wright, M. (2008). "Research and technology commercialization". *Journal of Management Studies*, 45: 1401–1423.

⁵ Bruneel, J., D'Este, P. and Salter, A. (2010) "Investigating the factors that diminish the barriers to university–industry collaboration". *Research Policy*, 39, 858– 868.

⁶ Wilson T (2012) "A review of business–university collaboration". Retrieved 20th August, 2015 from www.gov.uk/government/uploads/system/uploads/attachment_data/file/32383/12-610-wilson-review-business-university-collaboration.pdf.

⁷ Schofield, T. (2013). "Critical Success Factors for Knowledge Transfer Collaborations between University and Industry". *Journal of Research Administration*, 44(2): 38-56.

challenges facing policy makers and researchers alike. However, as discussed there is sometimes an uneasy and at times tenuous relationship between researchers and policy makers or between research evidence and policy formation. Part of the problem lies in the different cultures surrounding those doing the research and those who might be able to use it. Discussions on the use of research evidence in decision making can be a challenge. Policy makers may accuse researchers of irrelevant, poorly written and communicated “products”, and researchers may accuse policy makers of political expediency that results in irrational outcomes.⁸

Policy making is fast-paced, sometimes unpredictable and influenced by external events or groups. Research, on the other hand, operates within comparatively long timeframes and is methodical, carefully planned and rigorously designed to avoid outside influences. The differences between these two environments must be acknowledged and addressed for ARC Linkage partnerships to truly succeed.

The creation of new research evidence or knowledge is a fundamental aim of ARC Linkage projects and a major reason why education jurisdictions support such projects. However, the creation of knowledge does not, of itself, lead to widespread implementation and positive impact in education and must be translated into change in policy and practice for the benefits to flow through the education system.

To effectively translate research knowledge and facilitate its use in policy and practice, consider the following strategies⁹:-

1. **Production and co-production of content**

– the way knowledge is generated and people involved in the production of content will impact its use. Consider the following questions:

- *Who (researchers, policy makers, teachers, principals, other stakeholders) should we involve in the production of content*

⁸ Lomas, J. (2000) “Using ‘research and exchange’ to move research into policy at a Canadian foundation”. *Health Affairs*, Vol. 19, No. 3

⁹ Adapted from Lemire, N., Souffez, K.M., & Laurendeau, M. (2013). “Facilitating a knowledge translation process: knowledge review and facilitation tool”. Quebec Government.

(including the formation of the research question/s or the problem to be examined, choice of method, interpretation of results)?

- *Which or what mechanisms can we put in place to ensure effective interaction between researchers, policy makers or practitioners as early in the process as possible and throughout the duration of the project (e.g. project advisory or management committee; project working group; periodic or regular meetings with different stakeholders)?*

2. **Adaptation of content and format to target audiences**

– the research output (or product) needs to be adapted for the target audience. The product should be ‘understandable’ and adapted to the needs, concerns, level of knowledge, practices and socio-political or organisational context of each of the target audiences, as well as to the purpose of the product. For policy makers, it is preferable to summarise the information and present it in the form of ideas/conclusions/recommendations or a synthesis that clearly explains the implications of the results for policy and practice. Consider the following question:

- *Who are the priority target audiences (i.e. policy makers, teachers, principals, ministers)?*
- *For each target audience identify the most useful and relevant information as well as the appropriate format and level of language.*

3. **Knowledge dissemination**

– the research products must be accessible to policy makers and practitioners. Not all research results need to be widely disseminated, however, consider the process through which the product is communicated, over what period of time, and through which communication channels. Also, personal contact is sometimes required to create mutual trust and understanding. For each target audience, consider the following questions:

- *What are the best channels of communication (written, verbal, electronic etc.) for reaching each target audience?*
- *What are the prevailing organisational conditions in the group we are trying to reach (ability or inability to access a computer, degree of autonomy, time at their disposal, openness to change?)*

- *What is the level of knowledge and understanding of scientific methods and results within the target audience?*
- *Do we need partners to carry out our dissemination activities? If so, which ones?*

4. **Knowledge reception** – the context in which knowledge is transferred as well as the prevailing interest and priorities of policy makers and practitioners in receiving the knowledge and their ability to do so is important. Maintaining ongoing relationships allows researchers to remain informed of their needs and facilitates better acceptance of new information. For each target audience, consider the following questions:

- *What is the best way to arouse their interest?*
- *What is the best time to present this knowledge (period of the year, intensive or brief exchanges, and pivotal step in a particular process or program)?*
- *Who would be the best messenger(s)? How can they be identified?*

5. **Knowledge adoption** – the factors that influence whether or not knowledge is adopted by policy makers and practitioners should be considered including context, political environment, the interest of influential groups, economic circumstances, public opinion are just a few examples. Consider the following questions:

- *What issues (political, economic, social, ethical) tied to the knowledge to be transferred need to be taken into account during the decision making process?*
- *What methods can we propose to encourage decision makers to consider the knowledge to be transferred during the decision making process?*

6. **Knowledge appropriation and use** – it is important to consider the process through which policy makers and practitioners assimilate new knowledge or new ways of thinking and how this knowledge is used for decision making and in practice. Consider the following questions:

- *What does this audience already know about the subject and what new knowledge should it acquire through appropriation activities?*
- *What type of appropriation activities would be most relevant (i.e. training workshops,*

coaching) and most appropriate for this audience?

- *How can we best support the concrete application of the transferred knowledge? What type of support will be required (e.g. personalised or group follow-up)? Who will provide this support?*
- *Are there networks or communities of practice that can support the use of the transferred knowledge and the development of a culture of reflection?*

Conclusions

In summary, collaborative research between universities and education departments results in great benefits and is a burgeoning area of interest to all parties involved.

Agencies such as the ARC, which offer Linkage projects to facilitate university-industry partnerships, are integral to the growth and development of collaborative research in Australia.

In the field of educational research it is hoped that more collaborations will be developed in years to come, to ultimately advance the nation's interests and future generations of Australians.

Key tips for successful ARC partnerships from the perspective of education jurisdictions include:

- true collaboration at each step of the process;
- common and clearly articulated understanding regarding research goals, methodologies, time commitments, intellectual property rights, and so forth;
- building on the success of pilot projects or previous collaborations;
- early engagement and planning;
- co-constructing the research project and proposal;
- partnering as investigators, administrators and research authors;
- involving the target audience in developing any research products; and
- ensuring that research participants, including schools, benefit directly from their participation.