

Communities of Practice, Supporting Research Administration in Australia using web 2.0 technologies

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Introduction

Collaboration is the catch-cry of the modern research effort. Researchers are encouraged to collaborate to build research teams of critical mass that successfully leverage knowledge expertise and resources and improve the chances of funding success. As facilitators of the research and innovation chain, research administrators encourage collaborative that increasingly transcends disciplinary and national boundaries. The “publish or perish” mantra has a new parallel: “collaborate or perish”. The challenge for research administrators is to consider how the principles of collaboration equally apply to our community. We operate in an environment where resources are scarce, compliance and reporting demands are increasing, measures of quality and international ranking are paramount and managing the true cost of research is a key business driver. Working across boundaries is becoming an everyday reality for the research services professional. The question now, is collaboration the answer for the research administrator and, if so, how will the collaborative process be supported?

Background

The Australian Higher Education Research Environment

Australia has 38 publicly funded universities, each with distinctive missions, yet all sharing the same ideal of achieving excellence in scholarship through research. In fact, the protocols that define a university in Australia legislate that institutions must maintain a “culture of sustained scholarship extending to the creation of new knowledge through research, and original creative endeavour”¹. By their very definition then, every Australian university must be a research-focused institution.

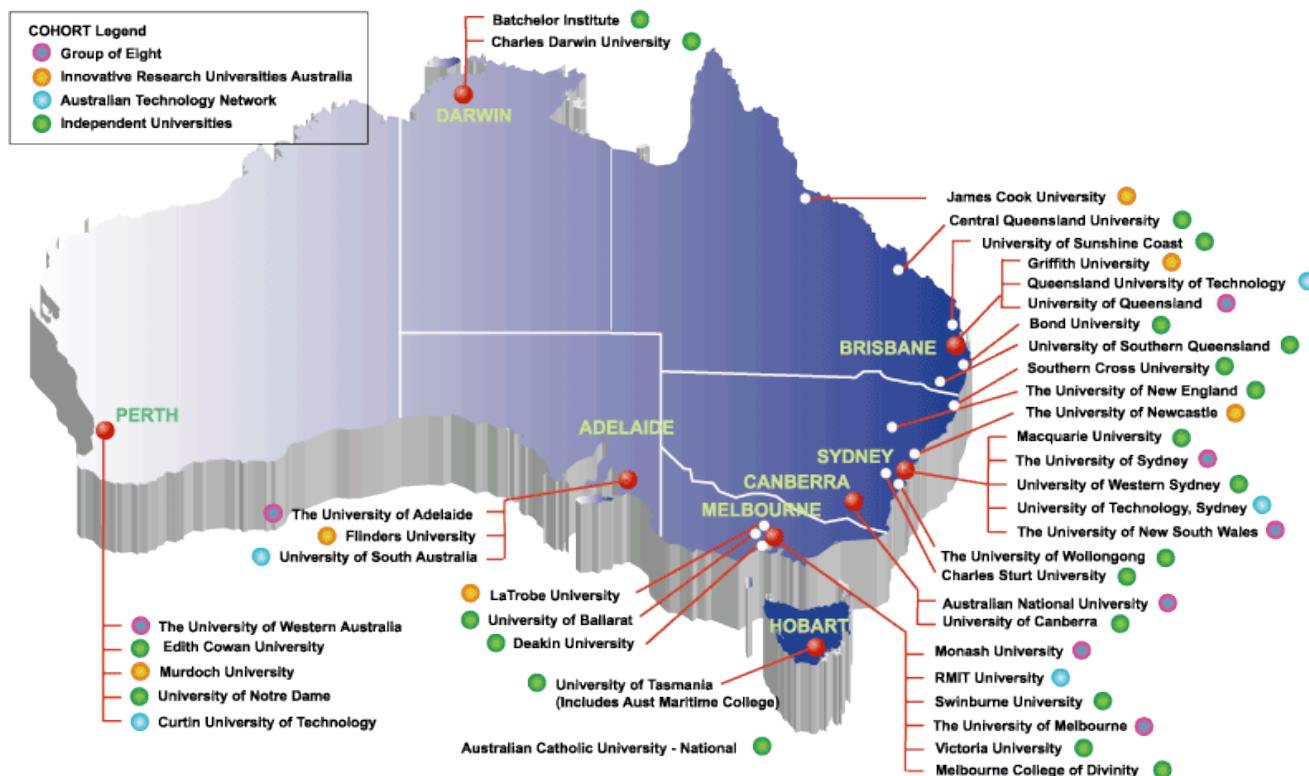


Figure 1 Location of Australian Universities

¹ MCCETYA National Protocols for Higher Education Approval Process

Australian Government Support for Public Australian University Research

The Australian Government supports university research through notional allocations based on institution's operating grants; formula driven block grant funding; and via competitive project support delivered through federal funding agencies. For 2007 research block grants to universities totalled just over \$AUD 1.2 Billion ²

Research Block Grant Scheme	Amount \$AUD M
Institutional Grants Scheme	302
Research Infrastructure Block Grants	204
Research Training Scheme	574
CTS, RPF, Research Scholarships (APA & IPRS)	122
<i>Total</i>	<i>1202</i>

Figure 2 Federal Research Block Grants 2007

The main federally funded research agencies are the Australian Research Council (ARC) and National Health & Medical Research Council (NHMRC), which, for 2007, allocated \$572M³ and \$644M⁴ respectively through various competitive grant programs in support of research. These competitive grant programs are open to applications from agencies outside the university sector, but they still represent in excess of \$AUD 1.2 Billion of project support.

Recognising the need to invest in the longer-term future of universities, the Australian Government in 2006 established the Higher Education Endowment Fund that has over \$6 Billion invested to support and develop eligible higher education institutions for capital expenditure and research facilities⁵.

Current Issues facing University Research in Australia

Research Block Grants are not indexed to inflationary pressures; therefore the infrastructure funding to support the full costs of research has historically not been addressed. A major new initiative announced in 2009, the *Sustainable Research Excellence in Universities (SRE)*, will address the infrastructure-funding gap. The major project funding agencies - ARC and NHMRC - have experienced significant growth in their annual budgets but concomitantly have seen large increases in the numbers of funding applications. Furthermore, the quality of proposals remains at a very high standard. Success rates for project grants are at best in the order of 20-22%.

The recent introduction of the Excellence in Research for Australia initiative (ERA) scheme by the Australian Government will see that the quality and impact of university research assessed in a more robust and systematic way. Using a combination of indicators and expert review by committees comprising experienced, internationally recognised experts, the ERA will evaluate and recognise research excellence in the Australian Higher Education sector⁶.

The emergence of eResearch as researcher providing support tools offers tremendous opportunities to researcher's projects. Parallel to this it presents challenges to the research office, Information technology and other administrative areas. The Australian Government since 2004 has offered funds to further enhance and develop eResearch capabilities via the National Collaborative Research Infrastructure Strategy (NCRIS); *where the Australian Government is implementing a strategic and collaborative approach to investment in world-class research facilities,*

² Australian Government DEEWR, Higher Education Report 2007

Accessed at: http://www.dest.gov.au/sectors/higher_education/publications_resources/profiles/HigherEducationReport2007.htm

³ ARC Annual Report 2007-08

Accessed at: http://www.arc.gov.au/pdf/annual_report07-08.pdf

⁴ NHMRC Annual Report 2007-08

Accessed at http://www.nhmrc.gov.au/publications/synopses/_files/nh105_AR-0708.pdf

⁵ DEEWR Higher Education Report 2007

⁶ ARC, 'ERA Consultation Paper' 2008.

*networks and infrastructure that are accessible to researchers*⁷. Most of the eResearch developments are still in their infancy and the full potential of available technologies has not been recognized within the Australian research community. Traditional research methodologies are still being used and this has an effect of the research administrative community as they look to develop and enhance a more “modern” communication and technological solutions to assist the research enterprise.

Challenges for Researchers

As you can see, the funding landscape and policy initiatives of Australia place tremendous pressures on researchers to be competitive and successful in their endeavours through:

- Publishing must now be focussed on top quality journals and other high impact outlets; publishing for publishing’s sake is not an option as funding is attached to the production of outputs.
- Project grants are fiercely competitive and collaboration, often in a multi-disciplinary context is emerging as key contributing factor to grant application success.
- International collaboration is increasingly encouraged as success in attracting funds often favours “big science”
- Scrutiny from policy makers and administrators into all aspects of academic research is increasing as block grant funding is more and more closely tied to research outcomes where the real benefit or social success of research is often not realised for at least 10 plus years. This can therefore affect the worth or measure of the research in the shorter term.

Challenges for Research Administrators

As research administrators, we share the pressures on our academic colleagues and look for ways to minimise admin burden whilst still meeting legislative obligations. As administrators the challenge to find ways of doing more with less is no less real than it is for our academic counterparts. Some of the mechanisms to achieve such efficiencies can be found in improved communications, collaboration with colleagues and gaining shared understanding of the issues being confronted in a changing landscape. Working in isolation within your own institutional or organisation boundaries is no longer an option for the research professional in the 21st century.

Communities of Practice for Research Administrators in Australia

There are many avenues for administrators to communicate with counterparts in other institutions: The Australasian Research Management Society (ARMS), a member organisation of the International Network of Research Management Societies (INORMS), facilitates various workshops and events through its chapters and holds a highly successful conference each year. Other organisations dedicated to professional development in the postgraduate research area also offer forums (Australasian Research Training Administrators – ARTA) for knowledge exchange. The industry in general is characterised by a willingness to informally assist whenever a colleague is seeking answers to a question. The ERA was a key catalyst for collaboration where an informal Google Discussion group has attracted 200 members from the 38 Australian universities and all manner of questions and solutions are openly discussed. However, no broadly accessible process or system to support the knowledge creation processes across institutions is apparent in the Australian higher education research management sector.

⁷ <http://ncris.innovation.gov.au/development/Pages/default.aspx#Overview>

CRAG

The Collaborative Research Administrators Group (CRAG) is a consortium of five universities who share a common mission – ‘to promote collaboration between staff in research organisations who are working at the coalface of research administration or as it has been suggested “below the policy line” at a more operational level. CRAG aims to establish an effective community of practice for research administrators and provide resources to support the knowledge creation and sharing process⁸.

The current CRAG member universities are:

- Deakin University (VIC)
- Edith Cowan University (WA)
- The University of Newcastle (NSW)
- The University of Western Sydney (NSW)
- University of New England (NSW)

Members pay an annual subscription to Higher Ed Services (HES), a not-for-profit services company owned by Universities Australia (the peak body that represent universities in Australia both nationally and internationally), which employs a part-time consultant to work with members on projects of interest to the group. Having the services of a HES consultant sets the group apart from other organisations that rely entirely on the voluntary contributions of participant’s time to achieve group objectives. CRAG’s activities are not limited to just the current core member universities. The group has implemented a number of initiatives and invites participation from across the entire Australian research and innovation sector. CRAG also works closely with ARMS to promote activities and grow good research management practice.. CRAG is aware that ARMS memberships also include government policy makers through to end user industries of research. CRAG’s niche market place is that of higher education providers in the Australasian area.

CRAG’s aims are to:

- Create a body of knowledge around research administration (RAdWiki)
- Provide a forum for staff involved in research administration to exchange and share ideas
- Facilitate exchange of knowledge and information on common research administration practices and experience with a view to establishing best practice
- Provide information on consistent operational processes across the sector
- Develop innovative and efficient administrative practices
- Provide research administration training and networking opportunities
- Encourage and foster collaboration across all stakeholders in the research and research training sector

As government initiative and research direction change CRAG monitors and evolves to the changing environment.

Key to achieving these objectives has been establishment of wiki to support the knowledge creation and management process.

⁸ CRAG Mission Statement, Higher Ed Services 2009 Accessed at <http://www.hes.edu.au/page/collaborative-research-administrators-group--crag->

The RAdWiki

The idea to establish the **Research Administrators' Wiki** (RAdWiki) came out group discussion and reviewing an article by Australian research information managers Watson and Harper⁹. This paper described the use of Wikis and other Web 2.0 technologies within university administration in the RUBRIC project (Regional Universities Building Research Infrastructure Collaboratively). In the RUBRIC project several universities from Australian and New Zealand worked together on digital repository development and implementation, using a variety of Web 2.0 tools to support knowledge creation and the collaboration process. Watson and Harper's research evaluated the efficacy of the various tools in supporting the collaborative process.

CRAG members could see the potential for a Wiki to capture knowledge to support their own collaboration and also as a potential means to support a broader virtual community of practice amongst Australian research administrators.

The RAdWiki was established with the aim of collecting information on research administration matters that is housed within a framework in which the structure and content is determined by the participants themselves. The initial objectives of RAdWiki included providing:

- Questions and answer forum
- Answers would be stored and made searchable (i.e. building up a knowledge base over time) supporting organic knowledge growth
- FAQs on common topics/issues could be collated, produced and made available
- Results from surveys, questionnaires and data analyses etc conducted within the sector could be stored and made searchable/retrievable for later reference
- Stakeholders in the research sector could post advice about major initiatives (RQF to ERA redevelopment for example) and all users would benefit from having direct access to such information
- Special interest groups for particular functional areas within research administration offices (e.g. Research Data Managers, Research Contracts Officers, Research Centre managers, ethics etc) could be formed
- Common data sets of national interest and analyses were made available
- International rankings /league tables
- Common policies on research administration could be housed centrally by participating CRAG Universities
- Procedural/process documentation could be published

The RAdWiki will cover the gamut of services provided to support the research and research training environment. This will include: grants administration; research contracts; research ethics (animal and human) and safety; HDR administration; commercialisation and Intellectual Property management; research systems and data management; research compliance reporting; research output management to name some.

The HES consultant did initial set up of the RAdWiki. We borrowed heavily from other wiki sites (including SRA) for things like: etiquette guidelines and rules of use; legal disclaimers; copyright notices and licence to use material from the site; privacy statements

CRAG financially supports the RAdWiki from member contributions as "free service" to the sector.

⁹ Watson, K and Harper, C, . CAUDIT; 2007. Supporting Knowledge Creation - Using Wikis for Group Collaboration. http://www.caudit.edu.au/educauseaustralasia07/authors_papers/Watson-112.pdf

Structure of the Wiki

In order to support participation in the RAdWiki from people outside of CRAG, the wiki was divided into two “realms” consistent with a “freemium¹⁰” vs. “premium” business model. The CRAG only area contains premium material for members only whilst the public pages are made freely available to all interested parties. All people have to do is request an account as there is no anonymous editing, however browsing is unrestricted.

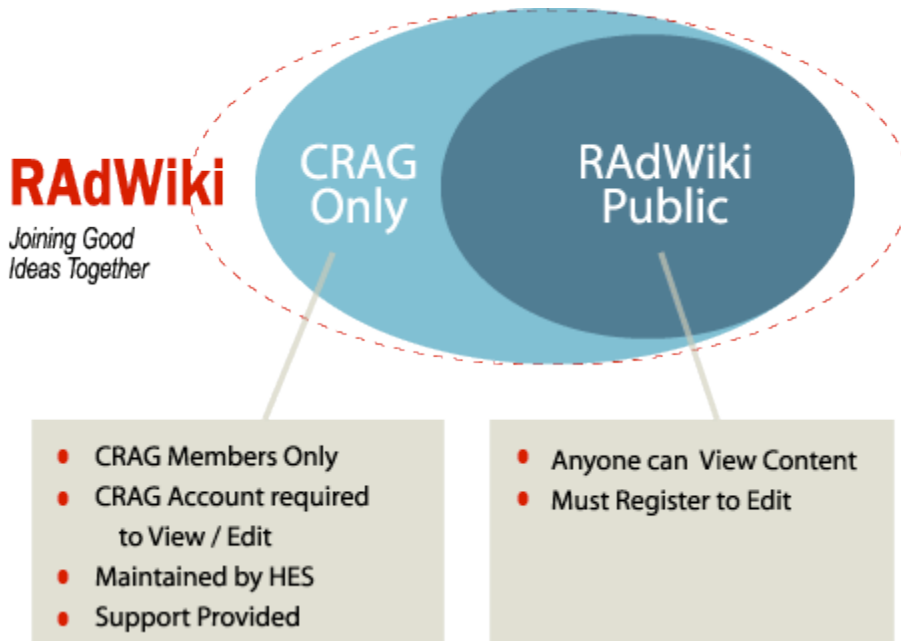


Figure 3 RAdWiki realms and access

Our Experiences to Date

The RAdWiki has been operating for just over one year. There are currently 29 registered users, with only 7 of these being outside the CRAG membership. This wider membership represents a broader benefit to the core CRAG members and a wider sector input to review content (similar to the role of a peer reviewer or editor).

The site is attracting a growing interest in terms of page views:

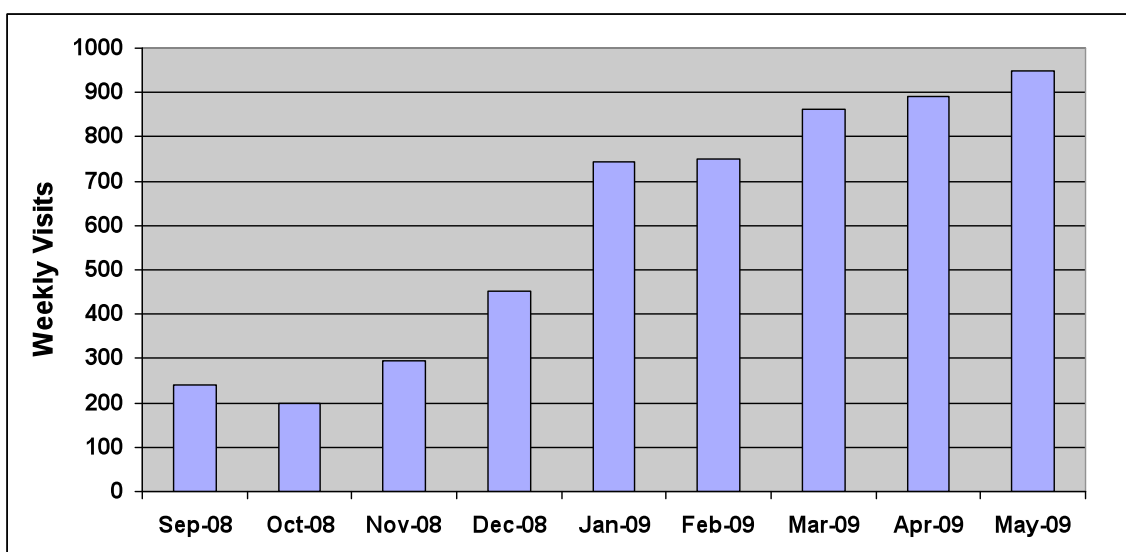


Figure 4 RAdWiki page views

¹⁰ <http://en.wikipedia.org/wiki/Freemium>

However page edits remain low and rely on a few key users to contribute material. Page edits continue to average only 2-3 per week.

Our experience confirms the **90:9:1** theory postulated by Jakob Nielsen in his paper, *'Participation Inequality: Encouraging More Users to Contribute'*¹¹:

- 90% of users are "lurkers" (i.e. they read or browse but don't contribute)
- 9% of users contribute from time to time, but other priorities dominate their time
- 1% of users participate very often and account for most of the contributions

CRAG members receive feedback that the RAdWiki is a valuable resource for the sector, but most research administrators are passive consumers of knowledge rather than contributors to the knowledge creation process. The site is operating more like a traditional website in terms of delivering information to the majority of users and not like a web 2.0 site with general participation from users.

Significantly, the site has not achieved its objective of becoming a discussion forum for the sector. The major current discussion topic in the Australian higher education sector, ERA, has taken place outside of the RAdWiki. This is an important lesson for the group to learn – the simplicity, ease of use and familiarity of something like Google Groups made it easier for an important dialogue about issues affecting the whole sector to be had somewhere other than the RAdWiki. The key to its success was not so much the ease of technology by then need for sector collaboration and communication. Our choice of wiki software (Confluence) does not readily integrate with email and, whilst the entire wiki can be viewed as a discussion forum, it was not as attractive or effective as a Google group. Australia as part of the NCRIS project is embarking on a trusted framework between higher education providers (Australian access federation AAF) which will allow seamless integration and collaboration between participating institutions as a way of collaborating. Confluence the chosen product allowed for Shibboleth Authentication which the AAF intends to use.

Compounding the situation is the marketing or ongoing lack of marketing that has taken place to advertise both CRAG and the RAdWiki. Confusion also exists as to the role and responsibility between CRAG and HES. This is not clearly understood by the wider audience.

Supporting CRAG members

In terms of supporting CRAG members the RAdWiki is going reasonably well in achieving its objectives. CRAG has developed into an effective community of practice where the trust relationship is already well established, so using the wiki platform has been a natural extension for the group in terms of communication and knowledge sharing.

Members routinely use the RAdWiki as a primary source of information sharing, though edits are often left to the HES consultant. The HES consultant was the initial "champion" of the wiki which was useful to get things started, but has created a tendency for other group members to leave it up to the champion.

CRAG as a community has taken steps to address the participation rate from its members by requesting that each member makes a minimum of five edits per year. This is monitored by the wiki site administrator and is hoped that this will address some of the lack of usage as well as assist with the learning process where some of the hesitation exists as users are not confident with the use of the application or more broadly the wiki way!

Supporting a Broader virtual Community of Practice

In terms of establishing a broader, virtual community of practice, the RAdWiki has been much less successful. One theory for this is the lack of clarity of roles between the 3 different organisations (as already outlined).

¹¹ Jacob Neilsen, [Participation Inequality: Encouraging More Users to Contribute](http://www.useit.com/alertbox/participation_inequality.html)
http://www.useit.com/alertbox/participation_inequality.html

In its first 12 months of operation the wiki has seen 7 users outside of the CRAG group register for edit accounts. The RAdWiki has been promoted by CRAG members to the broader community, through:

- Articles appearing in the ARMS journal (2008)
- A Workshop at the ARMS conference (2009)
- Flyer distributed to select research information managers (2008)
- Word of mouth discussion at networking events (e.g. conferences) (ongoing)

Many of the pages in RAdWiki were seeded with content by CRAG members as they have been released in order to generate continued input.

CRAG has yet to move toward sending individual invitations to people more likely to be interested in participating in the RAdWiki. This will be followed up in the near future.

Problems with the Wiki Approach for Research Administrators

What's in it for me?

The most common impediment to involvement in the RAdWiki we have experienced has been the sentiment “what’s in it for me”. Prospective users cannot see the value in putting forward material they know or raising questions on topics in which they’re seeking information. CRAG has attempted to address this by expounding the value proposition in its promotional material and in dealings with colleagues at various forums, though the competitive nature of securing resources for research funding is often subsequently cited as a barrier to participation.

Cultural impediments

Web 2.0 technologies have gained broad uptake in generation Y and later with tools such as Facebook, Twitter, Bing and the like. Students now expect exams results delivered by SMS, regularly socialise online and do not have the fear that some have of putting their comments out there. Such adoption and acceptance of the Web 2.0 *participative* culture has not yet clearly progressed (or is understood) to being a tool of the day to day of the research administration office.

As outlined there now is a new generation where the internet in its current form is part of everyday life. The rise of the **Ne(x)t** generation! In 17 years web tools have developed from a small collaborating tool for scientists at CERN to a worldwide phenomenon. To see the impact of this remove access to the internet and see how the younger generations react! Web 2.0 technologies are now seen as standard tool sets for Generation Y and Z (generation Z sometimes is also referred to as generation I or iGeneration the internet generation). Wikis, RSS feeds and social online networking has become standard everyday tools sets. The value of these web 2.0 technologies is still questioned by a larger majority of people where world connectivity is not realised. Many of the RAdWiki users have used the tool just for a specific purpose, to go looking for a particular document or topic if they have been alerted about previously. Wikis are just a more modern mail client and continual use and education is required.

Perceived competitive advantage

One of the ongoing challenges that some of the Australian research administration face is, understanding their competitive advantage. With only 38 publicly funding universities structural barriers exist that hinder universities participating in a more collaborative environment. At a disciplinary level our researchers collaborate all the time and the sense of locality is not an institutional level (although prestige at times can play a part). This in turn has lead to

research offices not sharing business processes and suggested approaches with the fear of losing some competitive advantage. Collaboration within CRAG has been built up over a number of years and is now reflected in the RAdWiki.

The commodity is the ability of the researcher rather than the processes that underpin the day-to-day operation of the research office. This has been hard to sell to senior management within institutions. Rather ironically many of the main funding bodies now are looking to fund for more cross disciplinarily, cross-institutional collaboration teams to address national priorities. Only time, trust, broader thinking and the better understanding of web 2.0 technologies will possibility address some of this thinking.

Lack of understanding of the “internationalisation” of research

Perhaps because of Australia’s isolation and the slower evolution of research management from purely administrative to being part of the value adding in the supply chain, much of the awareness of international research practices is not known. Matters dealt with in the research office are often only localised. University performance is measured at a national level but not internationally. The national rankings are not linked to international rankings (Times, Shanghai Jiao Tong) as a large percentage of Australian universities fall outside the top rankings. This could be seen as a linking factor to understanding the international scene. The RAdWiki is currently only seen as a placeholder for only local Australian content. Australia in 2007 committed 2.01% of its GDP to R&D¹² trailing behind the OECD average and many other 1st world countries. Greater emphasis and effort must be placed to learning about the management of research in other countries to assist with the possibility of receiving or being involved in more international grants and collaboration. A RAdWiki allows for this collaboration easily to occur and widens one’s perspective of the research environment.

Positives to the Wiki Approach

Link to ARMS

The Australasian Research Management Society is looking to adopt the RAdWiki as its primary knowledge creation tool. The ARMS website has recently undergone significant renewal¹³ and the Marketing and Web Committee has agreed to partner with CRAG in using the RAdWiki for ARMS members only.

Useful for staff new to Research Administration

We have had positive feedback from people new to research administration, stating the Wiki provides a useful resource for information. However, once again, this frames their participation more as passive consumers of knowledge rather than actors in the knowledge creation process. There is reluctance for research administrators to put forward ideas or even questions for discussion in this type of forum without the risk of not appearing knowledgeable enough.

Extension of eResearch

Recently an eResearch survey was undertaken at four New South Wales (NSW) universities asking all interested staff (both researcher and administrators) their understanding, wants and needs in relation to eResearch. In the soon to be published findings by Markuskaite *et al*¹⁴, it was clear that only 9% of the respondents were not involved in collaborative research, of these 94% of the respondents are using email as their preferred collaboration tool. It could be suggested that the web 2.0 technology and especially wikis are not the way of the future! On the other hand less than half the respondents had heard of eResearch but more than 70% suggested eResearch and in its entirety is very import to their research fields looking into the future. If the research community are seeing that

¹² <http://puck.sourceoecd.org/vl=844627/cl=24/nw=1/rpsv/factbook2009/07/01/01/index.htm>

¹³ see <http://researchmanagement.org.au/>

¹⁴ eResearch practices, barriers and needs for support: Preliminary study findings from four NSW universities, Lina Markauskaite, Leonie Hellmers, Mary Anne Keenan, Jim Richardson, 3rd eResearch Australasia Conference, Sydney Australia 9-13 November 2009

eResearch (which includes web 2.0 technologies) are important perhaps as research administrators it is time to embrace this technology, not only to learn about these tools but have a better appreciation of the researchers needs and tool sets they require. As administrators we are much more effective in our roles when we better understand the researcher world.

Emerging as a Knowledge Base

Users report they are finding the RAdWiki a useful reference site for information. One of the areas that works well on the RAdWiki is a collection of research administrator staff position descriptions – information that is often requested when managers are drafting position descriptions and wish to compare with similar roles across the sector. This indirectly has led to a better understanding of the role and responsibility of the research administrator and has allowed research managers an easier method of measuring their office structure against national standards and commonalities. Other benchmarking data on the RAdWiki and information on research information systems in use at Australian universities is also frequently accessed. Information related to major government policy initiatives (eg ERA and the emerging SRE scheme) is also high on the list of frequently accessed pages.

Lessons Learned

For the RAdWiki to be sustained buy-in by more people is required. Opportunities exist with greater linkages to international sister organisation such as the SRA and ARMA. CRAG continues to run successful forums and its profile is slowly rising, however as identified the marketing and future proofing of the RAdWiki is not a key KPI for the group.

Increased functionality is needed to allow easy discussion in a Google like forum or seamless integration between to various technologies should be considered allowing users to interact under the banner of the RAdWiki. Our experience with the ERA discussion group indicates people will communicate freely across a virtual community of practice when the topic is of sufficient interest (ERA is hugely important!) and the ease of use of the tools set is easily understood.

CRAG needs to continue to promote an understanding of the importance of socialising in a Virtual community of practice to build trust amongst participants. An example of this would be when future forums are run the RAdWiki needs to be shown while at the same time encouraging RAdWiki user to meet and education the wide group.

It is worthwhile. We continue to receive encouragement to keep it going, be it by the 90%. The energy should be sustained.

Conclusions

A more in depth study is being formulated to explore content, participation and usability of a wiki in the research administration environment. Clearly the role of the research administrator's is still evolving and a clear understanding of what are the appropriate tools of the trade differs with use and expectation. Research administrators are an important part of the research and innovation supply chain and our role helps to assist with the researchers in their endeavours. One of the main aims that we aspire to is to ensure that boundaries and barriers are broken down to allow the *"researchers to research"*. If this is important to us then all options must be explored to work smarter and not harder. A wiki is a good option and way into the future.