

eResearch Survey: first longitudinal report

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ABSTRACT

This paper will present findings from the first longitudinal survey investigating eResearch practices and attitudes across the higher education sector. The survey was first rolled out in 2009 across seven NSW universities, with over 1,000 participating researchers. It is about to be repeated and this second round of responses, available in time for the conference, will allow us to observe changes in attitudes and behaviours with respect to eResearch over the last two years.

Results from 2009 provided valuable baseline data. Significantly, results pointed to a gap between researchers' willingness and obvious need to adopt eResearch practices and their limited awareness and utilisation of eResearch and eResearch bodies. This presentation offers findings from the second round of the survey towards three aims: a) tracking movements in researcher technology-enhanced practices, needs and constraints; b) continuing the discussion about the importance of considering these practices when developing research infrastructures and services; and c) monitoring the effectiveness of eResearch support agencies over time. Are we effectively engaging with researchers? Is there a noticeable impact on the uptake of eResearch technologies? What improvements are evident in specific areas such as: research data management, data re-use and research collaboration?

APPROACH AND PROCEDURE

This study uses an online survey covering three main eResearch areas: a) data management, retention and sharing; b) technology-enhanced research methods, tools and services; and c) research collaboration and dissemination. The questions focus on four aspects: a) present practices and barriers for eResearch; b) attitudes, and awareness about eResearch; c) priorities and requirements for new infrastructures, services and support; and d) researchers' willingness to be involved in future elicitation of needs and specification of requirements. Participants are asked to respond to 40 questions, most of which are multiple choice. Eight questions ask participants to provide open narrative answers.

The online survey was first conducted in May–June 2009 at four NSW universities: the Universities of Sydney, Newcastle, New England and New South Wales, and later in 2009 at the University of Technology, Sydney, Southern Cross University and Charles Sturt University. The second survey will be conducted in the third quarter of 2011 at the same universities as well as additional campuses. Email invitations are distributed via Deputy Vice-Chancellors (Research) inviting all research staff to participate. After the survey closes, multiple-choice answers are analysed using statistical analysis, while written answers are categorised and further explored for common patterns.

The University of Sydney and Intersect intend to reopen the survey every two years to gather longitudinal data. Victoria and Queensland plan to roll out the survey as has South Australia.

FINDINGS

Preliminary findings were presented at the 2009 eResearch Australasia conference ([here](#)), which proved a highly viewed abstract and downloaded presentation. The [Summary Report](#) and the Full [Technical Report](#) of the eResearch Practices and Requirements Survey were published soon after. By the time the paper is presented, detailed and analysed results will be available in the following areas.

Data management, retention and sharing. In 2009 around 70% of respondents indicated that their research lacked an explicit data management plan. Over 81% of respondents indicated that they store their data during their project in insecure ways such as on local hard drives, placing data at increased risk of loss or inappropriate access. After completion most projects were not archived, with 79% of respondents indicating that they continued to store and care for their data locally. Disturbingly, 4% indicated that nobody stores their data at the end of a project. The presentation will compare these findings with 2011 results.

Research methods and tools. In 2009 more than 74% participants indicated that they use spreadsheets, databases and statistical software for data handling and analysis; 46% indicated that they used software specifically developed for their data; but very few used data and computation intensive methods, such as data mining (15%) or voice recognition (21%). In contrast, asked which digital methods they don't use, but would had they support, participants nominated such methods as modelling and simulation, data mining, and voice recognition and transcription software, among others. The presentation will compare these findings with 2011 results.

Research collaboration and dissemination. In 2009 only about 9% were *not* involved in collaborative research. Most collaboration occurred within the research group (70%), and more than 49% with other universities and countries. The favoured technology for collaboration was overwhelmingly email (94%), with face-to-face meetings running at 60%. Video conferencing was only used often by 13% of respondents, and virtual research environments and project

management tools used very little (1% and 5% respectively). These technologies however, along with institutional repositories, were all frequently identified as areas that would benefit from institutional or ICT support. The presentation will compare these findings with 2011 results.

Awareness and attitudes. In 2009 less than half of the respondents had heard the term ‘eResearch’ before the survey. Nevertheless more than 70% stated that eResearch is important or very important for future progress in their research. More than 43% indicated that they faced data-management or preservation issues, and about 30% stated that present ICT support only minimally or not at all matched their research needs. Only 7–26% of respondents had heard about or used services provided by Australian eResearch bodies, such as ANDS, ARCS, NCI, Intersect, or NCRIS. In contrast, 59% wanted to receive information about eResearch activities from their university. The presentation will compare these findings with 2011 results.

CONCLUSIONS

This longitudinal survey provides snapshots over time in the emerging field of eResearch. The first results pointed to a significant interest in eResearch, but a telling lack of awareness, and minimal engagement between eResearch service providers and researchers. In many ways the survey itself contributes towards the important task of opening eResearch to a broader research community. This presentation will highlight recent, significant changes in that landscape.

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Leonie provides communication and special project support to Intersect. Leonie worked in the digital humanities as a project lead, manager and advocate for 15 years, variously with the National Portrait Gallery, the National Gallery of Australia, Fairfax, Brainwa@ve. More recently she was founding Director of the Dictionary of Australian Artists Online for a consortium led by the University of NSW.