Gathering Evidence: Current ICT Use and Future Needs for Arts and Humanities Researchers

A knowledge-gathering project under the AHRC's ICT in the Arts and Humanities programme

Lesly Huxley, Christine Mullings, Tamar Hodos, Di Jones – University of Bristol

Background

The project involved an online survey and a small number of case studies targeted at arts and humanities researchers— including postgraduate students—in UK higher education and aimed to:

- help understand researchers' current ICT use and capability
- identify trends and gaps
- highlight potential future needs and
- consider what, if any, added value ICT brings to the quality of research in the arts and humanities.

Who responded?

Excluding students, survey respondents were experienced researchers with nearly two-thirds having more than 11 years' research experience (over a third with more than 20 years). Respondents identified with a wide spread of subject domains and came from 73 different institutions. Findings from the 449 valid survey responses and nine case studies suggested that research in the arts and humanities is characterised by a high proportion of sole researchers and of unfunded research. Our data gave some support to the view that the 'lab-based' disciplines—for example archaeology, music, the performing arts and visual arts and media—collaborate more widely than those in the traditional humanities subject domains. The majority of respondents, excluding students, spent a quarter-half their time on research.

What resources are important?

Primary texts, electronic or otherwise, are the most important resource for all disciplines, followed by catalogues. Non-electronic primary material ranks higher than electronic. There were few surprises in analyses of resource importance by discipline, with images most important for the visual arts and media, archaeologists and English scholars and maps being important for archaeologists and historians. Traditional archives are most important to historians and more so than digital archives, although the latter are more important to historians than to other disciplines. Electronic databases are important to all disciplines, particularly archaeologists and visual arts scholars, and least important to philosophers. Similar patterns emerge in the importance of modelling tools, analysis tools and multimedia. Awareness of national services is low, but where known these are very much appreciated.

Worryingly, a fifth of respondents claimed not to do anything with the data or resources resulting from their research (especially true for non-funded researchers), perhaps adding to fellow researchers' frustrations over the continuing lack of primary resources accessible in digital form. Conventional publishing channels were the most frequent means for disseminating research results.

Just over half classed themselves as having an intermediate (rather than basic or experienced) ICT skills level. The majority keep up to date with ICT developments and resources via personal contacts, with a relatively low use of email lists, journals or conferences. 'Just in time' information and support are more useful than generic courses or advice/tools published with a 'blanket' approach.

Where are the gaps?

More than half of respondents identified gaps in ICT provision, mainly in the (non-)availability of specialised tools or resources for their specific research area, but also in 'basic' ICT resources such as hardware, software and network provision. There are perceived gaps in quality and reliability of resources and in researchers' and others' lack of expertise. Licensing and copyright restrictions (and cost of re-use of images) are described as "prohibitive" and decision-makers as being far removed from the research. Lack of discipline-specific software, accessibility problems, a lack of common standards and compatibility/usability of software were each mentioned by about a quarter of respondents, in some cases linked to national and institutional funding and charging policies and publishing practices. Access to and re-use of images, tools for their analysis and infrastructure, standards and space for their storage appeared problematic in responses to several sections of the survey.

Sustainability of research resources was identified as a key problem, particularly when material is deposited/published locally rather than nationally. Departmental websites were seen as particularly

problematic, with a varying range of support and storage space available, lack of quality control, training and the loss of content when staff moved on.

When asked to choose between greater investment in the digitisation of primary resources or in tools to support search, retrieval and access, more than two thirds demanded digitisation, with historians pressing most. English and Modern Languages were the two disciplines expressing the highest demand for access and retrieval tools. One case study provided a possible reason for differing views: "It's a dilemma, as more and more digital data appears and is archived, so the search tools are more important". Case studies also highlighted the significant extent to which primary resources remain in non-digital (and therefore in many cases largely inaccessible) form, supporting the demand for more digitisation of those all-important primary materials. As it is clearly impossible to digitise all resources anyway, access will continue to be of crucial importance, but with a changing priority in subject domains dependent on the extent of digital material available.

What would help?
Respondents were also asked to identify their top three 'wish list' items to meet their needs: top of this were requests for digitisation and access to more primary materials; more support and training and better or updated hardware and software.

There were many specific requests for digitisation of journals and journal back copies and easier access to these. The second item on the wish list expressed a desire for more support or training and particularly subject-specific support, and for that to happen locally. Support is also required for producing websites. Better/updated hardware or software was the third item on the wish list with demand for specific software for data analysis and bibliographic tools, design and 3D animation software. In many cases, respondents did not feel they have access to the latest or most up-to-date hardware and software for their needs. Digitisation of manuscripts (or other material) requires considerable storage space for images and this is often not available within an institution. Dedicated servers for the department or project are on some individuals' wish lists. Fourth and fifth were more open access or free access to resources and more sophisticated search tools.

ICT and the pace of change
57% of respondents reported that ICT had brought significant change to their research although this was less apparent for younger researchers: a possible hypothesis is that they are already familiar with ICT and/or have not had long enough in research to experience any change. Most reported changes related to speed of finding resources, improved access to existing resources, and access to a wider range of resources. Less change was reported for research productivity, quality of research or collaboration (however, later findings suggested that there was a desire for increasing collaboration especially at an international level). Web 2.0 technologies and tools (including versions of social software) may help build on the trend to use personal contacts for support. Many respondents reported changes in ICT use in teaching and comment on the relationship between ICT use in teaching and research, including an emphasis on support for ICT in teaching at institutional level (in some cases to the perceived detriment to research support).

Project recommendations included:
1. Explore appropriate mechanisms (including potential for Web 2.0 technologies) to aid communication, awareness-raising and collaboration (especially for sole and unfunded researchers).

2. More detailed study on support/training and whether this is national/local, generic or specialist.

3. The AHRC to consider looking into creating national resources for individual subjects, along the lines of the Archaeology Data Service, and to offer support in their use and in the use of analysis and other tools at a very local level. This could be a central repository or resource at a national level which is drawn down by individual institutions, or a support network of experienced researchers themselves.

4. The AHRC to work further with other organisations such as the JISC to engage and support institutions in their infrastructure and support structures for arts and humanities research.

5. Investigate whether problems identified with access, storage and re-use of images/sound can be addressed through national or other consortia.