EPrints and Mahara: sustainable approaches to conserving Art/Design/Media/Performing Arts outputs using a consortia model

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Background

The Consortium for Research Excellence, Support and Training (CREST) was created in 2009 as part of the Higher Education Funding Council for England (HEFCE) Strategic Development investment in Higher Education based on a proposal created by the GuildHE Research Group. Its current members comprise 18 institutions including: Bishop Grosseteste University College Lincoln; Bucks New University; Glyndŵr University; Harper Adams University College Shropshire; Leeds Trinity University College; Leeds College of Art; Newman University College Birmingham; Norwich University College of the Arts; Plymouth College of Art; Rose Bruford College of Theatre & Performance; Royal Agricultural College; St Mary’s University College, Twickenham London; University College Plymouth Marjon; University for the Creative Arts; University of Cumbria; University of Winchester; University of Worcester; and Writtle College.

Supported by members’ subscriptions, the CREST exists for institutions that have achieved high levels of research excellence concentrated in smaller communities of research practice, in order to:

- Create a collaboration of equal partners seeking to achieve research excellence through collegiality and mutual support.
- Build research capacity within these participating institutions and secure research critical mass together with the retention of diverse learning environments.
- Provide an integrated structure for the delivery of the research objectives of members and the promotion and promulgation of the research they produce.

CREST now represents a cross-section of Higher Education: Vice Chancellors and Principals, research leads, department heads, research-active staff, postgraduate researchers and administrators all work together to maximise strengths and identify and address areas for collective improvement. It has become an innovative model for how to support research excellence and achieve concentration in the small and specialist HE sector. CREST members undertake research in areas including Art, Design, Media and Performing Arts; Education; Applied Sciences (including, in particular, land management and food security); Sports, Health and Ageing; and the Humanities.

Expectations

CREST Collections (EPrints) is a repository that aggregates metadata from existing CREST member repositories, and provides deposit capabilities for smaller institutions without a repository of their own. It thereby showcases the combined outputs of the CREST consortium as a whole, and an additional utility for individual members.

This Kultivate case study focuses primarily on the research officer’s role, supported by the University of London Computing Centre (ULCC), in administering the Consortia’s integrated repository. In addition to providing evidence of best-practice for the CREST and Kultur II Group communities, a key aim was to delineate the process by which existing research outputs from existing institutional repositories (including University for the Creative Arts, with its links to the Kultur and Kultivate projects) can be captured and integrated with the developing CREST Collections.
CREST Collections is designed to provide an open access forum for published or final-stage research outputs, including the complex linked multimedia objects produced by practice-based arts researchers. CREST Collaborate (Mahara) is concerned with connecting researchers using Web 2.0 tools, including blogs and forums. CREST Collaborate was developed simultaneously with CREST Collections, but was released for use by the researchers before CREST Collections in order to allow for direct user testing and a thoroughly iterative assessment phase. It also provides secure space for researchers to store and share ongoing research, with each individual able to determine levels of access to their work. They can also create and join existing groups around specific topics and projects. All CREST staff and postgraduate researchers at CREST member institutions are able to create their own profile and account within CREST Collaborate, and contribute to CREST Collections, meaning that researchers can communicate their ideas and findings with one another across member institutions within a secure environment through CREST Collaborate and, through CREST Collections, with the general public as well.

Other expectations include:

- Developing methods for how to standardise and recycle metadata from the CREST Collaborate (Mahara) researcher-networking site for reuse in the integrated CREST Collections.
- Negotiating a common workflow/peer review process across Higher Education institutions and disciplines.
- Encouraging uptake through the use of social networking technology and remote support.

The work undertaken hopes to show how, given cuts to funding, particularly in the Arts and Humanities areas, institutions can alleviate some of the financial pressures
associated with designing, administering and expanding their research databases, drawing on the best practice of colleagues (with the Kultur II Group representing an excellent resource, particularly for the arts community); provide a gallery for research outputs taking on a variety of forms and addressing different specialisations that conforms to the highest standards of research communities; and align these procedures with institutional and CREST research policy, in particular in preparation for REF 2014.

**Approach**

1. **Engagement with Research Officers**

The most important point initially was to engage key research officers at member institutions in the creation of the Virtual Research Environment (VRE). In terms of advocacy, GuildHE stressed that the VRE would provide the backbone, connecting researchers at various levels with an eye towards future interdisciplinary research collaboration. This emphasis on the potential of the VRE to support and attract funding as well as increase communication between individuals and research teams was key to the issue of project sustainability. Equally important were the issues of access and ease of management: while many Higher Education institutions have dedicated staff administering their online repositories, the scale of research activities at small and specialist institutions is necessarily more concentrated, meaning that controlling the amount of time required to administer work flows, both institutionally and within the GuildHE / CREST central office, was key. The result was that from the outset the simplification of metadata, and the development of common methods to ensure successful self-deposit with minimal monitoring and conservation requirements became a key theme during the procurement and early development process, with research leads, researchers, IT and library staff all agreeing that this would be important to the success of the project. This then left the Research Coordinator, who retains central responsibility for supervising the development of the joint Repository, to begin work with the site developers in London, supported by the Research Leads and their individual repository teams, who supervise the devolved management of the project.

2. **Use of Open Source Software**

The second issue which was resolved early on in the project was the agreement to use open source software in order to allow for concentrated capital spend on the development of software, and for work to remain within the Higher Education community. Furthermore, the availability of EPrints plug-ins for CREST Collaborate, and the work undertaken within Higher Education institutions (and by the Kultur and Kultivate projects) on the development and integration of this software into academic practice, increased the attractiveness of open source software. With respect to CREST Collaborate, the decision to use open source software (Mahara) was predicated on the idea that alterations would need to be made to ensure uptake amongst researchers, and to ensure successful integration with CREST Collections. Furthermore, using non-HE specific social networking platforms (such as Facebook) did not provide the security required for the network, and would not create a researcher-specific space.

3. **Questionnaire, User Testing and Events**

Consultation began with a questionnaire to the repository managers in order to check their willingness to allow items from their existing repositories to be utilised as the initial source material for the CREST repository. At the same time, the basic model
of CREST Collaborate (Mahara) went live; research-active staff and postgraduate researchers were encouraged to use the resource as a means to create an informal portfolio for a CREST Research Symposium in December 2010. The CREST Symposia along with a series of breakout meetings were also utilised as platforms for introducing and discussing the development of the VRE; linking events to the repository work seems a good way to encourage participation and raise awareness of the network and new means of research communication.

4. Integration of CREST Collections and CREST Collaborate

Based on feedback from discussions about existing repositories (many designed specifically for RAE 2008, but with limited appeal to non-academic users) it was ultimately decided that integrating CREST Collections and Collaborate would allow for a natural hierarchy. After discussions with research-active staff and postgraduate researchers it became clear that the sharing of work in progress was central to encouraging a truly linked-up community of researchers, underpinning the wider CREST project. Many complicated issues about the stage at which material might appear in CREST Collections have been solved by providing researchers with a secure area in which to share developing work, linked to blog and forum sites with multi-media potential (particularly important for the arts communities and practice-based researchers interested in interrogating the research process). The CREST Collaborate site also provides a useful area for archiving more ephemeral work (meeting papers and minutes, for example).

In order to deal with the tricky issues of Intellectual Property (IP) and institutional repository policy, the Research Group and Research Network Coordinator made the decision that a staged approach to repository engagement was necessary. Existing repositories would be used as best-practice models, with their items and data integrated in the CREST Collections site via the search functions; the items themselves would sit in the individual institutions, with hosting agreements retained. Institutions wishing to develop their own repositories would do so by negotiating directly with the University of London Computing Centre, but with support from the Research Network Coordinator, who could coordinate on IP and repository policy issues. These developing sites will also be integrated into CREST Collections via search functions; development work costs are being funded by the CREST collective IT budget. Institutions with less experience of repositories, and less material already deposited, can also have a space, with hosting costs spread and covered by the CREST budget; each will have a page or space tailored to their needs and with their institutional branding. All new contributions to CREST Collections will be logged on the CREST Collaborate landing page of the individual researchers’ pages in the hope of sparking discussion and future joint projects.

Challenges do remain, and development work is ongoing. The project is beginning to, and will continue, to implement best-practice with respect to advocacy; most researchers are keen to use the combined repository and social networking sites to increase the visibility of their research and engage with colleagues in ‘future gazing’ and collaborative projects in the future. However, there is still an issue about how central the CREST Collaborate site, in particular, is to daily academic life, and the extent to which sufficient metadata can be mined and pushed between CREST Collaborate and Collections, as well as the public website (crest.ac.uk). This remains unclear largely due to the fact that the amount of developing research on CREST Collections is still limited; the transfer of data and ‘snapshots’ of work from CREST Collections to Collaborate has, to date, proved more practical to increasing researcher involvement in the CREST Collection site, and enthusiasm for the repository amongst the involved researchers remains high.
Conclusions and Recommendations

Three aspects have been key to the success of this joint project: from the outset, the existence of an advocacy group including senior researchers and managers as well as repository managers; ensuring that the IT structure takes into account time-management issues alongside institutional and consortial research policy; and responding to the needs of the individual stakeholders. Realistic timetabling is also important; each institution works to its own schedule and requirements, so those considering a shared repository should take into account external requirements and internal pressures when entering into development of something like CREST Collections / Collaborate. A central manager (in this case the Research Network Coordinator) with the ability to liaise with multiple stakeholders is necessary to drive forward the project and to ensure that flexibility is built in to the system and the budget. Finally, the benefits of the repository to individual researchers as well as the group need to be constantly communicated, discussed and revised; sustained advocacy within the institutions from research leads and managers, research colleagues, postgraduate and library and IT staff, and the project manager, is central. JISC-led initiatives in particular have ensured it is widely supported and understood across the UK HE sector.

Key Points

- Viewing repositories as a shared service and cost is a way for small and specialist institutions to ensure that their academics' research outputs are visible to the public, form part of a substantial and interdisciplinary collection, and take into account the very serious issues of cost, existing resources (including the scale of outputs available) and sustainability.

- Although the technical challenges associated with repositories require substantial resource investment; advocacy, from research managers and institutional IT / library / repository administrators, is also key to the success of a VRE that relies so heavily on devolved researcher engagement.

- The development stage of a VRE project must consider how time can be managed effectively as a resource, for example through streamlined workflows, particularly with small and specialist institutions, as this is key to a repository's successful integration at individual, institutional and consortia levels.

- Retaining respect for institutional autonomy and policy with regards to material included on the CREST Collections site is important; however, by creating two co-existing and increasingly integrated sites offering different levels of visibility, many of the issues of what to include in the shared repository have been resolved, as has using existing member repositories (including those dependant on developments advanced by the Kultur / Kultivate projects with respect to showcasing complex multimedia research outputs) and their standards for metadata as the basic model.

- Open source software, developed within the HE community, appears to offer the best solution for consortia involving multiple institutions due to its flexibility.
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- Involving researchers in the development process is challenging; however, this is central to the ultimate success of repositories integrated with social networking technology.

References

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http://www.collaborate.crest.ac.uk

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Mahara
http://www.mahara.org

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