

Institution: University of Reading
Unit of Assessment: 31 Classics
Title of case study: The Ure Museum database: Enhancing the development of the digital humanities
<p>1. Summary of the impact</p> <p>The Ure Museum is at the heart of the Department of Classics, and a key part of the UoA's leadership in digital humanities work. The database has generated very considerable impact on: i) the development of the digital humanities beyond the discipline base, ii) digital animation work and pedagogical practice in schools, through thousands of visitor interactions, scores of workshop events, and several special projects and iii) activities in museums and the arts. The Ure Museum's ever-growing appeal among academics, students and the general public, quantified below, makes it powerful example of impact in UK Classics. All these impact-bearing activities stem from the Museum's function as a research collection and in particular Prof. Amy Smith's (Professor, Curator of Ure Museum, 2004-) creation of its online database, constantly updated and enhanced, which disseminates knowledge of, and research on, the collection's holdings to as broad an audience as possible on a 24-7 basis; it is also part of the EU's digital library, 'Europeana' as well as providing the data for a number of other impactful projects.</p>
<p>2. Underpinning research</p> <p>The Ure Museum is the UK's fourth-largest collection of Greek ceramics. Instituted by Professor Percy Ure, who was able to build on an earlier collection of (largely) Egyptian antiquities and his own excavations in the Greek region of Boeotia, the Museum now houses a collection of more than 2,500 ancient artefacts, covering ancient Greece, Egypt, and Rome. As detailed in REF 3a and 4, the museum is a vibrant hub in the University of Reading's research culture and is a cornerstone of the Classics Department's research grouping <i>Art, Religion, Society</i>.</p> <p>The Museum collection itself has provided the basis for several substantial research publications (including numbers 2–6 in Section 3, below), both on objects in their own right and as on their potential to illustrate widespread cultural practices, activities and attitudes.</p> <p>The online database of the Museum, developed by Prof. Amy Smith, is the core research work underpinning much of the impact-generating activity of the Museum. Its current dataset of 4,866 entries, partly originating from but far transcending the museum's paper-based catalogue, is the result of extensive original research carried out by and under the leadership of Smith and Brian Fuchs (then Max Planck Institute for the History of Science, Berlin, currently CTO at The Mobile Collective) with input from research students and other scholars since its inception in 2002.</p> <p>Research related to the database, whether carried out in preparation for its launch or as a result of its availability, has been very significant and, in some cases, of fundamental value. 2007 saw the publication of Smith's <i>Corpus Vasorum Antiquorum (CVA) UK fascicle 23</i>, on vases belonging to the Reading Museum Service, on loan to the Ure Museum, research on which is incorporated into the database. A subsequent fascicle of CVA, a fundamental series of catalogues raisonnées, co-authored by Smith (with A. Alexandridou, Universite Libre des Bruxelles), is due for publication in 2014, as is a volume of the <i>Corpus of Cypriote Antiquities</i> (with Reading PhD students M. Bergeron and S. Pickup). Preliminary results of research on both of these volumes have already been published on the database, enabling scholars as well as the general public to access it before its final publication.</p> <p>Smith, working with Reading postgraduate students, has organised two major international conferences during the REF assessment period drawing on research enabled through the database: <i>Aphrodite revealed. A goddess disclosed</i> (2008) and <i>The gods of Small Things</i> (2009). Smith and her co-organisers published select contributions from their proceedings (see Section 3, below).</p> <p>Since 2001, the Ure Museum has also taken a leading position in implementing new technologies by developing and publishing digital resources. The Virtual Lightbox for Museums and Archives (VLMA), was developed as a JISC e-learning tool, in 2004-5. The image manipulation segments of the VLMA source code are based on the Virtual Lightbox (created by the Maryland Institute for Technology in the Humanities). It was developed in collaboration with the Max Planck Institute for the History of Science (Berlin) and later with Oxford Archaeology, and was of particular importance</p>

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for impact-bearing activities, as it firmly established Smith's leading role in the creation of high-end digital resources for the museum sector. Smith has published on the VLMA (see Section 3, below), and has thus been able to develop an outstanding track record of impactful digital work (see Section 4, below).

3. References to the research

1. Ure Museum Online Database

- Creation date: 2002-present; Author: Prof. Amy C. Smith
- <http://uredb.reading.ac.uk/cgi-bin/ure/uredb.cgi>

The database has been cited by similar programs at Oxford and King's College

Print publications (selection):

2. A. C. Smith, *Corpus vasorum antiquorum, Great Britain fascicule 23: Reading Museum Service* (Oxford 2007). Available upon request
3. A.C. Smith and S. Pickup, eds, *Brill's Companion to Aphrodite* (Leiden 2010). Available upon request (*)
4. A.C. Smith and M.E. Bergeron eds, *The gods of Small Things (= Pallas. Revue d'études antiques vol. 86)* (2012). Available upon request
5. A.C. Smith, "Recent acquisitions and conservation at the Ure Museum," *Archaeological Reports* 54 (2007-2008) 175-86; DOI: [10.1017/S0570608400001009](https://doi.org/10.1017/S0570608400001009)
6. A.C. Smith, B. Fuchs and L. Isaksen, "VLMA: a tool for creating, annotating and sharing virtual museum collections," in J.-G. Bodard and S. Mahony eds., " *Though much is taken, much abides*": *Recovering antiquity through innovative digital methodologies, Digital Medievalist* 2008, online at <http://www.digitalmedievalist.org/journal/4/smith/>

* Evaluated as of at least 2* by internal and external review

4. Details of the impact

The Ure Museum database, disseminated via the museum's web page, serves both as a shop window for the museum, allowing 24/7 access to its holdings, but also provides users with a level of access not normally experienced by the public, whether schoolchildren, artists or curators of further collections. Broadly its impact can be described under two main headings: i) innovation and dissemination of new approaches in museology, and ii) direct impact on education and pedagogy:

1. Innovation and dissemination of new approaches in museology

Dissemination of Database and the Virtual Lightbox for Museums and Archives (VLMA) Techniques

The VLMA project, which has been widely disseminated in conferences, seminars and articles, introduced a new approach to encourage curators to annotate, share and reuse museum data, including images, for the purposes of education and research. It has had fundamental impact on the early planning and development of major resources in the digital humanities in the UK. The way the Ure's approach and its underlying database and technology, radical at the time, informed the development and acceleration of this trend is clearly shown by the Ure's acknowledged influence on successor projects such as the development of the Oxford Virtual Resource Environment (cf. <http://www.oerc.ox.ac.uk/image-library/Kirkham.pdf>) and the Pliny platform at King's College London (cf. <http://pliny.cch.kcl.ac.uk/docs/Illinois-Poster.pdf>). These kinds of accessible virtual platforms are now almost ubiquitous, transforming museums, collections, and archives worldwide, extending to major international institutions such as the British Museum and the J. Paul Getty Museum. Smith was among the first who suggested (and, in creating the Ure museum database, undertook) a digital overhaul of museum database and curation systems.

Impact on artistic work and museology

The Ure database has been utilised by, and has informed, other museums and artists, nationally and internationally. It was used, for example, in 2013 by staff of the Reading Museum (not affiliated to any university), both in preparation of their current exhibit on 'Greek vases in Reading' (<http://www.readingmuseum.org.uk/events/details/358/>) (through November), which also incorporates 25 objects from the Ure (and on which Smith was consulted) and it borrowed the UreView animations for display in the Reading Museum and Town Hall.

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The research that has resulted in the database, as well as the research that the database itself has generated, has impacted directly on art, film and blockbuster museum displays overseas, and it has thus unlocked the huge potential of the Ure's collection to audiences which would otherwise not have been reached. A highlight in that respect was the insights generated by the *Aphrodite Revealed* conference (2008; see above, Section 2), which had a significant impact on subsequent artistic work carried out by a number of participants in the first conference, among them the Greek and Roman curator at the Museum of Fine Arts, Boston, who incorporated insights learned from the conference into her subsequent work in creation a blockbuster museum exhibition – *Aphrodite and the Gods of Love* – displayed at the Museum of Fine Arts, Boston, the Getty Museum and the San Antonio Museum of Art, published in a 2011 catalogue (ISBN 9780878467563).

Integration into Larger Digital Library – Europeana and Pelagios

The Ure database also played an important role in the integration of museum information into digital libraries of European Culture: from 2003 its data was incorporated into ECHO, an EU-funded project of MPIWG, and when in 2006 the EU developed its own digital library of European Cultural Heritage, Europeana (www.europeana.eu), the Ure Museum was a founding member. Smith is also a member of Europeana's Council of Content Providers, generating policy impact stemming from the Ure's research work at an international level.

The VLMA technology and the Ure Database featured prominently in a high-profile international project on geospatial data from antiquity in 2011. It is used by scholars and the general public to link artefacts to geographical locations, and used the Ure Museum database to contribute to its own records. (<http://pelagios-project.blogspot.co.uk/2011/12/converting-ure-museum-data.html>).

Smith's museology research also contributed to a JISC-funded project, OBL4HE (Object-based Learning for Higher Education), a partnership between the University of Reading, University College London and the Collections Trust, which developed a series of online resources, as highlighted at <http://blogs.reading.ac.uk/engage-in-teaching-and-learning/2013/01/25/students-like-live-lectures-and-online-ones-as-backup-by-rebecca-reynolds/>. About 6,500 objects and archive documents were digitised and put with already digitised sources to create a source base of about 150,000 digital assets. Seventeen open access e-learning resources based on these were developed.

2. Direct Impact on educational resources and pedagogy:

The purpose in presenting the museum's data to the public is to allow its use and reuse in whatever way suits their learning interests and styles. Smith and her colleagues have created substantial impact by means of disseminating and encouraging reuse of this data among as wide an audience as possible:

Impact on school groups and the general public through improvement to the Ure Museum.

The database developed by Smith enabled the Museum to better inform visitors of the content and significance of the items they were viewing. During the REF cycle the Museum has hosted about 4,000 pupils and teachers from 54 schools for formal group activities; public family events for a total of c.2,000 young visitors; adult visit events for a total of c.6,000 visitors; and seminars and colloquia for c.2,500 visitors. Feedback from these activities has been overwhelmingly positive:

"Last year you kindly invited us to the museum and put on a fabulous workshop and gave the children an opportunity to look at the artefacts on display. It was a wonderful afternoon and the children thoroughly enjoyed it and got a lot out of it. Would it be possible for us to come over again?" Feedback from a teacher at St Martin's School in Caversham Park (3rd Sept 2012)

"I learnt that the little clay pots were actually childrens toys in greek times. I had a fabulous time I deffently want to come again with my family.[sic]" Feedback from a student at Grazeley Primary School (30th Sept 2010)

The impact of the Museum contents and catalogue, enabled by the underpinning research, on the local and wider community and on school teaching and learning has therefore been very substantial.

A series of special projects using digital technologies.

i) *Open Olympics*

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The database enabled incorporation of Ure images and data in an award-winning learning module developed by the Open University (<http://openlearn.open.ac.uk/course/view.php?id=4450>). A quiz prepared initially for this module was then adapted in collaboration with AACT (Access-ability Communications Technology), a local charity seeking to open up museums to special needs individuals (<http://www.aact.org.uk>) via an Olympics themed iPad trail made available in 2012 on occasion of the London Olympics.

ii) *Stories of the World*

As part of *Ure View*, a team of digital animators (Steve K. Simons and Dr Sonya Nevin (Roehampton University), relying on Reading's research expertise, worked with students and pupils from two local schools to produce animations of their interpretations of the Greek vase paintings in the Ure. These animations are now centrally hosted on <http://www.panoply.org.uk> and available on YouTube. Along with the storyboards on which they were based they were displayed in local schools and the University (University Library, School of Humanities and Ure Museum) and in Westminster Hall, Parliament, on the occasion of the Launch of the *Stories of the World* project, as part of the Cultural Olympiad, 24 July 2012 (<http://tinyurl.com/pg62k2t>)

The second, even more substantial wave of activity, *Ure Discovery* (<http://tinyurl.com/ot54ugo>) engaged pupils from three local schools (including one special needs school: Addington School), informed by Reading's research expertise, working again with AACT. This involved the creation of a multimedia display and iPad trail that presents viewers with original animations and artwork, voiceover interpretation, museum photographs, as well as the original database entries on each of six Ure vases. The feedback form from Addington School noted that the project "was a great experience for the pupils!"

Since the launch and display of the work, the animations have reached an audience of over 20,000 on the web (24,897 views in 75 countries, approx. 1383 per month), via <http://www.panoply.org.uk> and YouTube, engaging especially enthusiastic international audiences, for example, in Greece and Spain.

As determined by the dissemination and public-facing mission behind the database, the impact resulting from it has been broad in scope; exemplifying curation techniques, enabling pedagogical gains through a variety of direct and indirect channels, informing artwork and improving the ultimate goal of museum curation – more efficient and informative access to historical artefacts.

5. Sources to corroborate the impact

Ure Discovery and Ure View videos featured on www.panoply.org.uk

AACT's item on Ure Discovery: <http://www.aact.org.uk/wordpress/wordpress/ure-discovery/>

Artworks informed due to *Aphrodite Revealed* conference. K. Bender (cataloguer: see <http://kbender.blogspot.com/view/magazine>). 'Divine Inspiration' shown at the Bijbels Museum, Amsterdam (until 25 August 2013) and 'Kypris: The Aphrodite of Cyprus Revealed' (<http://www.youtube.com/watch?v=fY3urlXuZvk>).

Trustee at Access-ability Communications Technology. Can corroborate collaboration with UreDiscovery and Open Olympics iPad trail. (*)

Assistant Curator, Reading Museum. Can corroborate the effects of the UreView project on audience visitors. (*)

Teacher, Addington School. Can corroborate the impact of the UreDiscovery project and the student creations on the students, their friends and families. (*)

Project Coordinator, World Stories East. Can confirm details of the UreView and UreDiscovery projects. (*)

VLMA Technician. Can corroborate the integration of VLMA project into other museum databases, and the proliferation of the concepts which underpin it. (*)

(*) Contact details provided separately