
HCDT Annual Report 1998-9

Background to the HCDT

Summary

In October 1998 Oxford University's Humanities Computing Unit added a project development component to its activities in Humanities Computing. The Humanities Computing Development Team works in innovative partnerships with members of the humanities faculties to develop new teaching and research resources for use both within and without the University. This is a new approach to the integration of IT into the University's activities and one which presents interesting and very particular challenges to the working process of the staff of the HCU, and expects a great deal of flexible working on the part of the academic staff. This article outlines the rationale behind setting up the new Team, the needs within the University that it aims to meet, reports on the major issues which have emerged in its first year of operation, and discusses some issues for its future operation.

Background

The Humanities Computing Unit has a long history of providing specialised support and training services which bridge the gap between computers and research or teaching in humanities academic disciplines. Unusually, from its earliest roots the HCU provided services to a predominantly external target audience. Some of the earliest developments in IT and humanities at Oxford University Computing Services were the Oxford Text Archive (collecting and disseminating computer-readable texts for an audience of international breadth), and the Oxford Concordance Program (a text analysis program). As early as 1992 [check] the Computers in Teaching Initiative provided a successful support and outreach service for Higher Education teachers wishing to understand what computers offer to HE teaching activities. This national support service formed the impetus for the provision of a Oxford humanities IT support centre, the Centre for Humanities Computing which was set up in 1994.

Coupled with its advisory and support services, the HCU has long experience of IT development including the development of the HUMBUL Gateway to Internet Resources, the Poetry Shell, and the British National Corpus, and the Virtual Seminars for Teaching Literature Project. Like the advisory and support services have generally been based upon external funding and with a focus upon external users, and they have usually been developed because of the subject expertise of the HCU staff rather than as collaborations with the University faculties. The projects have generally had little involvement from the other departments and faculties of the University, and thus have impacted little upon the teaching and research activities. Most projects are fixed term and oriented towards a fixed set of deliverables which has meant that the HCU has not had the opportunity to steadily build upon its staff expertise in IT development.

The Virtual Seminars Project ran from 1996 to 1998 and was the first project to draw together teaching expertise within the University (from the project Director), University-owned resources (the Wilfred Owen Collection at the English Faculty) and to build up specialised

technical development skills within the Unit. During the project, the Unit's management group began to explore whether it might be possible to bid for funds to continue the activities of the Project staff on a University-wide level. Research was carried out into the scope and activities of IT development units at other institutions in the US and UK.

Other initiatives

Many other institutions have already encouraged a higher level of IT integration into research and teaching with the provision of centralised group of dedicated staff who are responsible for specialist technical advice and development activities. These include the Technology and Teaching Initiative at the University of Virginia; the Education Technology Services at Penn State University; Brown University's Scholarly Technology Group, and McMaster University's Humanities Computing Centre amongst others. These initiatives operate on various levels of formal collaboration and different funding models, each of which has experience to offer to a new venture such as that which was proposed. A short report which explored the structure and operation of these initiatives was prepared and submitted to OUCS's Director for feedback.

Survey of IT activity in the humanities

The Director's response was to suggest that a survey of IT activity related to research and teaching be carried out in February 1998. Oxford University is rich in primary and secondary resources, and in high levels of scholarly activity in research and teaching. In digital resource development and use there are also pockets of intensive activity but the idiosyncratic and highly distributed structure of the University means that this activity is not communicated or disseminated as much as it could be. This is particularly true for humanities subjects where teaching tends to be located within colleges rather than faculties; it is extremely difficult to build up an accurate picture of teaching activities in particular because of this.

A two part questionnaire was written and sent out to over 2000 members of the University's humanities faculties. 146 valid questionnaires were returned and analysed by an independent research to provide some interesting results. 95 per cent of those staff are currently using IT in their research, and 56 per cent are currently using IT as part of their undergraduate teaching. Responses indicated that most respondents would like to expand their current IT use into new areas, but this is not currently possible due to lack of time (cited by over 90 per cent) and training (cited by over 60 per cent). The support activities of the Centre for Humanities Computing are clearly much needed, despite the last seven years of successful training events.

A Humanities Computing Development Team

The second section of the survey dealt with a proposal that a Humanities Computing Development Team (HCDT) should be set up. This suggestion came about because of a lack which has long been perceived within the HCU. All the ingredients for successful IT-based humanities projects are present in Oxford: dedicated staff; high-quality collections of resources; expertise. However, the lack of collaboration between individual academics, faculties and the centres of expertise such as the HCU have meant that high-level activity is not as widespread as it could be. The HCDT should be able to work more closely, and for longer periods of time, with Oxford academic staff in the development of collaborative projects where academic content should be selected and created by the academic partner, and decisions about the technical structure of the project should be made

by the HCDT. This model drew upon similar programmes in a number of institutions as described above, but in particular sought advice from the University of Virginia's Technology and Teaching Initiative (Thomas, 1997).

Responses

Collaborative academic activities are traditionally not widespread within the humanities and this is as true at Oxford as anywhere else. We were unsure how positive the response would be that academics should play a part in these highly collaborative ventures. It was a pleasant surprise, therefore, that 65 per cent of respondents indicated that they would be willing to work on a collaborative project with the HCDT in the future and, in fact, 45 projects were suggested for development. The scope of these projects ranged enormously in detail and in ambition, from a simple 'put course materials and reading lists onto the Web' to complex three-dimensional simulations of archaeological data. They also crossed the broad spectrum of humanities faculties which the HCU aims to serve: Modern Languages, English language and literature, History, Archaeology, Classics, Philosophy, but also Law, Environmental studies, and Anthropology.

The positive responses were sufficient to convince the Computing Services that the HCDT would provide a much needed service, and funds were allocated to a Team of three staff for one year, with plans to begin operation in autumn 1998.

First phase of HCDT Projects

We were now in the favourable position of being able to solicit suggestions for brand-new projects from any of the humanities faculties, with potentially any type of IT platform. We now had to confront the issue of convincing academic staff that the development of a collaborative project with the HCDT would be a good use of their (limited) time. A formal call for project proposals was issued with a comprehensive project application form, and resulted in twelve project proposals from which the first round of projects were selected. The project selection was carried out in consultation with the University's Committee for Computing in the Arts (CCA), which oversees the activities of the HCU. The committee is made up of a dozen representatives from the University arts and humanities faculties and thus plays a valuable role as a bridge between the HCU, the faculties and the University's high-level IT committee. The selection of project was based on a number of factors: potential breadth of use; commitment to the project; realistic and well thought-out goals; and a 'start-up' factor of how quickly work could begin upon the project. From these, four projects were selected and ran from October 1998 to April 1999.

HCDT Projects October 98 - April 99

The HCDT developed three projects and worked upon one other year-long project during the first six months of operation. The three completed projects were the Centre for Teaching Chinese as a Foreign Language's language-learning software; the 'Hillforts of the Ridgeways' Archaeology database for teaching and research; and the Fontes Anglo-Saxonici Old English database on web. The Theology Faculty library 'reading list' project ran for the whole academic year 1998-9 because of the length of time involved in the negotiation of copyright for the content of the project.

HCDT Projects April 99 - October 99

During this period, the HCDT worked on the completion of Theology Digital Library project; the development of the 'Greek Driller'

language learning project for the Faculty of Theology; and the 'Gunpowder, Compass and Printing Press' project for the History Faculty Library.

Technical solutions

There are two main areas in which development has taken place: developing web versions of databases, and the creation of web sites aimed at teaching, learning and research. The Team has explored some of the most up-to-date technologies for the creation and delivery of web sites which are easy for the students and tutors to use, and also easy for the project partner to maintain over a longer time period. Several projects, including the Gunpowder, Compass and Printing Press' project for the History Faculty have encouraged us to explore the possibilities of database technology for the organisation of varied information types such as 'zoom' images, text files, and photographs. We have used a database to create language-learning exercises which will provide a student with random tests on vocabulary, and at the same time allow the student to keep track of their own use of the resource through tracking questions which they have got wrong.

Additional funding

Funding for the HCDT from the Computing Services was provided for only a single year in the first instance. By February 1999 we felt that the response we had so far received meant that we could demonstrate there was indeed a need for the HCDT services. The HCDT Coordinator and the Director of the Computing Services worked together to bid for more funding from the University's central funds. Due to the strong backing which the bid received from the Computing Services and the University's IT Committee, it was successful and we learned in May 1999 that the HCDT would be funded at the current level for two further years from September 1999. This has allowed us to continue to run the HCDT in the way which we feel is most appropriate for the University at the present time, where projects are selected on a competitive basis on the strength of the qualities, rather than because they can afford to pay for HCDT services. We also hope to be able to accept some paid commissions on an ad-hoc basis for other projects and smaller tasks such as the construction of web sites; this type of work enables us to broaden our spread of expertise beyond the demands of the half-dozen or so projects that we have in hand at any one time.

The project review and development cycle

We have now developed a regular pattern for starting and completing projects. A call for project proposals is sent out as widely as possible on University email lists each six months. Potential project leaders are encouraged to contact the HCDT staff for a preliminary discussion before drafting their project proposal form, and the HCDT web site has been developed to include guidance on writing a project proposal, and the criteria against which proposals are measured. The Project Proposal form has developed over time to become more comprehensive and to include issues which we have learned are important to the success of a project. This includes, for example, whether the project leader has plans for a final 'home' for the project beyond the development cycle.

New proposals are assessed at six-monthly intervals by a four-person Project Review Group drawn from academic representatives of the Committee for Computing in the Arts and the Humanities Computing Unit. The Group members each assess the proposals individually against set criteria to give a rating, and then meet to discuss which of the projects are most suitable for development at

that point. In some cases, project leaders are given a 'deferred' acceptance where the start-date for the project is delayed until certain criteria have been fulfilled, for example where copyright clearance by the partner is required.

The next step is to set a date for a first meeting with the successful applicants at which we can decide how we wish to take the project forward, and we begin to set overall deadlines for the development of the project. Projects are rarely as straightforward as simply developing an IT solution; finding an appropriate structural design for the IT resource is extremely important and needs to be chosen in close co-operation with the project partner. In addition, there will nearly always be an aspect of content selection and collation of resources for which the project leader has to ultimately be responsible, but for which the expertise of the HCDDT will also play an important role.

The projects are thus very collaborative and because of this, it is important that deadlines are set and kept to. It can take several meetings to begin to establish the outline for a project which will meet the needs of the academic staff, and which is within the possibilities of time and technical expertise. Once some mutual understanding has been reached, the HCDDT staff write a project schedule which will provide the backbone for the development of the project. Each project goes through similar phases of carrying out background research into similar projects, establishing the scope of the project, collecting resources together for a prototype system, development of a prototype, feedback to the prototype and re-development of the system, addition of further resources and refinement of the interface, user testing and further feedback, documentation and reporting. However, the length of these phases will differ enormously depending upon the complexity of the system which is needed, the type and quantity of resources to be included in the system, and the commitment of the project partner or partners. We have frequently found that it is difficult to complete every phase of the project (including testing) within the allotted six month timescale and that we have to be flexible in allowing some time for completion of the project outside that timescale.

Advice to other projects

In addition to the main project development, we contact every unsuccessful project proposer to offer the opportunity to meet up and discuss their project and how they might take it forward, or whether it is worth re-writing and re-submitting their proposal to the HCDDT. The HCDDT also meets with individuals to offer advice about projects for which we have some expertise.

Problem areas

The main problem areas for project development are concerned with coping with time constraints, understanding each other's goals and priorities, and achieving a sense of closure with a project.

Problems with timing can generally be solved by setting realistic timescales from the start, and setting regular meeting dates which will always serve to focus the mind. Project partners are frequently over-committed to teaching and research activities before they start work with the HCDDT on a project, so we are very aware that they are often trying to squeeze our project into a non-existent gap in their time. Slipping deadlines create problems for the HCDDT staff because project development tasks are usually highly inter-dependent, and if for example content or feedback for a prototype is two weeks late then it will affect the schedule for the whole project. We try to get

round this problem by setting deadlines early so that all parties have plenty of notice of particular milestones, and allowing deadlines to be moved slightly if necessary.

Reaching a mutually agreed understanding which reconciles the possibilities of technology and technical staff and the goals and aspirations of the project leader is the most difficult part of the project. Surprisingly, lack of knowledge about the academic's subject area is not often a problem but understanding what they hope to achieve with IT within the constraints of normal vocabulary can be very difficult for both parties. The development of IT projects requires a great deal of precision and this will always affect the timescale and achievability of a project. However, it can be extremely difficult for the project partner to give precise details about a future system without first having a concrete example of the possibilities. We try as much as possible to refer to existing web sites for similar projects as examples, but it is generally not until a prototype system containing the project's own content is in place that we will get detailed feedback about the system design and interface. As IT developers we often find it difficult to find the vocabulary to describe the appearance of a web page, and this is far more difficult for people who do not deal with IT on a day-to-day basis. We have found that the best solution is to develop a prototype system and give the partner access to the system over several weeks, and then to meet to sit together at the system to discuss the details. Detail to the level of the size of fonts or position of navigation buttons can be interpreted very differently by different people so this is an important step towards creating a suitable product.

The issue of achieving closure for a project once the development work has been completed is also very important for the project development system. It can be difficult to draw the line under a project which has been completed as the issue of 'completeness' is a difficult one. Particularly for web resources, it can be tempting to continue to improve a project with a few additional features or updates, even when the content is accurate and the site functions as it should do. This is particularly true of resources which have not been heavily tested by the target user group before the development process is complete. Once a teacher has used a resource and had feedback from student, it could be tempting to come back to the HCDDT and say: 'the students like it but they thought it would be better if ...'. The only way to avoid this situation is to encourage full testing of a prototype version of the system which can then be updated to reflect user feedback before the final deadline. We also use the final reports which are written at the end of every project to give a sense of closure; writing the final report tends to indicate that our commitment to the project is coming to an end.

Balance of input and benefit

With any collaborative activity it can be difficult to achieve a balance of input and acknowledgement of effort. This is particularly true in cases where there are two very different types of activity involved, such as IT development and content selection. To date, partners have been very happy to acknowledge our intellectual effort and expertise and issues such as copyright for the materials have been easy to reconcile. One possible area of conflict stems from the fact that projects which we develop as part of our day-to-day work are automatically copyright to the University of Oxford whereas academic staff are frequently involved in the development of a project as activities for which they are not paid. We can usually get round this conflict with an explicit copyright statement but this

could become a larger issue if a project were to be made commercially available, for example.

Post-project contact

Any IT activity, particularly that which is successful, will often lead naturally to plans for more development. An ongoing relationship between the HCDT and projects is needed. For this reason we would be pleased to be able to offer additional project development activities in exchange for payment so that, for example, a project partner could use a pilot project developed by the HCDT as the basis for generating funding from internal or external sources. Some of this funding could then be given to the HCDT for additional development activities.

We aim to integrate HCDT projects as fully as possible into the activities of the University as a whole. To this end, we work closely with libraries and IT support staff to achieve coherence and to share information about our activities.

The future

How will the HCDT operate in the future? Will we continue to offer free services to individuals who wish to develop activities in teaching

and learning, or will we be forced impose charges? How would this affect the service that we currently provide, and the types of projects which we undertake? Will the HCDT continue beyond its current phase of funding? What is the long-term outlook for the use of HCDT projects by Oxford University staff and students.

The answer to these questions will be closely tied to strategic questions within the University as a whole. The fact that the HCDT has received two years funding from the General Board indicates that there is support for IT project development at central levels. We need to build upon this success with a demonstration of the way which HCDT projects can help a number of faculties, and not just single individuals. We may also need to question the breadth of our basis of our service in order to do this successfully. The HCDT currently helping the humanities staff at Oxford University; we may also need to consider whether we should also provide support for faculties beyond the humanities, particularly if we wish to provide a service which is fully integrated into the University as a whole.

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HCDT

Project diary

September 1998

Coordinator in post half-time. Preparation of temporary web site.

Compilation of proposal form.

Posting proposal forms on email lists, to named contacts, and to those who had described potential projects in the Computing Services questionnaire which went to Humanities staff in March 1998.

October 1998

All three staff in post.

Setting up staff machines, installing software.

First projects selected by HCDT Coordinator with Head of CCA (Stephen Parkinson) and Head of CHC (Stuart Lee).

Contact made with first project leaders.

Allocation of projects to Project Officers.

Chinese project

First meeting (8 October).

Background research for Chinese project.

Second meeting for Chinese project and observation of students using IT resources (22 October).

Advice about setting up the Chinese project web site.

Development of first version of Chinese characters using animated gifs.

Feedback from academics.

Fontes project

First meeting.

Given copy of Fontes database in Paradox 4.0 for DOS.

Theology digital library project

Decision made to also take on Theology Faculty Digital Library project as a one-year project. First meeting for digital library project (26 October).

Ridgeways project

First meeting for project (15 October).

Other

Meeting for evaluation of Refugees Studies project.

Paul Groves attended a one-day British Computer Society XML workshop and wrote a report.

Web pages for all projects on the HCDT site.

November 1998

Chinese project: research into automated marking systems / question-and-answer programs.

Research into re-design of character drawing to respond to comments.

Research into development of system to allow the easy authoring of multiple numbers of characters.

Interviewing candidates for the Research Officer post.

Fontes project

Research into locating space on a permanent web server for the project (discussions with the English Faculty and RSL).

Meeting with Radcliffe Science Library to discuss this.

First analyses of the database structure; further detailed explanations from the project partners.

Attempting to reconcile updates to the structure of the database.

Pinpointing errors in the database which need to be changed before the relationships can be resolved.

Discussion of updates to database with partners.

Advice to Fontes about future costings for HCDT development.

Theology project

Report analysing possible technical solutions.

Research into displaying Greek fonts on the web (for full-text solution).

Research into copyright clearance agencies and legal issues.

Ridgeways project

Development of first prototype database. Population of database with example data provided by project partners plus questions on specific issues.

Email discussions with partners about the organisation of data in the system.

Demonstration of database to partners.

Scanning slides to add to the project's web site.

Other projects

Meeting with Robin Briggs (Witches of Lorraine database) to give advice (12 November).

Discussion with Philip Kenrick about Archaeology database.

December 1998

Chinese project

Development of three types of character-drawing for comparison.

Preparation of example characters for demonstration by partners to language-teaching staff.

Documentation for creating character-drawing for partners.

Tutoring on character drawing for partners.

Fontes project

Further analysis of database content to reconcile structural changes.

Theology project

Meeting with partner to discuss technical solutions.

Copyright negotiations for two texts to use for test site.

Ridgeways project

Development of second prototype to send to partners.

Meeting to discuss further changes to the prototype.

Other

Peter Karas training in C++

Submission of papers for the Association of Literary and Linguistic Computing conference

January 1999

Chinese

Development of question and answer sections.

Report on different versions of character-drawing for comparative purposes, and to allow partners to make an informed decision.

Re-development of character-drawing to make use of vector graphics instead of animated gifs.

Fontes project

Further efforts to update the database and create relationships to facilitate querying.

Experimentation with ASP scripting with the database.

Meetings about the query interface and structure.

Theology project

Meeting with Richard Gartner to talk about technical solutions.

Discussion about possible content selection by academic partner.

Ridgeways project

Development of third (?) prototype of system. Demonstration of system to project team to generate feedback.

Other

Meeting about RSP to talk about evaluation questions, etc.

Arrange details for RSP evaluation workshops.

Meeting with Prof Vaver of Law faculty about using IT in teaching.

Meeting with Philip Kenrick to advise on database.

Call for proposals for new HCDT projects.

Research into acquisition of NT Server for development of Windows projects.

Proposal for further funding to go to the IT Committee.

February 1999

Chinese

Report on the Chinese project written and circulated to partners for comment.

Meeting to discuss development of other question types (not just multiple choice).

Fontes project

First on-line prototype made available with a basic query structure.

Discussion of further updates with project partners.

Meeting to talk about additional queries, etc.

Theology

Research into delivery of system to meet the needs of end-users and system-maintainers.

Development of two prototype systems for comparative purposes.

Meeting with two project partners to discuss content and possible technical solutions.

Ridgeways project

Other

RSP: help in setting up web server for one of prototype systems.

Development of online questionnaire for evaluation of systems.

Advice to Tom Stoneham about Philosophy faculty web boards.

Meeting with Emma Hornby (Music grad student) about encoding music.

Business cards for HCDT staff.

March 1999

Chinese project

Fontes project

Definite home for Fontes Web found at the RSL; meeting with staff to discuss this.

Development of first complete version of Fontes Web.

Demonstration of FontesWeb at HCDT workshop in March.

FontesWeb appears on BBC Online Education Web site.

Theology

Prototype systems prepared for presentation at HCDT workshop.

Meeting with academic partner.

Receive list of resources for which to start copyright clearance.

Research into copyright agreements, payments etc.

Ridgeways project

Other

Organisation of 'Beyond Art?' event (Oxford Union).

Meeting with Review Group to discuss proposals for new projects which have been submitted.

Successful project partners (3 projects) contacted and asked to have a preliminary meeting.

Specification for NT Server drafted and submitted for approval.

April 1999

Chinese project

Fontes project

Negotiations with OUCS about Fontes Web name.

Beta testing of Fontes Web site by partners.

Organising database updating facilities for the Fontes team on the RSL server.

Updates to the existing Fontes web site to accommodate the new online database (addition of new graphics, etc.)

Theology

Copyright clearance database set up.

Extensive work on copyright negotiations begins. Attempting to locate copyright holders.

Ridgeways

May 1999

Other

Meeting with Sphakia web site project to discuss their project and future plans.

June 1999

July 1999

August 1999

September 1999

NT Windows server arrives. Paul starts to set it up.

October 1999

Sophie Clarke joins the HCDT.

One-day Training in ASP for Sophie and Sarah.

November 1999

December 1999