

In Search of Humanities Computing in Teaching, Learning and Research

Martyn Jessop (Martyn.jessop@kcl.ac.uk)

King's College London

Introduction

Humanities computing as a field of study has many facets which can be used to define it. John Unsworth (2000) suggested seven 'Scholarly Primitives' of discovering, annotation, comparing, referring, sampling, illustrating and representing. These low-level research methods combine and feed into each other to form the basis for higher-level scholarly activity not just in the humanities but throughout the academy. A primary task of humanities computing is to provide the technological tools to allow academics to apply these primitives to the range of digital data and resources available across computer networks and to ensure the viability of these resources into the future.

Willard McCarty and Harold Short (2002) have produced a rough intellectual map of humanities computing. At the centre of the map is a large 'methodological commons' of computational techniques shared among the disciplines of the humanities and closely related social sciences, e.g., database design, text analysis, numerical analysis, imaging, music information retrieval and communications. Each disciplinary group contributes techniques to the methodological commons. As new applications of these techniques are demonstrated in other disciplines they in turn are exported from the commons into new disciplinary groups. Humanities computing is the agency that oversees this development process taking methods from one discipline, developing them and then applying them in other disciplines. Part of this process is the identification or creation of the tools to fulfil the roles of the scholarly primitives described earlier. The tools do not exist in isolation; they must be developed and used in ways that satisfy the scholarly criteria of all the disciplines involved in their production, which is again a role of humanities computing specialists.

The nature of humanities computing can also be explored by looking at the teaching and learning taking place in the courses that are intended to prepare the next generation of practitioners. Researchers who are active in the field design and implement the curriculum of these courses. The content therefore reflects

what they believe students need to know but do these courses reveal more about humanities computing than is written in the course handbook?

Courses at King's College London

The Centre for Computing in the Humanities (CCH) at King's College London offers undergraduate and postgraduate degree programmes in Humanities Computing and Digital Culture and Technology. This paper focuses on the teaching and learning that takes place primarily in the final year of the B.A. Minor Programme in Humanities with Applied Computing. The final year is taken up with a practical applied computing project. This offers an opportunity to examine how effective the rest of the programme has been in equipping the student to tackle the ill-defined, open-ended style of question asked by researchers in the humanities. Although the emphasis here is on the final year of the undergraduate programme many of the issues it raises apply equally to the other programmes of study and some examples may be drawn from them and indeed from some of the research projects at King's.

Final Year Projects

The School of Humanities at King's College London has shown a high level of commitment to developing the effective use of applied computing in research, teaching and learning in the Humanities. Their support has allowed the Centre for Computing in the Humanities to play a central role in developing humanities computing at King's and in the wider academic and cultural heritage communities. The students on the humanities computing courses at King's are drawn from a broad range of humanities disciplines and have opportunities to examine an extensive set of humanities computing projects first hand at King's. Because of this, applications of humanities computing chosen by the students for their projects are varied and extensive. The projects vary considerably in content and scope but many involve the creation of a digital resource; examples from recent years have included:

- a computer assisted learning module for learning verbs with common roots in Modern Greek;
- investigating the use of computer animation to analyse Naval Battles;
- a study of the representation of women in three French novels from the nineteenth century using text analysis tools;
- using a database to investigate patterns of involvement by individuals and institutions in corruption scandals in France during the 1990s;

- exploring the effects of the Mexican Revolution on the demography of Mexico using a Geographical Information System;
- an Investigation into how global warming is portrayed by Online Resources;
- an XML Mark-up Scheme for Texts in a Virtual Museum of Latin American iconography.

The applications of computing techniques in the humanities are evolving rapidly, as is the technology being used by the students. Many challenges are posed by this rapid change when supervising and assessing the projects.

Conclusion

Humanities computing does not exist in isolation. It integrates a large body of knowledge from the humanities disciplines and many facets of computing and information science into a single discipline. This integrated body of knowledge has to be applied in a way that satisfies the scholarly criteria of each of the original source disciplines. The level of integration means that the teaching of humanities computing should affect teaching and curriculum development elsewhere. This raises issues surrounding the institutional role of humanities computing and new media within the contemporary academy, including curriculum development and collegial support for activities in the fields with which it exchanges knowledge.

This paper reflects on the use of project work as a means of teaching humanities computing. Pedagogic, and more pragmatic issues are discussed from the viewpoints of both the teacher and learner. The experiences of staff and students on the undergraduate and postgraduate courses in humanities computing at King's College London are used to explore the nature of humanities computing. The project work performed in the Centre for Computing in the Humanities at King's will also be drawn on to illustrate key issues where appropriate.

Bibliography

- Biggs, J. *Teaching for quality learning at university*. Buckingham: Open University Press, 1999.
- Booth, Wayne C., Gregory G. Colomb, and Joseph M. Williams. *The Craft of Research*. Chicago: University of Chicago Press, 2003.
- Borger, R., and A. Seabourne. *The Psychology of Learning*. London: Penguin, 1966.

Botkin, J., M. Elmandjra, and M. Malitza. *No limits to learning: Bridging the human gap. A report to the Club of Rome*. Oxford, UK: Pergamon Press, 1979.

Freire, P. *The Pedagogy of the Oppressed*. Harmondsworth: Penguin, 1972.

Jarvis, P., J. Holford, and C. Griffin. *The Theory and Practice of Learning*. Routledge Falmer, 2003.

Jessop, M. "Humanities or Computing? The Growth and Development of Humanities Computing." *Association of Computer Machinery* 41.5 (December 2004).

Jessop, M. "Teaching, Learning and Research in Final Year Humanities Computing Student Projects." *Literary and Linguistic Computing* (due Summer 2005).

Kolb, D. *Experiential Learning: Experience at the Source of Learning and Development*. Kogan Page, 1984.

Marton, F., D. Hounsell, and N. Entwistle, eds. *The Experience of Learning*. 2nd ed. Edinburgh: Scottish Academic Press, 1997.

McCarty, Willard, and H. Short. *A Roadmap for Humanities Computing*. . Accessed 2005-02-15. <<http://www.kcl.ac.uk/cch/allc/reports/map>>

Moon, Jennifer A. *A Handbook of Reflective and Experiential Learning: Theory and Practice*. London: Routledge Falmer, 2004.

Prosser, M., and K. Trigwell. *Understanding Learning and Teaching*. Buckingham, UK: Open University Press, 1999.

Unsworth, J. *Scholarly Primitives: what methods do humanities researchers have in common, and how might our tools reflect this?*. Accessed 2005-15-02. <<http://jefferson.village.virginia.edu/~jmu2m/Kings.5-00/primitives.html>>