

INTRODUCTION

Digital resources are an essential part of any teaching programme and their integration within a learning environment should be central to any course design strategy. In the light of current scholarship, this paper discusses the importance of building integrated learning communities and outlines possible approaches to their development both within and outside the digital humanities. To make clear what is meant: *learning* is taken as the ‘action of receiving instruction or [more importantly] acquiring knowledge’¹; *community* as ‘joint or common ownership’, and ‘a body of individuals’². This study is based on the author’s experience as part of the teaching team at the Centre for Computing in the Humanities (CCH) at King’s College London and also informed by his role as Student Support Manager for King’s College’s first wholly distance delivered e-learning programme, *MA War in the Modern World* at the Department of War Studies.

Building communities of learning has been the subject of much study within the distance learning community (Anderson, 2004; Brown, 2006; Swan, 2002; *et al*) but here it is argued that this also needs to be a consideration for all undergraduate programmes especially those in non-campus universities. The growing trend of movement from set courses to the introduction of the modular and credit course system means that students no longer follow a single programme of study. Their time is fragmented between their chosen course options and they often only come together with their peers for *core courses*. Masters students at CCH follow a dedicated core course depending on their programme (MA Digital Humanities or MA Digital Culture and Technology) and select their optional courses from those offered by CCH or other participating programmes.³ The undergraduate students at CCH are either part of our minor degree programme (soon to become a joint-honours programme) or are taking stand-alone elective courses while following their degree programme in another humanities discipline;⁴ either way the majority of their classes are in other departments and they have very different backgrounds and learning experiences.⁵

Study has for many students become an individual rather than community-based activity. Although, as we know, the humanities are highly collaborative our students often become trained as solitary learners running the risk of them losing the collaborative skills they may already have, skills which are valuable both in the academy and the workplace. This becomes especially noticeable as students start to climb the academic ladder to their PhD and beyond; there is a tendency for research students to become more and more isolated as they progress towards greater specialism. In Junior, Middle, and High School, students are encouraged to work together in groups and produce collaborative work. Once at University they are warned about the dangers of plagiarism and are constantly reminded that all work submitted must be their own.⁶ This paper will examine how digital resources and new technologies can be used to redress this balance.

CONTEXT

There have been some recent initiatives that are pertinent to this topic. Firstly the *Summit on Digital Tools for the Humanities* convened in 2005 at the University of Virginia.⁷ The published report identified areas where innovative change was taking place ‘enabled by information technology’ and specifically by ‘digital tools’ that could lead to what they referred to as ‘a new stage in humanistic scholarship’⁸. The style of collaboration enabled by digital learning community tools is identified as one such area. This has been further reinforced at the National Endowment of the Humanities hosted *Summit Meeting of Digital Humanities Centers and Funders* held in April 2007 at the University of Maryland.⁹

On the summit wiki among the areas of research priorities and funder priorities John Unsworth lists ¹⁰:

- Collaborative work
- Teaching and learning
- Collaboration among scholars

Further pages consider the benefits of collaboration utilising both existing and new resources; for example, improved lobbying, and the opportunities for sharing people as well as tools and solutions. ¹¹ Others pages list problems associated with collaboration; as well as institutional problems concerning running distributed projects, organization, coordination, and incentives, Unsworth rightly notes that ‘It is hard to learn how to collaborate’ ¹².

The highly collaborative nature of modern research practice makes it clear that future humanities scholars need to be trained in the collaborative process; it must also be remembered that this is equally true for the success of students whose future careers lay not in the academy but in business and commerce. The skills required to make effective use of modern digital tools must be taught alongside traditional writing and communication skills; many of these are in fact new communication skills. This emphasis on collaborative practice represents a shift in the academic culture of humanities away from the paradigm (and popular funding model) of a single researcher towards one of team working where no single person has complete control or ownership. This is closer to models in operation in the sciences where progress is often based on team efforts, and reports frequently have many authors; in other words, we may need to develop protocols that borrow some aspects of science research practice. A big step and, it is argued here, a necessary one, for humanists.

How might we use technology to facilitate these aims? The digital tools are already available and the opportunity exists to repurpose initiatives and make use of research from distance learning to build campus-based learning communities. The issues of collaborative working and community building must be addressed head-on at the course planning stage.

INTERACTIVITY

One of the defining characteristics of computing in the education process is that of interactivity. Modern technologies allow students to interact with their course content, their tutors, and importantly with their classmates. Arguably it is the ability of learners to communicate with each other about course content that enables them to build an ‘active learning community’ (Moore, 1989). None of this happens independently as ‘interaction among students ... is supported by instructor facilitation and support, which, in turn, centers on content.’ (Swan, 2002) In distance education much student interaction is in the form of asynchronous threaded discussions which form a significant part of all Virtual Learning Environments (VLEs). Swan (2000) rightly considers these discussions to be ‘one of the most influential features of online courses’. Here all students get to make their contribution, often after digesting and reflecting on earlier postings while formulating their own. They have the opportunity to think about their writing before committing themselves thus these asynchronous discussions encourage a culture of reflection. The end result is often perceived by the student to be more democratic than traditional classroom discussions as everyone gets to have their say (Harasim, 1990).

Swan’s research among students who had experience of both online and traditional courses indicate that amongst those surveyed most ‘believed their levels of interaction with their instructor, with their peers, and with the course materials was as high or higher than in traditional face-to-face courses. Students comments show that in many case respondents felt that asynchronous format actually supported interactivity and involvement.’ (Swan, 2000)

Students’ comments included:

I feel that I had many opportunities to be part of my learning process — more than in other classes. In a traditional setting, students usually don’t get to participate as much, but in this class I felt like I took a much more active role in my learning.

Student participation was all online discussion. I found this much better than I had guessed it would be at the beginning of the term. Being able to reflect before responding and being able to look forward and backward in a discussion was very beneficial.

(Swan, 2000)

Experience in MA War in the Modern World supports this with online discussions being a crucial part of the learning process. ¹³ Commenting on the e-learning experience this student focuses on the asynchronous discussion: ‘I have really enjoyed the luxury of considered thought, knowing that my every interaction with this course has been an opportunity for a deliberate and prepared statement.’ ¹⁴

PLATFORMS

Researching digital learning environments in use: a Google search on WebCT (a proprietary product now owned by Blackboard) demonstrates its widespread use in the UK and beyond, and it is also the platform used at King’s. ¹⁵ The most popular open source alternative is Moodle ¹⁶ an application of which is set up at the University of London Computer Centre ¹⁷; another is in use by the English Subject Centre ¹⁸ (part of the Higher Education Academy) to scaffold courses for new lecturers in English studies ¹⁹. Criticism of these VLEs is widespread with many simply being used as somewhere that tutors (who don’t access to webservers) can host class notes and bibliographies rather than deliver content and engage with their students. ²⁰ The main benefit often being one of security as all student access is controlled by the institution’s central authentication systems in the same way as email and access to the college computer network. The downside of these systems is that they are constructed and developed as a *teaching* tool rather than a *learning* tool. They are course and institution centric rather than student focused. The Centre for Education Technology and Interoperability Standards (CETIS) ²¹ funded by the Joint Information Systems Committee (JISC) publish their research on ‘the personal learning environments blog’. ²²

Their Personal Learning Environment (PLE) Project Summary is copied here:

The last five years have seen a major uptake of VLEs by colleges and universities. The vast majority of these are large, institutional systems, which are predominantly course based providing support for content distribution, discussion and assessment, mainly through proprietary tools. There are several problems with this approach of which two are of most concern.

- VLEs are not easily customised to suit the needs and preferences of individuals
- As learners move between institutions, they may need to learn the interfaces to different VLEs.

An alternative approach would be to locate a large amount of VLE functionality with the learner either as a desktop application or an independently hosted portal. Institutions would still provide content via repositories, undertake assessment and so on, but learners would interact with these using their personal systems (Personal Learning Environment), comprising their preferred tools and ways of working.

The PLE project team at CETIS is currently working on developing the definition, scope and a reference model for PLEs. It will also be developing desktop and portal based prototypes. The project hopes to report early in 2006.

(Oleg Liber, 4 October, 2005) ²³

CETIS have developed PLEX, which is now available as an open source PLE and an alternative to address the perceived problems of the VLE ²⁴. The extent to which PLEX has been taken up is difficult to determine and it seems that it is often used in conjunction with other applications as its prime function is to act as an aggregator to bring together material from a range of sources; for example, Athabasca (Canada’s Open University) use PLEX to feed into their PLE which is based on Elgg.

Elgg is an open source PLE which the developers claim is ‘based around choice, flexibility and openness: a system that firmly places individuals at the centre of their activities’ ²⁵. It’s very much centered on a social networking approach. The parent company Curverider ²⁶ promotes social networking not only in education

but also in business with its own platform EduSpaces running for a 'dedicated to education and educational technology'. ²⁷ A popular feature of Elgg seems to be the ability to differentiate and make a distinction between those parts that are public and those that are private. An internet search shows widespread use of this application both nationally and internationally. A few examples are:

- Me2u at Athabasca University, Canada: <http://me2u.athabascau.ca/elgg/>
- Claremont Conversation at Claremont Graduate University, California, USA: <http://claremontconversation.org/tcourse/>
- Community@Brighton at the University of Brighton, UK: <http://community.brighton.ac.uk/>
- LeedsBlogs at the University of Leeds, UK: <https://elgg.leeds.ac.uk/>
- The Stoa at the University of Sao Paulo, Brazil: <http://stoa.usp.br/>

Elgg, although it gives more control to the individual user, is still however hosted on institutional servers and so computer services are always going to be concerned with how it is used, problems of security, and the need to control authentication of users via an access protocol such as LDAP ²⁸. How do we get away from this as anything involving student access to institutional networked systems seems problematic? One way is to be independent of any institution which at a stroke removes access and authentication issues which seem to be one of the single most pressing concerns of all institutional IT services. However, setting up one's own server infrastructure involves considerable management overheads as well as resources and so is not to be taken on lightly.

Flock ('The Social Web Browser') is moving in the right direction. ²⁹ This freely downloadable web-browser encourages the user to draw all their social networking sites together (even if they don't realise that is what they are) such as *FaceBook*, *YouTube*, *Flickr*, *Twitter*, del.icio.us, etc.; share photos and videos; stay in touch by pulling in the content from websites in their Feed Reader. As noted, this gives independence from institutional control but the overall effect is confusing (although this may become less so with increased exposure to the browser's enthusiasm for connecting you to anything and everything) and full of self-promotion. Once installed, the Flock homepage becomes 'My World' with a Yahoo top search bar and three lower windows: 'Favourite Sites' (bookmarks that show the URL), 'Favourite Feeds' (RSS feeds with some annotation), and 'Favourite Media'.

NETWORKED COMMUNITIES FOR COLLABORATIVE TEACHING AND LEARNING

To develop an environment that fosters collaboration students should be actively encouraged to engage with each other both inside and outside the classroom. With social software such as *Facebook*, *LiveJournal*, *MySpace*, *inter alia* students are already building networked communities and their existing use of the *dynamic* and *live* web can be built upon to construct learning communities. The deployment of the blog and the wiki has provided simple, readily available tools to build such communities of learning and scholarship. The wiki can be deployed as an experiential and formative learning environment outside of the classroom where students can create their own content, comment on each others, and share resources with tools like del.icio.us and *MyIntute*. The blog supports this with a less formal reflective space which belongs to the students rather than their academic course. To take this approach further it is now possible with simple applications such as *MyYahoo* and now *iGoogle* for students to draw together all their varied networks along with course and departmental webpages and create a single personal portal through which to access their online resources. This portal would be unique to the individual student, portable, and under their control and so free from institutional restrictions.

Here students should be encouraged create a web interface for their own digital environment which includes:

- Content management where they integrate both personal and academic interests
- A networking system for connection with others
- Collaborative and individual workspace
- Communications setup
- A series of syndicated and distributed feeds

This model is based on a presentation given by Terry Anderson from Athabasca University, Canada at the Centre for Distance Education, University of London in March 2007:

<http://www.cde.london.ac.uk/support/news/generic3307.htm>.

What is also notable here is that this model represents an approach rather than a specific application and that it is portable and not dependant on a single department or even institution. This ensures sustainability as it allows and encourages students to take the tools and skills from one area and apply them in others, which is arguably the basis of humanities computing (see McCarty and Short, 2002) ³⁰. At the same time it puts the emphasis for the responsibility for managing their own learning and web resources on the students. Absorbing information is not the same as learning and to gain the most benefit students need to be active in their participation with the educational process.

This approach also offers great advantages in the way learners are encouraged to manage their resources. Rather than just viewing static webpages (saving and printing where their browsers permit) these tools allow interaction in a way that the traditional browser does not. The pages on a wiki and the students' personal portal are dynamic and mutable as they can be edited by the user through their web browser. This gives learners the ability to enrich the material and, unlike a print publication where those annotations are only for personal use, make these available for others (see below). Such exchanges of ideas are central to the processes of building communities of learning. It is in this way that knowledge grows and we are able to push the boundaries of scholarship. The model that is developing here is one in which the student moves from being a reader of other peoples' material to active engagement with that material; a transition from being a *reader* to being an *interpreter*.

THE PERSONAL LEARNING PORTAL (PLP)

The portal chosen here is *iGoogle* which is in essence a customisable Google homepage that runs in a standard web browser (Firefox, Internet Explorer, Safari, etc. ³¹) and is cross-platform, working equally well in Mac and Linux. The only requirement is a Google account which one already has if using *Googlemail* or *Blogger*; it is web based and so independent of any individual computer and may be accessed by logging in from any internet access point (automatically if connected to Googlemail). Google promote and encourage the use of *gadgets* (small tools to display content on the users page), some of which are created by them and some submitted by users. Many of these such as *Web Definitions* and *Etymology Dictionary* can be very useful for the students, especially those that are not native English speakers. However, its main power in an educational context is in managing and sharing resources. The user is able to create an unlimited number of *pages* under unique headings to collect and group together their online material and networks. Any web resource with a *feed* (RSS or Atom) such as a blog or news-group can be imbedded in a page with the user determining how that is displayed and how many items should be included. In addition, a course blog along with discussions or *learning objects* from an institution's online platform (VLE or PLE) set up with feeds can also be drawn into the student's PLP creating a possibly important link between this personal space and an institutional platform or information repository. ³² The PLP can therefore be set up to compliment any existing institutional platform rather than necessarily as an alternative. Any number of the user's *Google Groups* can similarly be brought together in one place with a live display of any new activity. Multiple calendars can be set up and *shared* with other users. It is this *sharing* which is one of *iGoogle's* greatest strengths; any resource embedded in a user's page has the option to be shared. This is made simple in a class situation by setting up a course Google-group which should form the basis of asynchronous discussion. Students can be invited by email to join a dedicated class Google-group (closed to outsiders and unpublished on Google) that is managed by the course tutor who also sets the permissions. Notices of activity can be set

to be sent out automatically by email (Gmail or whatever email address the member registered with); information, resources, including bookmarks [33](#) and *note book* [34](#) entries can then be circulated in this way by any member of the group to the group as a whole.

In this context, *Google Documents* deserve special consideration. Documents (Word documents, spreadsheets, presentations etc) can be uploaded to iGoogle for storage which enables them to be accessed and edited from any internet location; in this way the user is always certain that they are updating the latest version of their work and no longer have to carry it around with them. [35](#) Just as with a wiki, it is also possible, using the *revisions* tag, to *roll back* to previous versions of the document. The *sharing* mechanism of all iGoogle applications takes this a stage further as any document stored here can also be shared with any other invited users. This allows for multiple editing of documents as well as adding *comments* or *annotations* which are named and dated. Any edits are stored in versions which then can be compared (using the *compare* revisions facility) to see exactly what the edit or addition was. [36](#) Documents are able to be published on the web directly (on a blog or other medium) or saved in a variety of formats (RTF, OpenOffice, PDF, text etc) though any compatible browser. [37](#)

Image groups can also be set up for image collections to be viewed by invited persons. This is mentioned here as *Picassa* is another Google application that can be incorporated in the user's iGoogle page although not a part of it. Individual or collections of images can be uploaded using *Picassa Web* [38](#) and with the additional functionality of having geospatial information automatically embedded in the image files by using its link to *Google Maps* and *Google Earth*. Again as with documents, these can be viewed or edited (annotation in the form of comments can be added by supplier or invited viewers) from any internet connection.

The possibilities for sharing and collaboration are extensive using iGoogle as a PLP. To support their studies, students should be encouraged to build up and manage a collection of online resources (especially those with a feed) and share these with their tutor and peers along with documents, images, and bookmarks. In doing so they are creating a central repository for their materials which is accessible anywhere they can connect to the internet (even college open access computers). [39](#)

It is important to emphasise here that all these activities take place through a standard web browser. This means that no additional software needs to be made available to the students to allow them to participate and there should be no obstacle to them doing so; hence everything works in a minimal set up. Contrast this with WebCT whose content runs in a Java Runtime Environment (JRE). [40](#) Installing or updating JRE is of course a simple matter but only providing you have administrator rights on the machine you are using. [41](#) Students having to use their college computing network would not be able to install any additional plug-ins if they were necessary.

Using a PLP to build and sustain a learning community necessitates developing a firm pedagogical foundation for it. Course discussion groups should be setup, facilitated and fed into class activities; prompting discussion here leads to asynchronous threads where students are able to reflect on their classmates comments before offering their own. Students need to be encouraged to be proactive in selecting tools as well as producing and filtering content. In addition, being strategic learners and always conscious of what *has* to be done to gain credit, students need firstly to have the PLP set up as part of a class activity [42](#) and then shown how it can be of use to them and a benefit to their studies (which in the case of undergraduates at CCH means in their courses in other departments and perhaps even outside of the academy). It is this final point that would bring about the transition from this PLP simply being a course based tool to being a portable and sustained pedagogical aid.

There are some minor issues of concern still to be addressed here mainly connected to the amount of information that students might be tempted to put online and their personal details that are held by Google. There is also the threat of targeted advertising although as the students are already exposed to this through engagement with social networking this additional risk seems negligible. The caveat here is that this approach reinforces the need for teaching critical literacy, the need to develop information literacy and information ethics amongst students, and also among staff; this also has an effect on the curriculum and the skill/knowledge set of the teacher. [43](#) Addressing these issues needs to be a part of curriculum development

with students being taught about personal security online and perhaps even being set exercises to find out information about themselves to complete the circle. ⁴⁴ This will challenge the concept of personal ownership of ideas.

CONCLUSION

Education is an academic, individual, and a social experience that requires a sustainable community of learning and here the tools and techniques developed in the distance learning field can be re-purposed for campus students. The use of the PLP explored here is an *approach* not a particular application which immediately removes any institution-bound security issues by making it independent, belonging to the student and not the institution. It is a move way from the slow moving and monolithic VLE to something more dynamic and in-tune with the emergent *live web* allowing us to engage with this anticipated 'new stage in humanistic scholarship'. ⁴⁵ At the same time it will encourage a re-evaluation firstly of the relationships between learners and course content, and then of attitudes towards openness. Learners are encouraged to create and manage their own online learning environment with emphasis on organising and classifying material from a wide variety of sources. This model, based on the student's PLP, is grounded in collaborative work, uses asynchronous threaded discussions to develop reflective practice; it can if necessary be deployed to complement any existing institutional platform; it is sustainable and portable, encouraging students to take the tools and skills from one area and apply them in others (strengthening transferable skills), as they take more responsibility for and become more of an active part of their own learning.

The great advantage of this type of personal portal over the VLE or even a PLE such as Elgg is that it requires no installation, no institutional support, needs no permission to set up as it does not require the student to breach the necessary security of the college network. Neither does it involve the considerable management and resource overheads of a dedicated server infrastructure. Additionally, it does not disappear at the end of the course but is carried forward with the student for re-use and will providing a continual context for future learning even if this is in other areas. Putting this in the wider context, it is by building such communities of learners that we will instil the cooperative, collaborative, and reflective skills needed for a community of humanities scholars; skills that are equally in demand within and outside of the academy.

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NOTES

¹ OED online sv *learning* 1.

² OED online sv *community* I. 1.a and II

³ Details of the two CCH MA programmes and the various options can be found at:
<http://www.kcl.ac.uk/schools/humanities/cch/pg/>

⁴ Details of CCH undergraduate courses and modules are at: <http://www.kcl.ac.uk/schools/humanities/cch/ug/>

⁵ For example a current CCH UG stand alone module: AV1003 (<http://www.kcl.ac.uk/schools/humanities/cch/ug/courses/av1003/>) which is taught by the author is for one semester only. The current cohort of students comes to us from the departments of Classics, Comparative Literature, European Studies, Film Studies, German, and Spanish.

⁶ See King's College London's pages on plagiarism:
<http://www.kcl.ac.uk/about/governance/acboard/examiners/assessment/plagiarism/> which includes the College's statement on plagiarism: <http://www.kcl.ac.uk/college/policyzone/attachments/AppendCv2005.pdf> and requirement for a signed declaration confirming that students have read and understand this.

⁷ The Summit website is at: <http://www.iath.virginia.edu/dtsummit/>

⁸ Summit on Digital Tools for the Humanities: Report on Summit Accomplishments (2006) p.5

⁹ The NEH summit wiki can be seen at:
<https://apps.lis.uiuc.edu/wiki/display/DHC/Digital+Humanities+Centers+Summit>

¹⁰ <https://apps.lis.uiuc.edu/wiki/display/DHC/Areas+of+research+priorities%2C+funder+priorities>

¹¹ <https://apps.lis.uiuc.edu/wiki/display/DHC/Benefits+of+collaboration>

¹² <https://apps.lis.uiuc.edu/wiki/display/DHC/Problems+with+collaboration>

¹³ Two pilots were run in 2004 and the course is in its third year since its launch in September 2005.

¹⁴ Student N.D. (2006): extract from testimonial supplied with permission to publish.

¹⁵ The results return logins for: Nottingham, UCL, Ulster, Manchester, Brunel, UEL, St Andrews, LSE, Keele and many more. (Google sv WebCT 17/11/07)

¹⁶ The Moodle Statistics website claims 35328 registered sites worldwide: <http://moodle.org/stats/> (accessed 17/11/07)

¹⁷ See: <http://moodle.ulcc.ac.uk/> (last accessed 25/11/07)

¹⁸ See: <http://www.english.heacademy.ac.uk/> (last accessed 25/11/07)

¹⁹ See: <http://www.english.heacademy.ac.uk/virtue> (last accessed 25/11/07)

²⁰ This statement is based on research conducted in 2004 at City University London (<http://www.city.ac.uk/>) during the second pilot for the MA War in the Modern World which was using WebCT hosted there and further supported by a limited survey of academics using WebCT in other departments at King's and beyond.

²¹ Managed by: University of Bolton partnered by University of Strathclyde, Heriot Watt University, and The Centre for Recording Achievement. See <http://www.cetis.ac.uk/> (last accessed 19/11/07)

²² See: <http://www.cetis.ac.uk/members/ple> (last accessed 19/11/07)

²³ Online at: http://www.cetis.ac.uk/members/ple/resources/ple_summary (last accessed 19/11/07)

²⁴ See the PLEX - Personal Learning Environment Download Page at <http://www.reload.ac.uk/plex/> (last accessed 19/11/07)

²⁵ See the Elgg download site at: <http://elgg.org/> (last accessed 19/11/07)

²⁶ See: <http://curverider.co.uk/> (last accessed 19/11/07)

²⁷ See: <http://eduspaces.net/> (last accessed 19/11/07)

²⁸ Lightweight Directory Access Protocol: a tool to allow data such as username and passwords to be verified.

²⁹ See: <http://www.flock.com/> (last accessed 19/11/07)

³⁰ This approach is sustainable as all materials are held on the web rather than locally and so can be accessed from any location using any machine.

³¹ Any browser that supports JavaScript.

³² This is not possible with WebCT Vista 3 but the new version, Vista 4, has greatly improved integration with RSS feeds in general. Moodle can be setup to supply RSS feeds which can be configured for each module; see: <http://docs.moodle.org/en/RSS> (last accessed 23/01/08)

³³ *Google bookmarks* is another very useful function. All browser bookmarks can be imported to the user's iGoogle page so that they are collected together and held centrally which means they are *all* universally available on any machine the user is logged onto. They are also never in danger for being lost if an individual computer needs its operating system re-installed.

³⁴ *Google note book* allows small documents and lists of links to be circulated by sharing.

³⁵ It is also of course possible to download and save files locally as a precaution against Google disappearing from the web.

³⁶ Here, unlike wiki applications, all edits and comments are clearly colour coded, highlighted, and linked with the name of the person it was that made the changes. In this way it is easy to see how extensive the editing or annotation was in any one instance by any one user.

³⁷ In addition there is also the option of writing right-to-left for Hebrew and Arabic scripts.

³⁸ Picassa (see: <http://picasa.google.com/>) is a freely downloadable Google application that arranges and organises your digital images. An additional component of this is *Picassa Web* which provides a simple mechanism for uploading large numbers of images directly into *Google images* for display and sharing on the web.

³⁹ iGoogle also gives potentially useful statistical information to a user about their *trends* in bookmarks and *top queries* which can be displayed by the hour, day, month etc.

⁴⁰ See: <http://www.kcl.ac.uk/learningteaching/e-learning/support/java.html> (last accessed 25/11/07)

⁴¹ For example, this excludes almost all of the serving military personal on the *MA War in the Modern World* programme who are restricted to using military based equipment. *Workarounds* using simple html pages have to be used to allow these students to access the course content.

⁴² In practice many students are already using iGoogle but simply as an organiser rather than in the manner suggested here.

⁴³ See Mitchell (2006, p.120 and p.140)

⁴⁴ For example by using 'Google alerts' (see: <http://www.google.co.uk/alerts>) and 'zoominfo.com' (see: <http://www.zoominfo.com/>)

⁴⁵ As envisaged by the Summit on Digital Tools for the Humanities. See their *Report on Summit Accomplishments* (2006) p.5