

## **CITSCAPES Project CASE STUDY REPORT**



**UNIVERSITY OF OXFORD**

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*A CITSCAPES Publication*

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## **1. Executive Summary**

### ***1.1. Character of Institution***

The University of Oxford is the oldest English-speaking university in the world. There is no clear foundation date for the University although teaching existed from late in the 11th century. The University supports over 16,000 students through 39 independent self-governing colleges, which are located in and around various sites of the City. The University has five academic divisions comprising Humanities, Life and Environmental Sciences, Mathematical and Physical Sciences, Medical Sciences and Social Sciences. In *Appendix B* of the *Final Project Report*, we classified this institution as a 'large size', 'pre-1992 university'. Oxford University achieved second place in the 'FT 100 University League Table 2000'.

### ***1.2. Models of C&IT Provision***

Oxford University provides programme specific and generic C&IT training. Compulsory, academic credit bearing courses, which contain a proportion of C&IT skills training, are available from the Department of Continuing Education through to postgraduate courses. Generic training is provided by two different sources: firstly, individual colleges provide compulsory induction courses to their College computing suites. Secondly, postgraduate and research students also receive C&IT induction courses through their Colleges. Oxford University's Central Computing Services (OUCS) provide a significant amount of voluntary, and some compulsory, C&IT training. Further, optional C&IT training includes a library induction, the Effective Learning Service, which offers one-to-one tuition on basic C&IT skills and drop-in sessions. Some optional academic modules also include C&IT skills training. The University offers European Computer Driving Licence training although it is not a registered test centre yet.

### ***1.3. Strategic Perspectives***

The institution has committed itself to an institutional responsibility for student C&IT induction provision, which is initiated and carried by an ICT Committee. Formally reporting to this ICT Committee is the IT Training and Education Committee, a senior University committee which has overall responsibility for C&IT training. Academic Services and University Collections, of which the Oxford University Computing Services is also part, have a remit for student C&IT with Computing Services occupying a core function in the provision of training services and C&IT training for all University members. Departmental and College IT Committees also have a remit for student C&IT induction. The Director of OUCS acts as the principal IT advisor, providing leadership and direction with regard to C&IT issues. This structure was developed as a result of the C&IT Strategic Framework 2000, which was initiated in 1992. The long-term integration of C&IT into teaching and learning is given significant attention with departments and faculties being encouraged to view IT-based teaching as an integral part of their teaching and not as a short term means of saving costs: the primary aim of its policy is to add to quality educational activities in an innovative way, rather than to promote the introduction of IT as an objective in its own right. This goal is also supposed to be realised by the OxTALENT programme, which is solely aimed at university staff.

### ***1.4. Emerging Directions***

The University of Oxford will pursue the importance of on-line course provision and learning materials being offered by the Central Computing Services and academic departments. It is intended to transform, where appropriate, tutor and paper based C&IT provision into on-line delivery. Secondly, the university will conduct an increasing amount of collaborative projects between educational technology teams and academic staff to develop appropriate electronic resources for teaching and learning purposes. Examples of such teams include the Humanities Computing Development

Team (HCDT) which works extensively with humanities technologies and the Technology Assisted Lifelong Learning (TALL) project which has been instrumental in supporting the 'Undergraduate Diploma in Computing via the Internet'.<sup>1</sup> Thirdly, the institution recognises the value transferable C&IT skills. It is intended to provide ECDL as certified evidence of C&IT skills competence. Finally, other initiatives such as the 'Greek Driller' language learning project in the Faculty of Literae Humaniores and the 'Sphakia Survey web site project' at the Institute of Archaeology highlight a university wide trend to apply C&IT based learning where and as appropriate.

### ***1.5. Perspective***

The University of Oxford will continue innovation with its Educational Technology Teams, which will play a central role in creating, developing and supporting subject specific electronic courseware in teaching and research in accordance with its IT Strategy,

'to encourage and enable the use of new technology wherever it adds real value to the traditional methods of teaching and learning'.

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<sup>1</sup> See <http://www.tall.ox.ac.uk/tallinternet/>

## 2. Introduction

### 2.1. *General Overview of the HEI*

#### 2.1.1. Location and Character of Institution

Oxford University is the oldest English-speaking University in the world and boasts a long history and elevated status which is reflected in the 'ancient and beautiful buildings that dominate the city'.<sup>2</sup> There is no clear foundation date for the university although teaching existed from late in the eleventh century. The relationship between the University and its Colleges is complex. The academic responsibilities of the University include providing the 'curricular framework within which college teaching takes place' as well as determining the content of the courses, setting examinations and awarding degrees.<sup>3</sup> Teaching and learning resources including libraries, laboratories, museums and computing facilities are also provided by the University.

Located in and around various sites of the city, the Colleges, which were conceived as medieval halls of residence for students, are the main focus for student life. Here, students receive weekly tutorials for much of their academic career and colleges are also a central point for social facilities and events, and pastoral care. Colleges also provide first year students with accommodation. As an Oxford student you must belong to a college as well as the University.

There are currently thirty-nine independent, self-governing colleges, each governed by a Head of House with a number of Fellows, - academics specialising in a wide variety of

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<sup>2</sup> How to get to Oxford University. <http://www.ox.ac.uk/aboutoxford/how.shtml>

The University and the Colleges, <http://www.ox.ac.uk/aboutoxford/unicol.shtml>

<sup>3</sup> How to get to Oxford University: The University and the Colleges, <http://www.ox.ac.uk/aboutoxford/unicol.shtml>

disciplines.<sup>4</sup> Thirty Colleges<sup>5</sup> admit undergraduates and postgraduates, while seven support postgraduates only.<sup>6</sup> One College<sup>7</sup> has Fellows only and the final College<sup>8</sup> supports part-time and continuing education students. Six Permanent Private Halls,<sup>9</sup> founded by different Christian denominations, have similar powers and duties as the Colleges and all admit both undergraduates and postgraduates.

### 2.1.2. Staff/Student Figures

The total student population equals 16,386 and University staff number 7,118 (figures are from 1999-2000 academic year).

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<sup>4</sup>How to get to Oxford University: The University and the Colleges,  
<http://www.ox.ac.uk/aboutoxford/unicol.shtml>

<sup>5</sup> Balliol, Brasenose, Christ Church, Corpus Christi, Exeter, Harris Manchester, Hertford, Jesus, Keble, Lady Margaret Hall, Lincoln, Magdalen, Mansfield, Merton, New College, Oriel, Pembroke, Queen's, St Anne's, St Catherine's, St Edmund Hall, St Hilda's, St Hugh's, St John's, St Peter's, Somerville, Trinity, University College, Wadham and Worcester

<sup>6</sup> Green College, Linacre, Nuffield, St Antony's, St Cross, Templeton and Wolfson

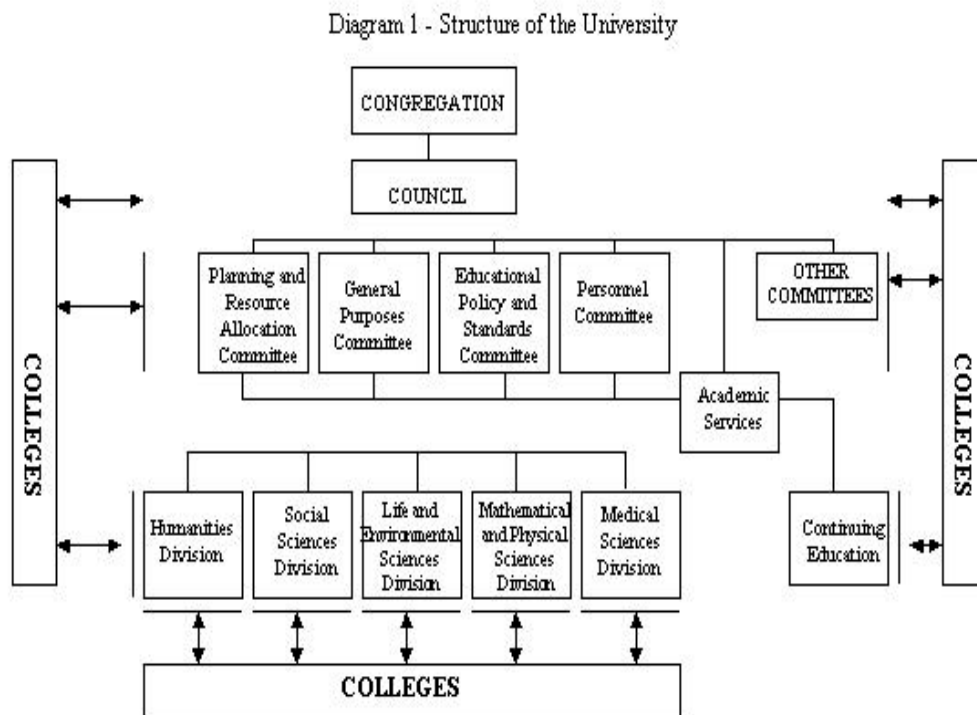
<sup>7</sup>All Souls College

<sup>8</sup> Kellogg College

<sup>9</sup>Blackfriars, Campion Hall, Greyfriars, Regent's Park, St Benet's Hall and Wycliffe Hall.

### 2.1.3. University Structure

Diagram 1 depicts the structure of the University<sup>10</sup>.



The University describes itself as an independent and self-governing institution, with members of the academic staff participating in its decision-making.

‘The Vice-Chancellor is effectively the ‘Chief Executive’, whilst the Chancellor serves as the ultimate figurehead of the University, presiding over all major ceremonies. The Registrar is responsible for running the Central Administration. Final responsibility for all legislative matters rests with Congregation, the ‘parliament of dons’ comprising over 3500 members from the academic, senior research, library and administrative staff’.<sup>11</sup>

<sup>10</sup> Oxford Outline 2000 pp. 10-11.

<sup>11</sup> University of Oxford, Oxford Outline 2000, p. 10.

#### **2.1.4. Academic Organisation**

From October 2000 five new academic divisions were created, each providing a broad strategic focus across the disciplines. Divisional heads also serve as members of the major University central bodies. The academic divisions are structured as so<sup>12</sup>:

- Humanities (English Language and Literature; Literae Humaniores; Modern History; Music; Oriental Studies; Theology; Modern Middle Eastern Studies and Chinese Studies, the Ruskin School of Drawing and Fine Art, and Comparative Philology and General Linguistics)
- Life and Environmental Sciences (Anthropology; Archaeology; Biochemistry; Geography; Plant Sciences, and Zoology)
- Mathematical and Physical Sciences (Engineering; Materials; Chemistry; Physics; Earth Sciences; Mathematics, and Statistics)
- Medical Sciences (Clinical Medicine; Physiological Sciences; Psychology)
- Social Sciences (Law; Management Studies; Social Studies; Educational Studies; Queen Elizabeth House (Development Studies) and the bulk of Area Studies)

#### **2.1.5. Academic Year Structure**

The academic year is divided into three terms: Michaelmas, Hilary and Trinity corresponding with autumn, spring and summer terms respectively.

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<sup>12</sup> University of Oxford, Oxford Outline 2000, p.12.

### **3. Current Situation – Overview**

#### ***3.1. History and Overview of OUCS***

Oxford University has had central computing facilities since the mid-1950s. During the 1970s short training courses to cover ‘use of the central computer’ and computer programming were given by departments and the central services. In 1983 the Computing Teaching Centre (CTC) was established as a separate entity from the Computing Services with a remit for the education of Computing students.

From September 1986 the CTC started to run basic PC training courses with a steady increase in the number of courses and attendees. August 1991 saw the amalgamation of the CTC with the Computing Service to form Oxford University Computing Services which became responsible for the current OUCS computer training courses.

In the late 1980s and early 1990s the emphasis was on the use of the PC, in particular word processing, MS-DOS and email. The ‘Computing for the Terrified’ course was developed in the late 1980s to meet this basic PC training need. Now the use of the web and the development of web skills are becoming increasingly important as well as the use of databases and different email clients and the proportion of time spent on the different areas has changed dramatically. Programming courses are still popular and in particular the language *C* but there are also demands for *Java* and *Perl*. However, there remains a constant need for basic IT skills and the Computing for the Terrified and Essential IT Skills courses are still run regularly.

### 3.2. *Hardware and Software Provision*

Over 25,000 computers are networked, providing desktop access to departmental, central, library and Internet resources.<sup>13</sup> The University expects all undergraduates to have access to e-mail facilities, adequate numbers of workstations and generic software (such as word processors and spreadsheets)<sup>14</sup> which is provided through the Colleges. Colleges are also responsible for providing 'general-purpose computing facilities for undergraduates, local networks, and access through them and the University's *JANet* connection to the Internet from central computing rooms and from individual student rooms'.<sup>15</sup> In instances where subject specific software needs to be available in Colleges it is provided via central servers. Access remains a high priority for the University with emphasis placed on funding the network and ensuring that student rooms have network access. The Colleges themselves are responsible for the financing of this and they also have responsibility for monitoring and ensuring the provision of C&IT resources for their students. The University describes a 'typical' college\* as providing two computer rooms for students use, one for undergraduates and one for postgraduates. Each room possesses ten PCs and two Macintosh computers with various items of software.

These rooms are locked, the keys being given to students on remittance of a deposit, however, students are obliged to attend a familiarisation session of the computer room which is given by the College IT Officer before keys are provided. Students are issued with usernames and passwords allowing them to access the student *Novell* network and each room contains a laser and dot-matrix printer; laser printing costing and the dot-matrix being a free option.

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<sup>13</sup> Oxford Outline 2000, p.17.

<sup>14</sup> IT Strategic Framework:2000, Section C: Support for Teaching and Learning, 17, <http://www.ox.ac.uk/it/strategy/2000/it007.htm>. See also **Appendix A** of this Report.

<sup>15</sup> IT Strategic Framework:2000, Section C: Support for Teaching and Learning, 17, <http://www.ox.ac.uk/it/strategy/2000/it007.htm>

\* The University also acknowledges that this is a general level of provision with some colleges providing more and others providing less.

### **3.3. *Publicity***

OUCS produce many introductory leaflets, flyers and posters explaining the scope and importance of their training courses. These are freely available from their premises and are distributed to Colleges and other strategic student populated areas. Booking forms and timetables, providing details on all courses, are available in paper based format and are updated termly. This information is also available on the Web.<sup>16</sup> IT staff based in Colleges actively promote the free training offered by OUCS with the courses being recognised as important tool for the effective use of College resources. OUCS also advertise their services in student publications such as term planners, student union booklets and diaries. A free printed newsletter, *IT News*, provides information about OUCS and is produced nine times a year; it is also available electronically<sup>17</sup>.

University prospectuses contain information about the C&IT provision and resources located throughout departments and Colleges. Emphasis is placed on the importance of students acquiring a 'sound basic introduction to IT',<sup>18</sup> and IT Training, including Central Computing Service and the Humanities Computing Unit (HCU) courses, ECDL, library induction courses and self-education using the IT Learning and Resource Centre (LaRC), is recommended through these publications. Relevant OUCS training courses are also advertised via lecture lists.

### **3.4. *Learning Materials***

OUCS produce learning materials to support their IT Training Courses and these can be purchased from either the OUCS shop or at course registration. Material to accompany

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<sup>16</sup> OUCS IT Training Courses <http://www.oucs.ox.ac.uk/courses/>

<sup>17</sup> See <http://www.ox.ac.uk/it/news/>

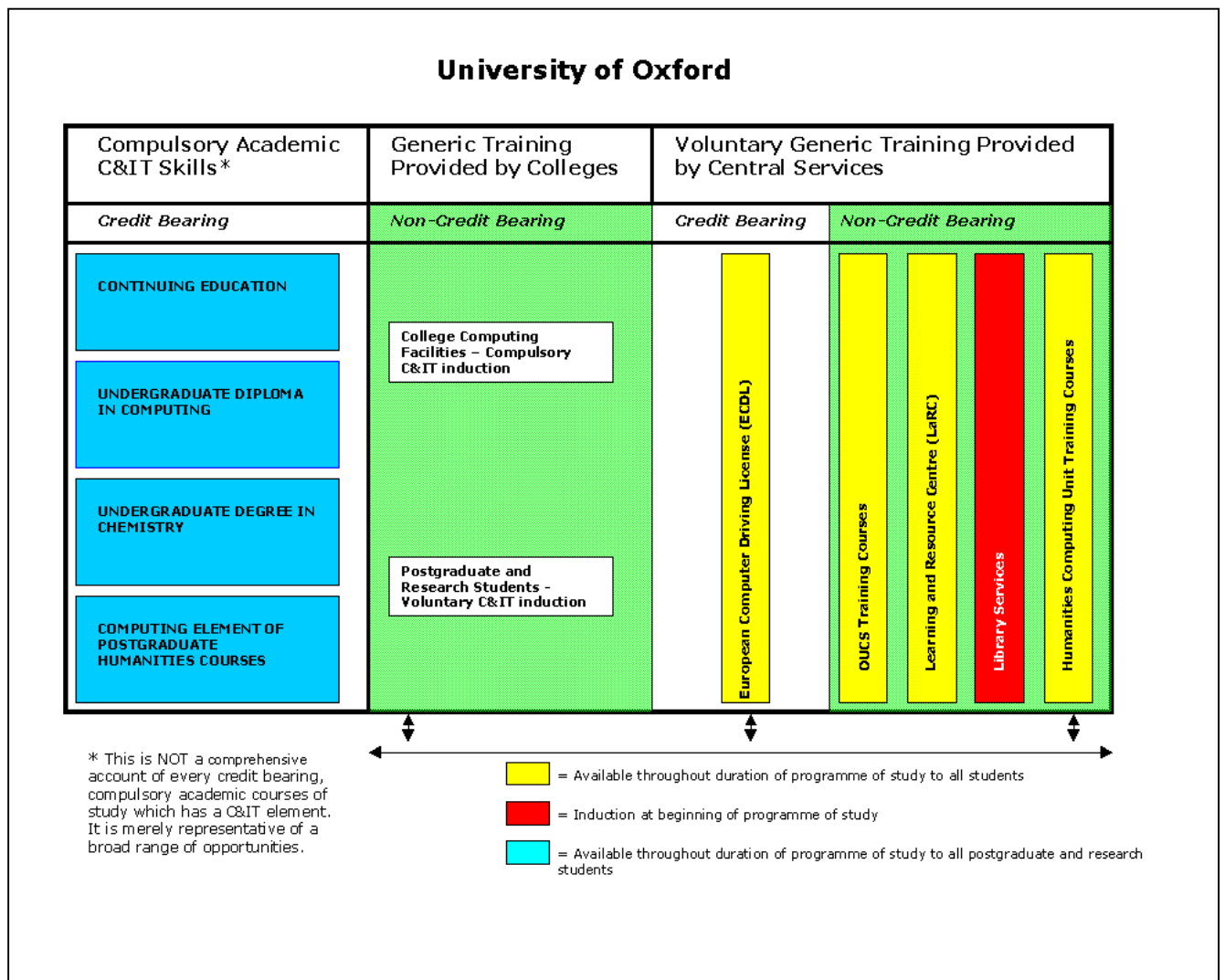
<sup>18</sup> University of Oxford, Graduate Studies Prospectus, 2001-2002, p.228. See <http://www.admin.ox.ac.uk/gsp/>

OUCS training courses is usually produced in-house although students may be alerted to the various commercial *MS Office* products now available to supplement and complement training sessions. It is also planned to publish the printed teaching materials on the web.

## 4. Current Situation - Nature of Provision

### 4.1. Diagram 2 - Availability of Student C&IT Skills Provision

**Diagram 2** shows how C&IT training, including voluntary, non-credit bearing workshops, compulsory subject specific academic courses and externally certified awards, are shared by the University's central services. *Generic Training Provided by Central Services* - and the independent Colleges - *Generic Training Provided by Colleges* and *Compulsory Academic C&IT Skills*, are also offered. Each of the programmes of study included on the diagram is examined in detail in the following part of this case study.



## 4.2. Central Services

### 4.2.1. Oxford University Computing Services (OUCS)

OUCS's mission statement is

'To provide basic IT infrastructure and IT services to the whole University and College Community...OUCS focuses on those IT services that can only be or are best provided by a single provider within the University'<sup>19</sup>

and as such provides a large element of generic, and some subject specific, C&IT training to the University community, seeing its role, apart from providing information about itself and its services, as 'primarily to train and encourage others to become electronic information providers and consumers'.<sup>20</sup> Training is a key element of the OUCS strategy to 'foster distributed and universal computing, by endeavouring to equip people to become self-sufficient'<sup>21</sup>.

The *IT Strategic Framework: 2000* states that 'in designing its courses to complement those run by faculties and departments, OUCS will ensure that all students have the opportunity to develop transferable IT skills'.<sup>22</sup> These opportunities are provided through the many courses and C&IT support provided by OUCS. Broadly, courses available fall into any of the following categories: foundation courses, computer operating systems, electronic mail, networks and the Internet, databases, graphics, publishing, statistics, spreadsheets, word processing, computer programming, tool-focused courses and transferable skills courses. Further breakdown of specific sessions,

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<sup>19</sup> Draft OUCS Annual Report 1999/2000 p.2.  
<http://www.oucs.ox.ac.uk/internal/annrep/annrep9900/index.html> See also  
<http://www.oucs.ox.ac.uk/about/oucs-mission.html>

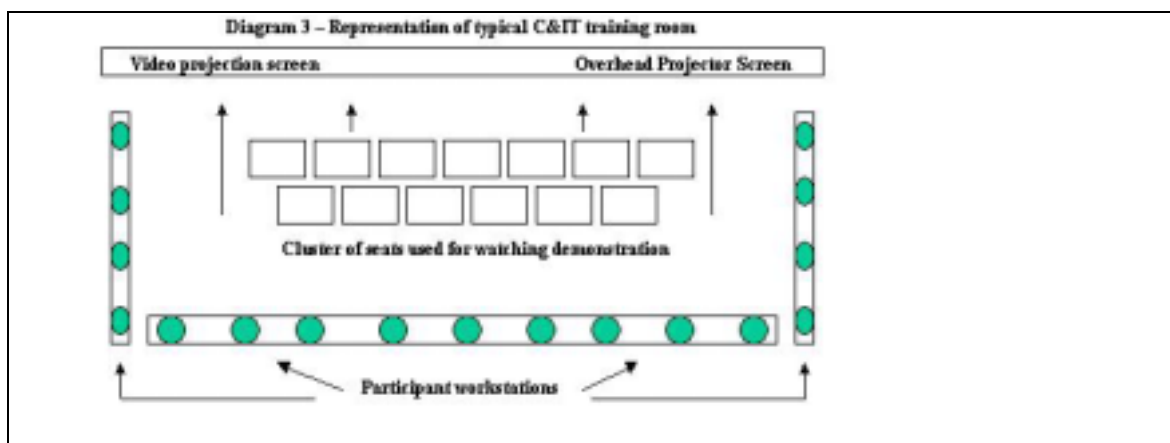
<sup>20</sup> See <http://www.oucs.ox.ac.uk/internal/annrep/annrep93-94.html#section1>

<sup>21</sup> See <http://www.oucs.ox.ac.uk/internal/annrep/annrep93-94.html#section1>

<sup>22</sup> IT Strategic Framework:2000, Section C: Support for Teaching and Learning, 16,  
<http://www.ox.ac.uk/it/strategy/2000/it007.htm>

of which there are nearly fifty.<sup>23</sup> Courses are free of charge to both students and staff of the University, although the participants are expected to contribute to the costs of the supporting material (usually between £ 1 and £ 3). Since many of the courses build on knowledge gained from previous sessions there are often pre-requisites set for course attendance. Specific details are clearly indicated for all courses. Booking a place in advance is often essential and may be completed through an online booking form, via e-mail, through the printed course booking form or by telephoning OUCS staff.

Sessions take place in any of the three designated training laboratories in the OUCS building. The training rooms contain PCs although Apple Macs are available on request. Each room also has full projection facilities, an overhead projector and a flipchart. Duration of sessions vary depending on the course. Attendees arriving prior to the workshop receive a password and login and collect the necessary training material. This registration process is undertaken by OUCS support staff, allowing the workshop trainer to focus upon the session. Training rooms contain clusters of chairs facing the video projection screen, as represented in **Diagram 3**, enabling students to concentrate on the demonstration without distractions; they eventually move to individual workstations to complete the practical exercises.



<sup>23</sup> See <http://www.oucs.ox.ac.uk/courses/> for a list of courses.

A copy of the training material is projected onto one screen via an overhead projector while the trainer demonstrates these examples and exercises onto a second screen using a computer and video projector. Sessions are divided into demonstration and participation, with the trainer supporting individual queries during the practical session. The status of attendees is not recorded; it is not considered necessary to make distinctions between students and members of staff since the courses cover generic C&IT skills. Courses are delivered OUCS IT Teaching Officers, however, postgraduate students are also employed to help during sessions with large groups. The IT training courses are continually under review and development.

#### **4.2.2. Humanities Computing Unit (HCU)**

The Humanities Computing Unit (HCU) is a special service of OUCS and has among its objectives the following:

- to provide advice and training in the uses of communications and information technology within the Humanities disciplines at Oxford, with particular reference to their teaching and research needs;
- to facilitate and promote access to a variety of high quality scholarly electronic resources; to advise upon and (where appropriate) assist in the creation and preservation of such resources; and to encourage their integration into the teaching and research activities of the Humanities disciplines; and
- to carry out research and development in the application of C&IT to the Humanities disciplines, in collaboration with academic staff at Oxford and elsewhere.<sup>24</sup>

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<sup>24</sup> The Humanities Computing Unit (HCU) at Oxford University Computing Services (OUCS) <http://www.hcu.ox.ac.uk/>. See also the HCDT Annual Report <http://www.oucs.ox.ac.uk/hcdt/publications/annual/>

The Humanities Computing Unit was created in October 1995 as a result of the merging of a number of 'discrete centres and projects within OUCS'<sup>25</sup> and currently comprises the Centre for Humanities Computing (CHC), a Development Team, the Oxford Text Archive (OTA) and the Humbul Humanities Hub. Part of the Unit's strategic plan includes the 'continued development of the Unit's support for teaching and learning activities in line with current local and national policies, in particular those concerned with integrating C&IT into Humanities faculties teaching and research'.<sup>26</sup> It is the Centre for Humanities Computing (CHC) that provides C&IT instruction as part of its remit. Strategic priority includes 'continued development of the Unit's support for teaching and learning activities...in particular those concerned with integrating C&IT into humanities faculties teaching and research'.<sup>27</sup>

The CHC, among other duties, organises and delivers introductory and specialised courses, course modules and specialist training materials specifically designed to support the needs of the humanities faculties and provides extensive training in humanities computing to the University's undergraduates, postgraduates and staff. Situated within the OUCS building, the CHC offers two computer rooms to humanities staff and postgraduates equipped with various resources.<sup>28</sup>

Courses are broadly categorised into the following: Essential Computer-based Research Skills and Presentation Tools, Essential Computer-based Skills for Undergraduates, Transferable Skills Courses and Tool-focused Courses<sup>29</sup>. Courses aim to provide users with an introduction to the main resources in their subject area, give an overview of

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<sup>25</sup> The Humanities Computing Unit (HCU) at Oxford University Computing Services (OUCS) p.2  
<http://www.oucs.ox.ac.uk/hcdt/publications/annual/strategy.html>

<sup>26</sup> The Humanities Computing Unit (HCU) at Oxford University Computing Services (OUCS) p.7  
<http://www.oucs.ox.ac.uk/hcdt/publications/annual/strategy.html> as at 19/01/2001

<sup>27</sup> The Humanities Computing Unit (HCU) at Oxford University Computing Services (OUCS) p.7  
<http://www.oucs.ox.ac.uk/hcdt/publications/annual/strategy.html>

<sup>28</sup> See Centre for Humanities Computing <http://www.hcu.ox.ac.uk/chc/>

<sup>29</sup> Centre for Humanities Computing Courses <http://www.hcu.ox.ac.uk/chc/courses.html>

subject specific tools and software and develop further generic transferable C&IT skills. Although training is available to undergraduates, the majority of course places are taken by postgraduates, with some course attendance being compulsory for students enrolled upon the Master of Studies programme<sup>30</sup>.

Materials are developed and produced by members of the Humanities Computing Unit. Some support materials are available online and the possibility of delivering some courses online is also being investigated. Sessions take place in the OUCS teaching rooms and are staffed by members of the Humanities Computing Unit. Teaching can comprise purely taught classes or demonstrations with practical 'hands on' elements. Students can ask the HCU for further support if necessary.

Some courses are designed and developed in collaboration with teaching staff and library professionals to ensure a comprehensive coverage of appropriate resources. A termly newsletter, *Humanities Computing in Oxford*, is also freely available on paper and web format and informs staff and students of course details and items of news and interest. All HCU computer training courses are frequently evaluated; a teaching report has also been compiled and is available from the web.<sup>31</sup>

#### **4.2.3. Learning and Resources Centre (LaRC)**

One of the facilities developed by the CTC was the Open Learning Centre and in July 1994 its remit was broadened and it was renamed the Learning and Resource Centre (LaRC). The LaRC offers training facilities and access in a supported environment although it is closely linked to the OUCS training programme being seen 'primarily as an adjunct of the training programme'<sup>32</sup>. It provides an 'environment to consolidate

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<sup>30</sup> For further details see section 4.4.4. Postgraduate Humanities Courses in this report

<sup>31</sup> See CHC Teaching Report <http://www.hcu.ox.ac.uk/chc/teaching.htm>

<sup>32</sup> <http://www.oucs.ox.ac.uk/internal/annrep/annrep93-94.html#section1>

skills learnt in a course...by guided or assisted self-paced learning, and skill development with material of real value to the learner'<sup>33</sup>.

The LaRC supports students who prefer to use self-directed study and a range of self-paced learning materials including videos, computer based training, books and OUCS produced course material and exercises are available.

The aims of the LaRC are:

1. To provide a supervised, friendly open learning environment for University members wishing to acquire computing skills.
2. To provide facilities for open learning [using] OUCS course specific material.
3. To provide support for people working on their own course material.
4. To provide supplementary facilities to those provided by Departments and Colleges
5. To provide general access to IT resources.<sup>34</sup>

Any member of the University may use the LaRC resources free of charge although a charge is incurred for printing. It is located within the OUCS building and is open between 8.30 and 21.45 from Monday to Friday. Booking is not necessary as the LaRC operates on a 'drop-in' basis. However, users may be asked to leave if demand exceeds supply.

#### **4.2.4. European Computer Driving Licence (ECDL)**

The University offers the opportunity to complete the European Computer Driving Licence (ECDL) in accordance with the ECDL Foundation guidelines. OUCS provide training and testing to all members of the University, marketing the qualification as 'aimed at ordinary computer users rather than just technical computer people [and]

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<sup>33</sup> <http://www.oucs.ox.ac.uk/internal/annrep/annrep93-94.html#section1>

<sup>34</sup> IT Learning and Resource Centre (LaRC) Site <http://www.oucs.ox.ac.uk/larc/about.html>

relevant and appealing to many groups of people around the University.<sup>35</sup> These groups, and their learning needs, have been defined as:

- ❑ IT Support Staff: to provide an understanding of all the major applications widely used in business and academia.
- ❑ Clerical Staff: as a means of staff development, to provide competency in the various applications and to reinforce and consolidate knowledge and skills users have gained through experience.
- ❑ Graduate Students: to ensure some structured training is provided for students to comply with funding council requirements and prove consistent competency in basic skills.
- ❑ Other Students: as a means of showing proven computer skills to potential employers, and as a reason for following through on structured training to ensure they make optimum use of facilities provided<sup>36</sup>.
- ❑ OUCS provide a range of training opportunities suitable for all learning styles. For learners preferring staff assistance options include:
  - ❑ Attendance at OUCS IT training courses - with traditional classroom teaching and hands on experience.
  - ❑ Use of the ECDL Computer Based Training (CBT) material, run weekly at OUCS
  - ❑ Use of the ECDL CBT material available in the LaRC at OUCS.

Alternatively the following options comprise independent learning:

- ❑ Independent use of the ECDL CBT material on the candidate's own computer (or those provided by a Department or College).
- ❑ Training material from the Cheltenham Computer Training Company which is

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<sup>35</sup> OUCS ECDL information site <http://www.oucs.ox.ac.uk/training/ecdl/>

<sup>36</sup> OUCS ECDL information site <http://www.oucs.ox.ac.uk/training/ecdl/>

- available as Word 97 computer files.
- An ECDL workbook which accompanies the CBT
- An ECDL textbook covering the whole syllabus with examples and practice exercises.

Course materials can be either purchased from the OUCS Shop or downloaded from appropriate locations.

Students fund the qualification themselves although they do have the opportunity to use a government Individual Learning Account (ILA).

#### **4.2.5. Library Services**

Oxford has many different libraries belonging to Colleges, faculties, departments or the University in general. The Library Services provide access to extensive C&IT-based materials and external electronic resources and are also expected to provide training for using these resources<sup>37</sup>. Part of the *IT Strategic Framework:2000* (see section 5.1 *Institutional responsibility for students C&IT induction*) states that the University must ensure that all entitled library users have easy networked access to an appropriate range of resources in electronic form, [and] that they receive the necessary training in the use of electronic information resources, and that all libraries in the University have the necessary infrastructure to support electronic access to both local and remote information resources.<sup>38</sup> Access for internal users is through public terminals in the libraries and the University network provides access for users in non-library locations. This networked access is deemed important; the University Libraries Curators policy

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<sup>37</sup> IT Strategic Framework:2000, Section C: Support for Teaching and Learning, 17 (b), <http://www.ox.ac.uk/it/strategy/2000/it007.htm>

<sup>38</sup> IT Strategic Framework:2000, Appendix II, Specific Objectives, (h), <http://www.ox.ac.uk/it/strategy/2000/it013.htm>

states that 'electronic services should not be restricted to individual libraries but should be accessible from any workstation attached to the network'.<sup>39</sup>

Historically each library has organised independent subject based inductions. An example of such includes training given in induction week which comprises hour-long sessions at the OUCS training rooms which this academic year (2000-01) provided induction to over 700 students in three days. Inductions involve a combination of explanation and demonstration using the training room facilities. This location enables students to participate in a practical session, exploring *OLIS* and *OxLIP*<sup>40</sup>, through both TELNET and the World Wide Web. Students receive *OLIS* documentation in their induction packs and paper based guides, covering basic and advanced searching, are also available. Informal 'lunchtime' sessions are periodically run by librarians as informal training opportunities for *OLIS* users. All induction programmes are evaluated and librarians write reports to disseminate evaluative findings.

Library training is not a formal part of the curriculum but academics require students to attend introductions. Collaboration between academic staff and librarians ensures appropriate training for specific student groups; staff are also training in using *OLIS* and *OxLIP* as part of the staff development programme.

Some libraries maintain staffed computing rooms, which can be used to access library based resources. however, libraries are not responsible for providing general C&IT facilities and must ensure library terminals are used appropriately.

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<sup>39</sup> IT Strategic Framework:2000, Section E: Support for Libraries and Museums, 23, <http://www.ox.ac.uk/it/strategy/2000/it009.htm>

<sup>40</sup> *OLIS*, (Oxford Libraries Information System) is Oxford University's online union library catalogue and *OxLIP*, (Oxford Libraries Information Platform) is an interface which provides access to several hundred subscriptions to bibliographic, reference and full-text databases. See <http://www.lib.ox.ac.uk/olis/>

### ***4.3. Individual College C&IT Induction***

#### **4.3.1. College C&IT Staff**

Each college employs an IT manager whose team comprises an IT support officer and several graduate students who are employed on a casual basis. These staff support college IT users by responding to requests for help, however, in an attempt to minimise general queries they have created comprehensive Web pages describing the facilities and services of their College. These are linked to OUCS and other pages that give technical information and advice. These staff also provide limited support for 'general-purpose applications software' like the statistical package SPSS.

Individual colleges provide access to computer rooms (as stated in Hardware and Software provision, above), and conditional use of these rooms is an introductory familiarisation session. Further C&IT support is provided in the form of 'surgeries' which provide help or advice for users. These take place for a couple of hours each day and evening and are staffed by the graduate students. Help requests via e-mail and telephone are also accepted with any 'problem queries' being referred to the OUCS helpdesk if the IT manager and his or her team are unable to solve them.

#### **4.3.2. Postgraduate and Research Students**

C&IT support for postgraduate students is the responsibility of individual departments and faculties, with the Educational Policy and Standards Committee overseeing the implementation of instruction in the use of the technological resources available to students in their departments, libraries and also outside of Oxford.<sup>41</sup> Science subjects provide initial C&IT training for their students whereas arts students are supported by departmental IT staff in conjunction with the Humanities Computing Unit. It is acknowledged by the University that graduate students make extensive use of networked

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<sup>41</sup> IT Strategic Framework:2000, Section C: Support for Teaching and Learning, 19,  
<http://www.ox.ac.uk/it/strategy/2000/it007.htm>

resources and C&IT applications and therefore need access and support commensurate with their level of resource use. Once again, colleges and departments are given the task of providing graduate students with 'appropriate general purpose computing facilities' and ensuring network access from the same.

#### **4.4. Academic C&IT Provision**

##### **4.4.1. Department of Continuing Education – British WWI Poetry**

This continuing education course has been included for its innovative use of C&IT in its teaching and learning methodology and the opportunity this affords for a diverse range of students. Although the Continuing Education course will be discussed in this instance it is necessary to state that the virtual seminars can be used by teaching staff in educational establishments worldwide.

The course primarily addresses aspects of British WWI poetry but also incorporates a substantial amount of C&IT training, including how to retrieve appropriate web based resources, writing basic hypertext mark-up language (HTML) and effective participation in collaborative learning via a web conferencing system. The course, which runs every Hilary term, admits approximately fourteen, self-funded students. Part of the assessment criteria requires each student to produce a web page and successful completion earns them 10 Credit Accumulation Transfer Scheme (CATS) points. Students are expected to have basic competence in word processing prior to entry; all further C&IT skills are provided through the duration of the course.

##### **4.4.2. Department of Continuing Education – Undergraduate Diploma in Computing via the Internet**

The *Undergraduate Diploma in Computing via the Internet* is predominantly an online qualification run by the Department of Continuing Education and annually recruits approximately 140 students; the department also run the same course using traditional

'face to face' teaching methods which recruits around 30 students. The 'online' students have a wide variety of backgrounds coming worldwide, from careers in the police force, medicine and school teaching and IT responsibility, and most state their underlying motivation for achieving the diploma is professional development.

The diploma is equivalent to Level II on an undergraduate degree and students need to prove reasonable familiarity with computing to be accepted onto the course. Course material is provided over the Internet and supported by a textbook which needs to be purchased by the students. Six units must to be completed during both academic years and a residential 'summer school' is also included. Unit 0 is an introduction to the system and contains the 'study skills' element of the course. The unit serves the 'dual purpose of getting a student's system working properly and providing practice in study techniques'. A *WebBoard* conference is used to support collaboration and detract from a possible sense of isolation, for posting general questions, as a revision aid and for a compulsory 'team building' game. Each student is assigned an individual tutor as a supportive presence. The online material, which has been specifically designed to support this course, is not used with the 'traditional' students.

#### **4.4.3. Undergraduate Degree – Chemistry**

A post of IT Co-ordinator and Training Officer, whose role it is to provide C&IT skills training for chemists and to teach chemistry using computers, was established in the Department of Chemistry following the 1997 IT Strategy Document which recommended that IT staff should be provided for student skills<sup>42</sup>. The Training Officer has many duties including teaching basic C&IT skills to all chemistry students and supporting a final year undergraduate research group to 'build multimedia rich virtual chemistry experiments'<sup>43</sup>. Graduate students and staff also need sophisticated C&IT

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<sup>42</sup> This is an experimental post combining subject specialism with C&IT specialism. Although other departments have computing suites they do not have an equivalent teaching post.

<sup>43</sup> Dr. Karl N. Harrison <http://www.chem.ox.ac.uk/it/karlharrison.html>

skills to enable effective research and teaching; approximately 50% of undergraduate students will progress to further research which will require advanced C&IT skills.

Students of chemistry require familiarity with C&IT for a number of reasons:

1. There is an immense volume of information available to researchers and computers are best equipped to handle this.
2. Chemistry cannot be 'seen' very well without C&IT; every piece of laboratory apparatus has an accompanying computer which supports use of that apparatus.
3. Research scientists have to present their work and need to use illustrative software competently.
4. Students need to produce a thesis for the MSc and require knowledge of generic software packages and presentation software.
5. Oxford's degree statutes require chemistry students to show C&IT competence.

The chemistry computer suite has 30 workstations for independent use by chemistry students and for training sessions led by the IT Coordinator and Training Officer. First year students, for whom C&IT training is compulsory, are taught in small College based classes each averaging ten students from an intake of approximately 200 per academic year. Progression through the academic career sees more open access to the labs without timetabled sessions, although in the 4<sup>th</sup> MSc year, students may choose to attend formal courses to equip them with further relevant research skills.

Training takes many forms ranging from formal compulsory timetabled training through to informal access to self-teach material in the computing lab. All instruction is on the web and accessible via the comprehensive department website.

#### **4.4.4. Postgraduate Humanities Courses**

As mentioned in 4.2.2 *Humanities Computing Unit* of this report the HCU run some courses which are compulsory for Master of Studies (MSt.) Students to provide them

with the necessary research skills to complete their postgraduate studies; attendance records are taken for this purpose. Course content is discussed by members of the CHC and academic staff to ensure appropriate material is covered and sessions are delivered as documented in 4.2.2 above.

## 5. Current Strategy and Policy

### 5.1. Institutional Responsibility for Students C&IT Induction

Various different areas within the University structure (see **Diagram 1**) have particular responsibilities for IT training. Committees with an interest in C&IT induction include the Information and Communications Technology Committee, (ICTC) which is the committee responsible, under Council, for the formulation and continued development of a strategy for information and communications technology in furtherance of the University aims and objectives<sup>44</sup>. Formally reporting to the ICTC is the IT Training and Education Committee, a senior University committee which has overall responsibility of C&IT training.

Academic Services and University Collections, of which OUCS is part, have a remit for student C&IT induction and OUCS itself has a remit and core function to provide training services and C&IT training for all University members. Departmental and College IT Committees also have a remit for student C&IT induction. The director of OUCS acts as the principal IT advisor providing leadership and direction with regards to C&IT issues.

In November 1992 the first University IT strategy was adopted. It was revised in May 1996 and currently exists as the *IT Strategic Framework:2000*, a document which details the C&IT strategy for the University as 'seen by the IT Committee in consultation with others'.<sup>45</sup> The introduction to the *IT Strategic Framework:2000* states that 'new technology will play an increasingly important part in teaching, research,

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<sup>44</sup> ICTC Terms of reference <http://www.admin.Oxford.ac.uk/ictc/terms.htm>

<sup>45</sup> IT Strategic Framework:2000, Section B: Introduction, 3 <http://www.ox.ac.uk/it/strategy/2000/it006.htm>. The IT committee was the predecessor of the ICTC. The ICTC is proposing to develop a new IT Strategic Framework in the near future.

communication, publishing, and administration'<sup>46</sup> and the document proceeds to explain the strategic priorities and goals for this implementation. Relevant issues concerned with C&IT training and induction are identified in the following paragraphs.

## ***5.2. Support for Teaching and Learning***

The section of the *IT Strategic Framework:2000* that considers support for teaching and learning stresses that the 'IT strategy is to encourage and enable the use of new technology wherever it adds real value to the traditional methods of teaching and learning'.<sup>47</sup>

Long term integration of C&IT into teaching and learning is given significant attention with departments and faculties being encouraged to 'see IT-based teaching as an integral part of their educational activities'.<sup>48</sup> Accordingly 'The University recognises that the introduction of IT in teaching and learning is unlikely to result in significant savings in the short-term: the primary aim of its policy is to add to the quality of the University's educational activities, rather than to promote the introduction of IT as an objective in its own right'.<sup>49</sup>

Oxford University perceives transferable skills to be important and acknowledges this by recognising the 'value in developing 'transferable skills' in the use of IT and ...[taking] forward the educational uses of IT'.<sup>50</sup> OUCS must ensure that its courses are

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<sup>46</sup> IT Strategic Framework:2000, Section B: Introduction, 4,  
<http://www.ox.ac.uk/it/strategy/2000/it006.htm>

<sup>47</sup> IT Strategic Framework:2000, Section C: Support for Teaching and Learning, 12,  
<http://www.ox.ac.uk/it/strategy/2000/it007.htm>

<sup>48</sup> IT Strategic Framework:2000, Section C: Support for Teaching and Learning, 14,  
<http://www.ox.ac.uk/it/strategy/2000/it007.htm>

<sup>49</sup> IT Strategic Framework:2000, Section C: Support for Teaching and Learning, 13,  
<http://www.ox.ac.uk/it/strategy/2000/it007.htm>

<sup>50</sup> IT Strategic Framework:2000, Section C: Support for Teaching and Learning, 12,  
<http://www.ox.ac.uk/it/strategy/2000/it007.htm>

designed to complement those run by faculties and departments, that ‘all students have the opportunity to develop transferable IT skills, and ... [that OUCS gives] priority to projects designed to address any shortcomings identified by subject reviews’.<sup>51</sup> It is unlikely, however, that C&IT skills training will be made compulsory for all Oxford students.

### **5.3. *OxTALENT***

Established in 1997 to promote the effective use of C&IT in learning and teaching at Oxford University, OxTALENT provides a forum for staff to learn, through various methods, about how to enhance learning and teaching via the effective use of C&IT.<sup>52</sup> It is overseen by an informal steering group that aims to raise awareness of the benefits of C&IT in improving teaching and learning, to promote interaction between individuals and groups already active in this field, and to stimulate the use of technology at all strata of the University.<sup>53</sup> OxTALENT activities include frequent hour-long dissemination seminars, an annual conference addressing use of C&IT in teaching and learning and an internal survey about the use of C&IT in teaching and learning activities.

### **5.4. *C&IT Training Providers***

It is the University's policy to ‘provide direct generic IT support to users through local IT staff’.<sup>54</sup> Training is provided or arranged by a number of different bodies<sup>55</sup> including

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<sup>51</sup> IT Strategic Framework:2000, Section C: Support for Teaching and Learning, 16, <http://www.ox.ac.uk/it/strategy/2000/it007.htm>

<sup>52</sup> OUCS Annual Report p.33

<sup>53</sup> OxTALENT – Teaching and Learning Enhanced by New Technology <http://www.ox.ac.uk/it/groups/oxtalent/index.html>

<sup>54</sup> IT Strategic Framework:2000, Section G: General Matters, IT Support Staff, 48, <http://www.ox.ac.uk/it/strategy/2000/it011.htm>

various departments, faculties and colleges with the *IT Strategic Framework:2000* identifying OUCS as an important element owing to its direct, generic IT training provision for all members of the University 'through courses and the provision of learning materials'<sup>56</sup>. This training is free or charged at a subsidised rate wherever it is 'provided routinely as part of Oxford's educational activities or to improve the effectiveness of its employees'.<sup>57</sup>

The library-based IT services, as well as individual librarians, routinely provide user education and training in support of the use of electronic information resources. The University Library Services has an Associate Director to coordinate and advance such a strategy.<sup>58</sup>

### 5.5. *Staff Training*

The Academic Staff Development Committee has responsibility for 'identifying the staff development needs of those teaching in the collegiate University'<sup>59</sup> and OUCS provides IT training for departmental and college IT support, staff details of which are advertised through IT support staff mailing lists and online.<sup>60</sup> The ICTC suggests that among items considered for inclusion in divisional and departmental IT strategies should be the

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<sup>55</sup> IT Strategic Framework:2000, Section G: General Matters, Training, 49, <http://www.ox.ac.uk/it/strategy/2000/it011.htm> The following statements are all taken from point 49 of the IT Strategic Framework and their footnotes refer to their corresponding alpha characters.

<sup>56</sup> IT Strategic Framework:2000, Section G: General Matters, IT Support Staff, 48, <http://www.ox.ac.uk/it/strategy/2000/it011.htm>

<sup>57</sup> IT Strategic Framework:2000, Section G: General Matters, IT Support Staff 49 (b) <http://www.ox.ac.uk/it/strategy/2000/it011.htm>

<sup>58</sup> IT Strategic Framework:2000, Section G: General Matters, IT Support Staff 49 (c) <http://www.ox.ac.uk/it/strategy/2000/it011.htm>

<sup>59</sup> IT Strategic Framework:2000, Section G: General Matters, IT Support Staff 49 (b) <http://www.ox.ac.uk/it/strategy/2000/it011.htm>

<sup>60</sup> IT Strategic Framework:2000, Section G: General Matters, IT Support Staff 49 (d) <http://www.ox.ac.uk/it/strategy/2000/it011.htm>

inclusion of 'interactions with other IT staff and training and development'<sup>61</sup> which is being realised, in part, by the activities of OxTALENT and the yearly college IT support staff internal conferences.

### **5.6. *Specific Objectives***

It is an objective of Oxford University that all students and academic and administrative staff should have basic IT Skills, the responsibility for which lies with individuals as well as those who are responsible for training.<sup>62</sup>

It is also a specific objective that the following central services play a part in actively promoting and assisting the effective use of IT in teaching and learning: 'the newly-established Humanities Computing Development Team (HCDT), the Staff Development Unit, and the Library Services Directorate through its Associate Director (Staff Development, User Education and Learning).'<sup>63</sup>

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<sup>61</sup> IT Strategic Framework2000, Appendix III, Suggested guidelines for divisional/departmental IT strategies, 9, (c), <http://www.ox.ac.uk/it/strategy/2000/it014.htm>

<sup>62</sup> IT Strategic Framework:2000, Appendix II, Specific Objectives, (c), <http://www.ox.ac.uk/it/strategy/2000/it013.htm>

<sup>63</sup> IT Strategic Framework:2000, Appendix II, Specific Objectives, (c), <http://www.ox.ac.uk/it/strategy/2000/it013.htm>

## **6. Emerging Directions**

### **6.1. *On-Line Course Delivery***

The importance of on-line course provision and learning materials is emerging as a significant development in C&IT skills training with both central services and academic departments perceiving a growing need for on-line, (student-centred??), material. Traditional C&IT training delivered using conventional methods will be adapted for on-line delivery and existing on-line resources will be developed and maintained according to user needs.

### **6.2. *Development of Educational Technology Teams***

Educational technology teams will play a central role in creating, developing and supporting subject specific electronic courseware in teaching and research at Oxford University. This work will be undertaken as a close and continuous collaboration between team members and academic staff, itself an important trend to emerge given the traditional divide between academic and support staff. Examples of such teams include the Humanities Computing Development Team (HCDT) which works extensively with humanities technologies and the Technology Assisted Lifelong Learning (check) (TALL) project which has been instrumental in supporting the *Undergraduate Diploma in Computing via the Internet*.

## 7. Bibliography

University of Oxford: IT Strategic Framework: 2000 (2000) [cited 2.2.2001] Available from URL: <http://www.ox.ac.uk/it/strategy/2000/>

## **Appendices**

### *Appendix A*

IT Strategic Framework: 2000 in PDF format.

### *Appendix B*

The Oxford Model in PowerPoint format.