

**IMPROVING THE STUDENT EXPERIENCE THROUGH  
COLLABORATION -**

**STUDENT COMPUTING INITIATIVES AT  
THE UNIVERSITY OF NEWCASTLE**

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# **IMPROVING THE STUDENT EXPERIENCE THROUGH COLLABORATION -**

## **STUDENT COMPUTING INITIATIVES AT THE UNIVERSITY OF NEWCASTLE**

### **ABSTRACT**

The University of Newcastle has adopted a “shared services” model for service delivery across the institution following an organisation-wide restructure in 2005. As part of this mode of operation, it is essential that units cooperate and collaborate in order to provide services and implement new initiatives.

This paper will explore a range of initiatives undertaken by IT Services in collaboration with other service units across the University to support and improve the student experience.

Information Commons and Student General Access Facilities – The first Information Commons was opened in the main branch of the University of Newcastle Library (Auchmuty Library) in 2003. Due to overwhelmingly positive feedback from students, opening hours have been extended to 24 x 7 and additional facilities have been opened at the Ourimbah and City branches of the Library. Plans are underway for a further facility on the Callaghan campus at the Huxley library. IT Services, in consultation with Library staff and academics, manages the computing environment in these areas which includes PC and Macintosh computers printing and scanning services and a rich software environment. First level IT support is provided during opening hours through the Library IT Rover service who are jointly trained by Library and IT Services staff to handle the range of enquiries they are likely to encounter.

Student Hubs – The Student Hubs are an innovative approach to the delivery of student services through a one-stop shop. The University currently has 4 Student Hubs operating across the 3 main sites – 2 on Callaghan campus, 1 in Newcastle CBD and 1 at the Ourimbah campus. Each Hub provides a wide range of student services including admissions, enrolment and program advice and referral; assignment submission and collection; transcripts and parking permits; as well as café facilities. IT Services’ provides a range of PC and Macintosh computers (including software) and wireless network access, in support of the functions of the Student Hubs.

Student Wireless Access and Student Laptop Clinics – Although the University has had wireless access in place for some time, a recent expansion of wireless coverage, combined with increasing student laptop ownership and the release of the Windows VISTA operating system led to huge demands from students wishing to connect to the wireless network. At the beginning of 2008, the Library bore the brunt of this increased student demand. IT Services staff, in partnership with the Library, developed and ran a series of Student Laptop Clinics across all campuses at the

commencement of semester 2, 2008. Due to positive feedback from the students, these Clinics will be run again at the start of semester 1, 2009.

Research Higher Degree (RHD) Laptop Scheme – In 2008, the University launched its RHD Student Laptop Scheme. This scheme provides a University-owned laptop (PC or Macintosh) to eligible RHD students, pre-loaded with a range of software and configured to connect to the University wireless and wired networks. IT Services staff work in close collaboration with the Office of Graduate Studies and selected vendors in the planning and delivery of this program which has been actively embraced by the RHD students.

## **INTRODUCTION**

### **The University of Newcastle**

The University of Newcastle was established as an autonomous institution in 1965. It has a student population of over 28,000 studying both on and off-shore in business, law, engineering, medicine, nursing, science, teaching, the arts and technology. The University has a main campus at Callaghan, a suburb in the city of Newcastle, NSW, where the majority (around 16,000) of the students are based. There is a presence in the Newcastle CBD housing the University's Conservatorium of Music, Legal Centre and Graduate School of Business.

The Ourimbah campus on the NSW Central Coast is a multi-sector campus which offers University, TAFE and Community College programs and courses. The Ourimbah campus is a partnership of The University of Newcastle and TAFE NSW - Hunter Institute.<sup>1</sup>

The University has a growing presence at Port Macquarie on the NSW mid-north coast, and in Singapore. Staff and students are also located at numerous health locations around NSW including Tamworth, Orange and Taree.

### **Shared Services Model**

Like most Higher Education institutions in Australia, The University of Newcastle has been through many changes. In 2005 the University underwent the largest change process in its history impacting all areas of the organisation.

One of the major outcomes of this change process was the adoption of a “shared services” approach to service delivery in many areas, including information technology. The restructure saw the formation of a single IT Services unit under the leadership of a Chief Information Officer (CIO) with a reduced head count of around 35%.

Under the “shared services” mode of operation, it is even more important that units cooperate and collaborate in order to provide services to the University community and implement new initiatives. This paper explores a range of initiatives undertaken by IT Services in collaboration with other service units across the University to support and improve the student experience.

## **INFORMATION COMMONS AND STUDENT GENERAL ACCESS COMPUTING FACILITIES**

General access computing laboratories have been provided for student use since the late 1980s in various locations across the campuses. The majority of these spaces were set up using a traditional layout, with rows of generic computers configured with a limited range of software (often specific to a single discipline) and access to printing facilities. Some of these spaces were centrally managed, with others being managed within Faculties and Schools.

The first Information Common was opened in the main branch of the University of Newcastle Library, the Auchmuty Library, in 2003. This initiative was a collaborative effort of the Information and Education Services Division at the time, involving staff

from the Library, Information Technology and Facilities Management, as well as external partners. As mentioned by Anderson and Wilson (2007<sup>ii</sup>) “the opening of the Information Common brought together electronic learning resources, computer hardware and software, and media production facilities, in informal, collaborative layouts, to suit contemporary learning styles”.

As a result of the overwhelming success of the Auchmuty Information Common (AIC) opening hours were extended to 24x7. Further facilities modeled on the AIC have been opened across the campuses – with 24x7 access at the Ourimbah campus library (Nyte Bytes) and the Newcastle CBD (CHIC – City Hub and Information Common). Funding has been approved under the Better Universities Renewal Funding (BURF<sup>iii</sup>) scheme for an additional facility on the Callaghan campus at the Huxley branch library.

The Auchmuty Information Common was a recipient of a 2007 Carrick Institute (now Australian Learning and Teaching Council) Award for Outstanding Contribution to Student Learning: “For leadership and creativity in developing around-the-clock information and learning environment that is flexible, innovative and inspiring”<sup>iv</sup>.

## **Facilities and Services**

A range of facilities and services are on offer in each of the Information Commons including:

- a comprehensive and modern computing environment with both Windows (PC) and Macintosh workstations;
- colour and black & white printing and scanning facilities;
- access to a wide range of educational software, including access to specialised software previously restricted to specific computer teaching labs;
- wired and wireless network access for personal laptops;
- food and beverage services, including vending machines,
- printed documentation providing advice about common issues;
- lounges and casual furniture to encourage collaboration; and
- a service point for enquiries.

Traditional general access computer laboratories remain at all campuses offering an equivalent technical environment to the Information Commons, however value-added services such as the collaborative environment, food and beverage services and the service point are not available in these spaces.

## **Support Model**

IT Services manages the computing environment in these areas under its Managed Operating Environment (MOE). The MOE is a set of standards, tools and processes for streamlining the support requirements for the staff and student desktop fleet, leading to economies of scale whilst still meeting user requirements. Desktop hardware is refreshed on a 3-year rolling cycle, while the software image is updated at least twice a year in response to changing requirements.

Standard high-spec hardware and a common software environment are deployed to all student computing areas including the Information Commons, Student Hubs and general access computer labs. The base image is built on the WindowsXP operating system and includes the Office suite, a range of multi-media utilities and other common software. Specialised software is made available in the 24x7 areas subject to licencing conditions – this allows students access to the software outside traditional teaching times to complete assignments in a collaborative environment.

A three-tier support model is utilised within the Information Commons. First level IT and Library support is provided during opening hours by the Library Rovers who are recruited from the student body. The Library Rovers are jointly trained by Library and IT Services staff to handle the range of enquiries they are likely to encounter. If a Rover is unable to answer an IT enquiry they are able to escalate the matter to the 17triplezero IT Service Desk. Likewise they can escalate Library matters to Library reference staff.

This model enables support to be provided as efficiently as possible in the locations the students most utilise.

## **STUDENT HUBS**

The Student Hubs are an innovative approach to the delivery of student services through a one-stop shop. The hubs were implemented following the 2005 Change Management process which brought together student administration staff previously located within Schools and Faculties under the Office of the Academic Registrar.

The University currently has four Student Hubs operating across the three main sites – two on Callaghan campus (Shortland and Hunter Hubs), one in Newcastle CBD (CHIC - shared with the Information Common) and one at the Ourimbah campus. Each Hub<sup>v</sup> provides a place for students to work on, submit and collect assignments, meet friends and obtain advice and referrals from student administration staff.

The Student Hubs received a commendation in the the 2007 Australian Universities Quality Agency (AUQA) Review<sup>vi</sup> which stated “AUQA commends UoN for its responsiveness in enhancing the student experience through the creation of Student Hubs and the Auchmuty Information Common”.

## **Facilities and Services**

Like the Information Commons, each Hub provides a wide range of facilities for students including:

- a comprehensive and modern computing environment with both Windows (PC) and Macintosh workstations;

- colour and black & white printing and scanning facilities;

- access to a wide range of educational software, including access to specialised software previously restricted to specific computer teaching labs;

- wired and wireless network access for personal laptops; and

- food and beverage services, including vending machines.

While there are similarities between the Information Commons and the Student Hubs, such as the computing environment, there are also a number of key differences with the Student Hubs offering:

- admissions, enrolment and program advice and referral;
- assignment submission and collection;
- transcripts;
- ID cards; and
- parking permits.

### **Support Model**

As with the Information Commons, IT Services provides the hardware and software environment under its Managed Operating Environment, and high level support services. Rovers are employed in the Student Hubs using a similar model to the Information Commons to handle first-level enquiries.

In addition, the call centre of the 17triplezero IT Service Desk has been co-located with the Student Enquiry Centre. This co-location has improved relationships between the front-line service staff resulting in improved support to students.

### **STUDENT WIRELESS ACCESS AND STUDENT LAPTOP CLINICS**

Although the University has had wireless access in place for some time, a recent expansion of wireless coverage, combined with increasing student laptop ownership and the release of the Windows VISTA operating system, led to huge demands from students wishing to connect to the wireless network.

Over 180 wireless access points were installed across the Callaghan and Ourimbah campuses in 2008 as part of a major Capital project to refresh the network infrastructure. All main study areas (such as Libraries and Student Hubs) as well as spaces such as the Student Union now have wireless coverage. In late 2008, a refresh of the network in the Halls of Residence commenced which includes a roll-out of wireless coverage to the dining halls and shared spaces within the residences in response to the students' preference for working collaboratively in these spaces.

### **Support Model**

At the beginning of Semester 1, 2008, the Library front-line staff bore the brunt of an increased student demand for assistance with connection to the wireless network. In response to this, IT Services staff, in partnership with the Library, developed and ran a series of Student Laptop Clinics across all campuses at the commencement of semester 2, 2008. The clinics were supplemented by improved user documentation and clear guidelines for front-line staff dealing with personal laptops.

Each clinic is run jointly by a staff member from IT Services supported by a Library Rover. While students do not need to register to attend a clinic, they must complete some pre-requisites in order to improve their chance of successfully connecting.

These pre-requisites include checking they have up-to-date operating system patches (service packs) and anti-virus software installed on their machine.

The clinics are in addition to the first level support provided by the Library Rovers. If the Rovers are unable to diagnose laptop connection problems in a short amount of time they are able to refer the student to the next available laptop clinic, freeing them up to deal with other enquiries.

Due to positive feedback from the students, these Clinics have again been programmed for Semester 1, 2009, with further clinics scheduled subject to demand.

The team responsible for the Student Laptop Clinics was awarded a Vice-Chancellors Award for General Staff Excellence in 2008, and the Clinics were the topic of a paper and presentation at the Enhancing Student Success Conference held at the Ourimbah campus of the University of Newcastle in December 2008.

## **RESEARCH HIGHER DEGREE (RHD) LAPTOP SCHEME**

In 2008, the University launched its RHD Student Laptop Scheme endorsed by the University's Information Technology Governance Committee (ITGC). This scheme provides a University-owned laptop to eligible RHD students, pre-loaded with a range of software and configured to connect to the University wireless and wired networks.

Over 500 laptops were deployed to RHD students in the first year of operation often replacing aging or obsolete workstations that were inadequate for the students' requirements and difficult for IT staff to support. Due to the success of the initial program, the ITGC has approved continuation in 2009.

### **Hardware and Software**

IT Services negotiated a bulk-purchase deal with the University's hardware supplier (DELL) for a suitable laptop model to meet the majority of RHD student needs. In 2009, the DELL Latitude E5400 was selected with the following specification:

Processor	Intel Celeron
Memory	2 GB RAM
Screen size	14.1" wide screen WXGA
Hard disk	120 GB
Wireless	Yes
Removable media	8x DVD+/- RW drive
Bluetooth	Yes
Warranty	3 year next business day on site

Table 1: RHD Windows Laptop Specification 2009

This model is comparable with the University's standard staff laptop model (E6500), and includes business features such as a 3-year warranty and factory software installation.

In response to demand, a limited number of Macintosh laptops are made available to students whose area of study requires the Macintosh environment.

A standard suite of University software is pre-installed on the laptop at the factory. This suite is based on the University's staff image as the majority of RHD students are also employed within the University in some capacity or other. University software licencing agreements are leveraged as the laptops remain a University asset. The base software environment includes:

Operating System	Microsoft Windows XP
Office Suite	Microsoft Office Pro 2003
Web Browsers	Internet Explorer 6 and Firefox 2
Academic Software	Endnote X
Anti-virus	Sophos
Multi-media	Apple Quicktime (with iTunes) Cyberlink Power DVD Macromedia Flashplayer Macromedia Shockwave Player RealOne Player Windows Media Player
Utilities	Adobe Reader Windows Messenger Sonic DigitalMedia Plus

Table 2: RHD Windows Laptop Software Suite 2009

Additional software (such as statistical packages) is available on request through the IT Service Desk subject to the University's software licencing agreements.

### **Distribution and Support Model**

IT Services' staff work in close collaboration with the Office of Graduate Studies (OGS) in the planning and delivery of this program. The OGS determines student eligibility and makes the offer of the laptop via e-mail as students complete their enrolment.

OGS provides a list of students who have accepted the laptop offer to IT Services who then manage the collection process. This process is fully documented and repeatable which allows administrative staff in IT Services to run it, freeing up technical staff time for other activities. Students are required to bring along a copy of the e-mail they received from OGS and two forms of photo ID. They must also sign the Terms and Conditions document which outlines their responsibilities in relation to the laptop which remains a University asset.

Before the student leaves the collection point they must login using their credentials to ensure the laptop is in good working order and can connect to the University network. This minimises call backs to the IT Service Desk.

Alternative arrangements through the OGS are available to students who are registered as "off campus" candidates residing in Australia, and are unable to collect the laptop from a collection point. Laptops are not posted overseas.

After the laptops have been collected, they receive the same level of support as staff machines. RHD Students are required to place all requests for service through the IT Service Desk, with hardware support provided by the vendor (under the conditions

of the warranty). Off campus students are made aware that only limited assistance can be provided.

## CONCLUSION

The University of Newcastle has faced significant challenges over the past 5 years, including the major downsizing and restructure in 2005 and the adoption of a shared services approach to service delivery. This environment has provided the catalyst for cooperation and collaboration across the institution to improve services to students. IT Services has been a leader in a range of successful initiatives that have been recognized by the students, the institution and external bodies as innovative and original.

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<sup>i</sup> <http://www.newcastle.edu.au/campus/ourimbah/>

<sup>ii</sup> Anderson, G. and Wilson M. "Inclusion and diversity : collaboration as a strategy for success at the University of Newcastle Library." Retrieved 13<sup>th</sup> February 2009 at [http://www.caudit.edu.au/educauseaustralia07/authors\\_papers/Anderson.pdf](http://www.caudit.edu.au/educauseaustralia07/authors_papers/Anderson.pdf)

<sup>iii</sup> Retrieved 13<sup>th</sup> February 2009, from <http://mediacentre.dewr.gov.au/mediacentre/gillard/releases/betteruniversitiesrenewalfunding.htm>

<sup>iv</sup> Australian Learning and Teaching Council. Retrieved 13<sup>th</sup> February 2009, from [http://www.altc.edu.au/carrick/webdav/site/carricksite/users/siteadmin/public/awards\\_citations\\_recipientsbyuni\\_aug07.pdf](http://www.altc.edu.au/carrick/webdav/site/carricksite/users/siteadmin/public/awards_citations_recipientsbyuni_aug07.pdf)

<sup>v</sup> <http://www.newcastle.edu.au/students/hubs/>

<sup>vi</sup> "Report of an Audit of the University of Newcastle", June 2008, Australian Universities Quality Agency. Retrieved 13<sup>th</sup> February 2009, from [http://www.auqa.edu.au/qualityaudit/reports/auditreport\\_newcastle\\_2008.pdf](http://www.auqa.edu.au/qualityaudit/reports/auditreport_newcastle_2008.pdf)