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The Balnaves Foundation Multimedia Learning Centre

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What it is?

The Multimedia Learning Centre (MLC) is located in the northern wing of the main Arch Building on the Bond University campus. The facility functions as an environment for extended learning experiences for all Bond students, as well as a digital gallery for the projection of multimedia high art and the use of computer gaming technology. It is managed and staffed centrally by Information Services (Library and ICT) and this is one of its key distinguishing factors.

There are a number of zones in the centre including a social learning zone, group oriented study booths, individual computer stations, tables with provision for students to work in pairs where extra chairs are provided, as well as an enclosed Collaborative Learning Room (CLR) with complete AV fit-out. The social zone includes lounge seating with easy access to power outlets as well as a Laptop Bar. A concierge style kiosk that is staffed at all times provides support and information for students as well as loans of peripheral equipment for use in the booths, CLR and at the computers.

 The facility was built as part of a project that included the construction of two mezzanine levels in the former art gallery space. The mezzanine levels are used as teaching spaces for the Faculty of Humanities and Social Sciences and are not part of the Centre. The entire project including the mezzanine levels cost around M$3.4. This also includes costs associated with new building code compliance, given that the building had not been refurbished since original construction around 1988, as well as a significant technology cost component. Construction of the 500m2 facility

began in November 2007 and was completed in early April 2008 with students using the facility by the start of Bond's second semester in early May. Shortly before opening, the centre was named The Balnaves Foundation Multimedia Learning Centre.

Why it is?

The existing art gallery at Bond University was essentially a "dead space" in a prominent and central building on the campus. Since its inception it was a difficult space to use as an art gallery or for holding functions as there were significant issues regarding reverberation and lighting. Initially it was thought the space would be good for a 24-hour "study hall" with tables and chairs and computers. However, the Main Library at Bond University had in recent years undergone an incremental transformation into an unplanned but very well used learning environment and this was increasingly observed and acknowledged across the campus. As a result the gallery space was identified as being suitable for an extension of the Main Library's learning environment but with updated technology and furniture to meet the changing needs and learning behaviour of students.

At the same time, the need was identified for a suitable space to project student digital art as well as to provide facilities for students enrolled in Bond's Bachelor of Computer Games program. These concepts were therefore brought together in a single brief to architects. A number of architects were invited to put forward proposals for the refurbishment of the gallery space on

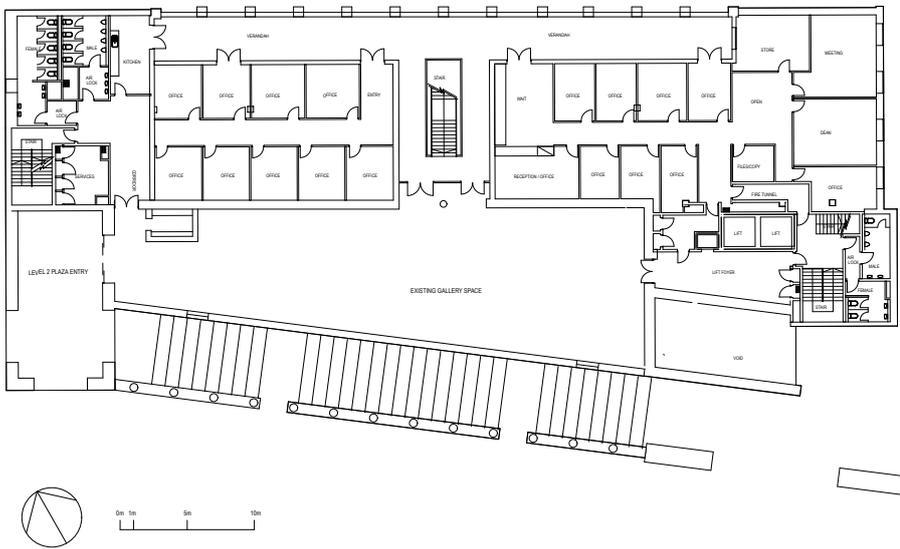
Figure 1: MLC shortly before opening

Figure 2: The original space showing the Art Gallery and surrounding offices.
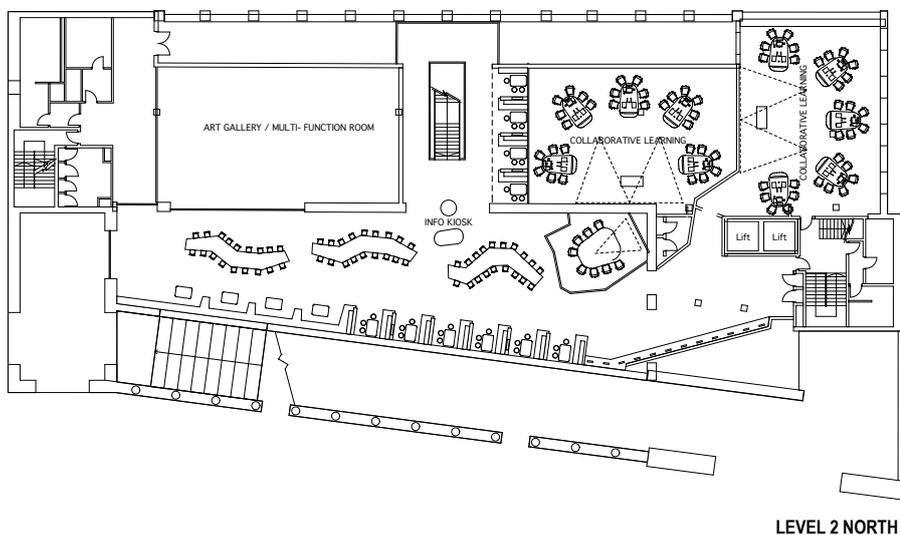

LEVEL 2 NORTH

Figure 3: Initially proposed plan showing the conversion of offices into teaching spaces surrounded by extended learning occurring in the gallery space.

this basis and Wilson Architects secured the commission.

The initial concept for the space was to build on ideas developed for the First Year Engineering Learning Centre at the University of Queensland that is predominantly a peer-to-peer social learning space. A significant aim in the design of this space was to enable extended learning experiences. The original proposal to convert offices on the same level as the Bond Art Gallery into collaborative teaching and learning spaces would have created a logical extension for this space. However, this strategy has been deferred until more office space can be found for the Faculty of Humanities & Social Sciences. Since the Multimedia Learning Centre is managed by Information Services (Library and ICT) and being both centrally located and close to the Main and Law libraries, the possibilities for campus social learning coordination and support are considerably enhanced.

The key players involved in the concept planning and gathering of support were the Director of Information Services who had long lobbied for refurbishment of the Main Library essentially to accommodate more learning spaces and senior

executive staff including the Pro-Vice Chancellor, Information, the Vice-Chancellor, the Director of Finance & Projects as well as key members of the University Council including the Chancellor. In the design stage and collaboration with the architects and consultants, the key players were senior Information Services staff, the Head of the School of Communication and Media in the Faculty of Humanities & Social Sciences and other staff on a consultative basis, including staff from Facilities Management.

Critical decisions were made by the University Council specifically in terms of approving and funding the creation of the new space as well as by the Vice-Chancellor and Director of Finance & Projects. Other decisions relating to technology, furniture and layout were made as the project unfolded by the Director of Information Services and Associate Director, Information (Corporate Services) in consultation with both senior management and other stakeholders on campus, including students. The Library's customer engagement strategies of holding face-to-face roundtable discussions with students played a key part in incorporating their input into the design of the space.

The pedagogical principles that drove the design included provision of extended learning opportunities, peer-to-peer learning, partially structured learning and collaborative learning.

What happens here?

In this section the broad pedagogical intent for the facility is discussed and in the section on space below, the pedagogy-space-technology rubric is detailed under the heading for each zone in the MLC. During Bond's 3-semester year, the MLC is open 18 hours per weekday from 7am to 1am and 15 hours on each Saturday and Sunday from 8am to 11pm, thus a total of 120 hours per week. Essentially, extended learning occurs here as the learning experience that starts in the lecture or tutorial extends into peer-to-peer and collaborative learning with students engaging in the following:

- Discussing assignments and projects

- Working on assignments in individual, pair or group mode

- Experimenting with technology for group work – digital presenters/document cameras, web cams, gaming technology

- Viewing of digital high art produced by students and projected onto the high parts of the walls on one side of the gallery

Each of the zones or spaces in the MLC is designed to support different student behaviours and different cohort sizes, broadly falling into three categories:

- Introvert: Focused quiet study (although this is an open space focus has been created by design and layout)

- Exhibitionist: Active extrovert space, particularly in the social learning zone

- Voyeur: Passive engagement with other people or aspects of the overall space

How is the space used?

Essentially the space presents a number of options for social learning engagement. As part of the design it was important to enable students to 'hyperlink' between various learning spaces and modes and this is reflected in the various zones or areas as shown in this floor plan and detailed below. Actual use is compared with intended use in the section dealing with evaluation of the space.

The space was designed to ensure visual engagement by the users with the inside and the outside – additional windows were created to engage with the courtyard outside and at the rear of the centre the building was opened up to provide a spectacular view of the campus lake and Fountain of Learning. The acoustics of the space were dramatically improved through the use of acoustic battens across the ceiling and parts of the internal walls.

The furniture was designed to ensure comfort and support a variety of learning modes. At some tables two chairs have been provided for a single computer with sufficient desk space for two students to work together on the computer. This also ensures that there are more chairs available than simply one for each computer and provides the flexibility for pairs and groups to be formed easily as required.

1.Entry/Foyer

- Pedagogical intent: Instructional display with touch-screen monitor as well as campus wide digital signage

- Space design: Comfortable ottoman for students to wait for friends and to engage with passing traffic and information displays

- Technology: Large screen LCD, campus-wide information coordinated by Information Services (Library and ICT), campus telephone for students to contact lecturers
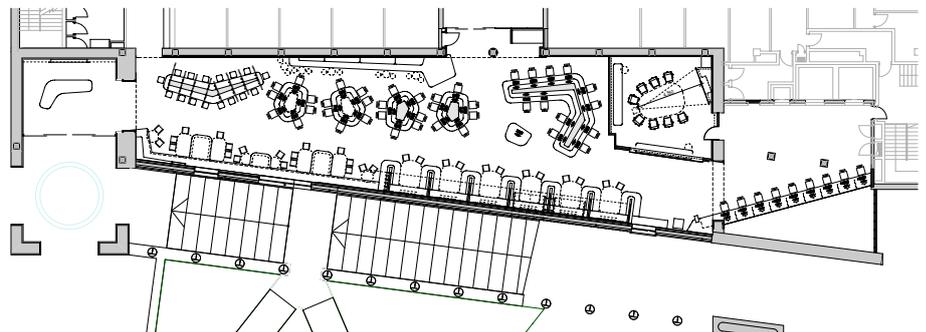

Figure 4: MLC layout as built

2.Laptop Bar

- Pedagogical intent: Social learning, casual drop-in, quick research or touching up of assignments

- Space design: Close to the entry, toilets and vending machines, this bar was designed for short term use by students in between classes. The short term stay overlooking the other learning spaces supports the behaviour preferences of the voyeur and exhibitionist. The colour of the bar changes to reflect potential different learning moods.

- Technology: Power for laptops and wireless connectivity

3. Lounge seating

- Pedagogical intent: Social learning, flexible furniture to support group work with laptops as well as print based material.

- Space design: To support cohorts of four - eight with comfortable casual furniture for longer study sessions. Caters for both more focussed introvert behaviour as well as extrovert behaviour within groups

- Technology: Power for laptops underneath seating and wireless connectivity

4. Study Booths

- Pedagogical intent: Open collaborative learning

- Space design: Booths for a cohort of four - six. Comfortable casual furniture for longer

working sessions. More focused introvert behaviour within groups and with the study practice on display for others to engage which encourages the extrovert and voyeur

- Technology: 40inch LCD screen with networked computer, wireless keyboard and mouse; document camera to capture print material; ability to connect a laptops to the large LCD screen; ability to view DVDs and play computer games using the PlaySation3 console; power for laptops without using the LCD screen and wireless connectivity

5.Open Computer tables

- Pedagogical intent: Reflective 70 percent, collaborative 30 percent modes of study

- Space design: Open study workstations to support one to two students at each computer. The colour of the bar changes to reflect potential different learning moods

- Technology: Networked computer workstations with 20" wide screen monitors – cable management in centre of tables

6.Individual Computer stations with a view

- Pedagogical intent: Reflective modes of study

- Space design: Students working with back to open space facing landscape view of lake and campus environs. Introvert behaviour for one to two students to enable more focussed work

- Technology: Networked computer workstations with 20" wide screen monitors

adequately spaced to allow for additional materials to be placed alongside

7.Collaborative Learning Room

- Pedagogical intent: Collaborative learning space enclosed for quiet focused work within groups

- Space design: Boardroom-style table supports a cohort of eight to ten with room for an additional 14 along bench seating at the edges of the room. Extensive use of glass enables passive engagement with activity occurring in the room

- Technology: Smartboard, HD projector, videoconferencing, gaming hardware and software for Computer Games and Multimedia students (Xbox, Playstation, Nintendo Wii), laptop plug-in facility

8.Art displays and viewing

- Pedagogical intent: Passive engagement with the digital art projected onto large wall

- Space design: Can be viewed throughout space but additional seating is provided on opposite wall

- Technology: High resolution digital projectors configured as a group of 3 images in landscape format

9.Service Kiosk

- Pedagogical intent: Instructional. Learning support staff managed by Information Services (Library and ICT) able to assist with information, IT/AV support and peripheral equipment loans

- Space design: Centrally located stand-up support desk backed up with storage cupboard for IT/AV peripheral equipment

- Technology: Staff computer with barcode scanner, cordless telephone to enable staff to rove around the facility and assist students, Xpanel for control of lighting, projection equipment and sound levels in

the study booths, microphone for PA system announcements

The unique or noteworthy aspects of the Multimedia Learning Centre include:

- The projection of digital art within the learning environment

- Mood lighting in the modern furniture

- Gaming consoles in the study booths and Collaborative Learning Room

- The fact that the facility is managed by Information Services (Library and ICT) and is staffed during all opening hours

- The high ceiling (triple volume) in the centre provides extensive headroom and white space, making the environment conducive to creativity and learning.

How is technology used?

The technology has been discussed above in terms of the pedagogy-space-technology rubric for each zone in the MLC. This section features some broad comments about the technology in general. Technology is used in various ways throughout the centre, depending on the type of zone and the furniture provided. Wireless connectivity is ubiquitous so laptop use extends throughout the facility in areas where power outlets have been purposely provided as well as in other areas such as at tables in between desktop computers.

The study booth zone is the most technology rich part of the space. Early use of these booths seemed to be mainly for computer games. However, as the semester progressed, this gradually declined and the booths have been used with and without technology by small and larger groups alike. In particular, groups gather around the large LCD screen to collaboratively work on assignments using either a plugged in laptop or the networked computer with wireless keyboard and mouse.

Bond University has a comparatively high laptop ownership ratio with more than 85 percent of

students reporting that they owned their own laptop in a survey in 2007. This is evidenced in the way the MLC is used as many students bring their own technology into the space. This was considered in the design and ample provision was made for power outlets for laptop use.

Networked printing facilities from both desktops and wirelessly from laptops are available in the MLC and well used by students.

How was the facility evaluated?

The MLC was evaluated using a variety of methods including:

- Paper-based exit survey during the Weeks 1-4 of operation

- Online survey during Weeks 5-7.

- Library blog, the L Files , used to gather comments from students

Usage of the facility has also been measured using electronic people counters and comparing this to visit statistics for the libraries. Although these instruments provide data indicating that the facility is being used as intended, a formal post-occupancy evaluation of the space has not been undertaken yet. As the MLC has only been open for just over two months at the time of writing, the full picture can only be seen once further evaluation has been undertaken.

Exit Survey: During weeks one to four of the semester, students were encouraged to complete a quick paper based questionnaire to gauge their impressions and obtain initial feedback on the new facility. A total of 300 responses were received, 210 undergraduate and 90 postgraduate, across all four faculties but predominantly from the Faculty of Humanities & Social Sciences. Considering that Bond has a student population of around 3,600 this was a good response. Students were asked to indicate on a floor plan which zones they had been using. The zones in order of popularity were:

1. Group tables with desktop computers
2. Study booths for groups
3. Social learning area
4. Laptop bar
5. Bench with individual desktop computers
6. Banquet seating with view of digital art
7. Collaborative Learning Room
8. Foyer

When asked what they were doing before using the MLC, 57 percent, indicated that they had been at a lecture or tutorial. With regard to their next port of call after using the MLC, a similar percentage (58 percent) indicated that they were going to a lecture or tutorial. These figures serve to reinforce the fact that the MLC is being used primarily as a place for extended learning or transitional learning between structured learning sessions. The majority of students indicated that they had worked in pairs or groups of up to five during their visit to the MLC.

Around 37 percent indicated that they purposefully chose their selected place in the centre based on preference while around 30 percent did so because of the appropriateness of technology and 20 percent because their friends were already in the particular zone. A very small minority indicated that it was "the only place they could find to study" which provides evidence that the space is catering for what students are looking for. Just over 50

percent of students surveyed said that they were working on an assignment while in the MLC while 23 percent were just meeting friends. Almost 60 percent of students indicated that they were at the beginning of an assignment rather than in the middle or near the end probably because the survey was conducted at the beginning of semester. Approximately half of the students said they were using a laptop and the other half a desktop computer. Only 7 percent were using gaming technology and only 2 percent document cameras.

Online Survey: This survey was conducted for a period of three weeks after the conclusion of the exit surveys. It covered both the MLC and another new extended learning environment on the Bond Campus known as The Street. Some 284 responses were received of which the undergraduate to postgraduate split was approximately 68 percent to 32 percent. Only 10 percent of respondents said they had not yet made use of the MLC. 30 percent indicated they used the facility once per week; 38 percent 2-4 times; 16 percent 4-6 times and 5 percent 7-10 times with 3 percent using it more than 10 times per week. In terms of the length of time spent in the facility on each visit, 26 percent spent more than 2 hours while 51 percent spent 1-2 hours and 14 percent less than half an hour.

When asked what they primarily did when visiting the MLC, students responded as follows: 76 percent had used it for individual study at times; 54 percent had used it for group study; 44 percent to meet friends; 41% percent just to take a break. In terms of the technology used, 48 percent had used the wireless LAN and the same percentage had used the desktop computers. Interestingly, only 16 percent indicated that they had used the games consoles.

In terms of overall satisfaction with the space, 51 percent of students strongly agreed and 26 percent agreed that the centre met their requirements/expectations, revealing that overall satisfaction was experienced by 77 percent of

students. Two percent felt the facility did not meet their needs at all and 8 percent were indifferent. 83 percent of students stated that they did not require any assistance while in the centre while the remainder did.

When asked what they liked most about the MLC, the majority of students said the computer access, lots of chairs and the comfort and layout for group work. The modern look and feel and "funkiness" also rated highly.

In conclusion, 93 percent of students indicated that they would recommend the MLC to other students and 80 percent said they intended to use the facility again in the future.

Blog and survey comments: Although well publicised and encouraged, very few students left comments on the MLC on the Library's blog, The L Files. This is one of them:

"I am very impressed with the MLC, it is gorgeous and luxurious, a pleasure to study there. Thankyou I hope other students will respect the space - I saw someone eating noodle box noodles in there - nobody needs hoisin sauce on the new keyboards!"

Other significant comments from the online survey:

"As students we are so privileged to have the use of such amazing facilities. Both the Street and the MLC have been designed in the students' best interests and are world class. Paying higher university fees is definitely worth it when we receive facilities like these. Thank you"

"The MLC is so fantastic – I find myself going there just to do work rather than at home because I enjoy the environment"

"The MLC is brilliant – they way it is designed space-wise is really neat. The materials used ..., etc is very nice"

Not everyone agreed, though:

"I think this new space is absolutely unnecessary

and a waste of money"

Comments from a number of students also indicated that the concept of social learning as opposed to old-fashioned studious learning is not understood by all with some believing the facility should be quiet with no "fun" activities or social chatting.

Visit statistics:

In the first three weeks after opening, 20, 691 visits were recorded while the following month, June, this rose to 32,668. When compared to the Main Library's 43,918 and the Law Library's 21,405 the two libraries together only showed a 1 percent decrease in visits over the previous year indicating that students are still visiting both libraries despite the availability of the MLC. More than likely many of those who never frequented the libraries are now using the MLC.

What were the main lessons learned?

In the short time that the Multimedia Learning Centre has been open, a number of key lessons have been learned all of which reflect one or more aspects of the pedagogy-space-technology rubric:

- The entry space was initially not used much. Some of the reasons for this were related to the fact that the digital display monitor was only operational some time after opening and at the time of writing, the touch-screen monitor is still not working. As such, there was not really anything to make the students stop and sit down in the area

- Laptop bar: this area was initially not well-used until signs were placed prominently indicating what it was designed for and that power-points were available below the edge of the bar as these were not clearly visible. Having power outlets underneath is also a problem with regard to cords becoming entangled with stools, etc.

- The idea of a concierge style service kiosk where the staff member would stand at times but rove around and help students most of the time is still taking off with staff being encouraged to "create work for themselves" by weaving in and out of the various zones in the space and checking if students need help and or demonstrating some of the newer technologies such as the Crestron controllers and digital presenters.

- It very soon became apparent that students wanted to plug laptops in at places where no power outlets had been provided, such as in between desktop computers. As a result, students began unplugging equipment in order to use their own.

- Some of the furniture is not being used as intended. However this does not appear to be too much of a problem – students like to sit on the timber bench meant for their feet! Unless the intended design of the seats can be demonstrated to students, they will continue to use furniture as they think fit.

- A "wait and see what happens" approach was taken in relation to the handling of the gaming technology in the centre and this has proven the right approach. The lesson learned is that it is not always necessary to open a new facility with rules and regulations in place – some must be allowed to develop organically. Although there were initially some complaints about too much social gaming as opposed to academic gaming, as mentioned, this has settled down and social gaming now seems to be mainly undertaken in the early part of semester while gaming students engage in academic gaming throughout semester.