Built pedagogy and architectural design in the architecture library of the Melbourne School of Design

Abstract: The Melbourne School of Design (MSD) located at the University of Melbourne’s Parkville campus aspires to be a ‘pedagogical building’, with built-pedagogy a driving aspiration behind its design and construction. This paper reviews one programmatic component of the building, the library, and how notions of built-pedagogy were interpreted by the user-group and the project design and management team in the design of the library as one of the key learning spaces in the building. It investigates the nature of current thinking about tertiary education learning spaces and their design from the perspective of those tasked with delivering the Architecture Building and Planning Library as a response to the understanding of built pedagogy developed by the design team, project managers, and library management. It suggests that the notion of built pedagogy contains multiple interpretations, influenced by current tertiary education shifts towards student-centred pedagogic practice, consideration of campus spaces within their social settings and the facility for buildings to engage as reference exemplars in teaching and learning which is generating opportunities for campus-centred student experience within increasing availability of online and digitally enabled education.

Keywords: Built pedagogy, library design

1. Introduction

In November, 2014 the Melbourne School of Design (MSD) located at the Parkville campus of the University of Melbourne opened its new building to house the Faculty of Architecture, Building and Planning. The building, as articulated in the initial international architectural competition brief, aspired to be a ‘pedagogical building’, with built pedagogy as a driving aspiration behind its design and construction (Faculty of Architecture Building and Planning and University of Melbourne, 2009). The library component of the MSD building provides an interesting study for investigation as programmatically and organisationally it operates independently from the Faculty whilst directly supporting it. Embedded within a purpose-designed faculty building, it offers, therefore, a case study for a point-in-time investigation of the translation of pedagogic strategies into tertiary education facility design from an institutional level, current library design responses to support teaching and learning and in this case, by being embedded within a Faculty building dedicated to built-environment education,
consideration on the role this played in forming its final design. It also offers a format by which one can investigate user and designer reflections on the understanding of built pedagogy and how these may be interpreted in the built form. Implicit in the use of the term by its inclusion in the competition brief is the notion that buildings have the capacity to convey meaning. This idea has been much debated in architectural discourse (Weber, 1984; Eco, 1997) and the framework for this paper lies in the use of the term as applied in tertiary education and libraries in particular.

The Architecture, Building and Planning (ABP) Library housed within the MSD building presents a germane microcosm for investigation into the question of built pedagogy and how this unfolded in the most recent development of a new building in the centre of the University of Melbourne’s Parkville campus. It has been argued that libraries play a part in aligning with institutional goals and outcomes (Matthews and Walton, 2014), with the advent of a “learning landscape”, which places the library in a holistic model of campus-level interaction (Appleton, et al 2011).

Monahan (2002) and Oblinger (2006) speak about the role of built-environment design in communicating institutional educational approaches and the capacity of space to influence how one teaches, defining this as built pedagogy. Academic library learning space attributes have been discussed in related research (Bailin, 2011; Cunningham & Tabur, 2012; Delaney & Bates 2014) with a great deal of literature directed to the pedagogical drivers of change in library design and the impact of socially constructed learning on library space requirements and design (Beard & Dale, 2008; Chan & Spodick, 2014; Gayton, 2008; Matthews & Walton, 2014). Fisher (2005) outlines a rubric for linking pedagogical activities to spatial qualities and types. Little research has been undertaken, however, in how such literature and discussion has been interpreted and utilized by design and project delivery teams in new campus facilities. This paper aims to tease out how the notion of built pedagogy was interpreted by the design team and user group involved in the design of the ABP Library.

2. Methodology
To discover how the design process and aspirations were interpreted and implemented, a qualitative research method was adopted by undertaking a series of interviews with design professionals, project managers and library management. Qualitative methods were particularly useful in this research, as such analysis allowed for a deep level of engagement with the issues being investigated, uncovered the varying perspectives of the participants and allowed for the validation of themes from multiple sources who had roles in shaping how the building project evolved. (Merriam, 2014)

Using a qualitative research methodology of in-depth open-ended interviews, two members of the research team participated in all interviews. Participants were selected due to their involvement either in the brief formulation process, the design development stages or project delivery stages, an equal weighting of interviews were given to represent the end-user group and architects. A total of thirteen interviews were undertaken, representing six members of the architectural briefing and design team and six members who represented the client end-user group, one representative of the project management team was also interviewed. All participants were asked the same series of open-ended questions which covered individual’s perceptions of the key factors that inform library design, precedence study undertaken, the role of library professionals in the architectural design process, formulation and interpretation of the design brief, libraries role in pedagogic practice and the lessons learned for process and library design outcomes. All interviews were recorded and transcribed, with the transcriptions analysed following qualitative methods of analytical induction through a process of coding and thematic analysis that involved the entire research team (Corbin & Strauss, 2008). This permitted
comparative investigation, regarding professional perspectives and interpretations of the language used in the aspirations for the building, as well as the approach taken in the methods adopted in formulating a design response for the project - especially as it related to pedagogy - within the contexts of built environment, project management and librarianship.

3. A pedagogical building and the pedagogical framework

The planning and design of the building and its library coincided with a critical and significant change for the University of Melbourne. The introduction in 2005 of the Growing Esteem strategic plan proposed significant changes in pedagogic strategy in undergraduate course structures, the establishment of graduate schools and a focus on the on-campus experience of students (University of Melbourne, 2005). A ten-year strategic plan, by Dr Kenn Fisher, drafted in 2005 for University of Melbourne libraries, coincided with the changes proposed by Growing Esteem (Fisher 2005b). Fisher identified changing teaching modalities and the demand for flexible library spaces responsive to digital resource access as drivers for change in library service provision. Libraries had an opportunity to be defined in terms of broader educational and social space provisioning rather than information transaction exchange (Fisher, 2005). The further refinement in the University of Melbourne Plan 2008, saw the establishment of an Information Futures Commission with the mandate to examine information management and systems and develop a ten-year strategy to enhance learning and library precincts. It also identified a new building for the Faculty of Architecture, Building and Planning as a major priority in the provision of new facilities (University of Melbourne, 2008). In concord with these strategic directions, was the 2008 commissioning of a new campus master plan drafted by architect Daryl Jackson to guide development of the Parkville campus. This document articulates the learning approach to be taken by the University in terms of the built-environment towards “a student-centred model”, emphasising the “on-campus experience for students” accompanied by consolidated infrastructure support (Jackson, 2008). To advise and shepherd the development of future student spaces throughout the campus Associate Professor Peter Jamieson was appointed as Strategic Advisor on Learning Environments Design in 2009 operating within the Office of the Provost. The architects identified this role as being an important one in providing input across a range of design responses ranging from space planning to the detail of furniture type that was consistent with overall University built-environment design approaches across campus.

Jamieson (2013, p.145) argues that the role of the library has expanded with the adoption of constructivist pedagogies. He posits that universities have so far been largely unsuccessful in providing informal learning spaces, and that libraries have stepped into the breach to be “critical source[s] of space for student learning”. Fisher (2006) argues that campus based students still require physical spaces, where they can become “a community of learners’.

4. Interpreting built pedagogy

The genesis of the building in 2008, therefore, occurred during significant change within the University academic environment, tracking alongside much of the policy development initiatives and roll-out to provide the framework for the new Growing Esteem strategic direction.

The University of Melbourne selected a shortlist for a building design consultancy team for the new MSD building via an international open architectural design competition process, establishing in its competition briefing document six evaluation criteria in its selection of entrants. The first of these
criteria was identified as ‘Built Pedagogy’ describing this in terms of the project being an exemplar in its learning environments, as a work of architecture, urban and landscape design as well as mandating outstanding construction, structural and servicing techniques (FABP, 2009). This articulation of built pedagogy as a model or pattern underplays the broader use of the term in the academic literature and which has informed student-centred pedagogical approaches in contemporary planning and design.

Monahan (2002) views built pedagogy as architectural embodiments of educational philosophies, arguing that the design of space has the capacity to influence behaviour. He goes on to argue that built pedagogies can enable flexibility in the behaviours around the usage of space. Oblinger (2006 p1) defines built pedagogy as “the ability of space to define how one teaches”, whilst Luz (2008, p5) establishes built pedagogy as being “the ability of space to define how one learns, teaches, acts or responds”. Fisher (2006) links pedagogy to a spatial paradigm, arguing that the learning space has to adapt to a “range of pedagogical delivery approaches”.

The MSD building, therefore, aspired to be a ‘pedagogical building’, with built pedagogy a driving aspiration behind its design and construction. What then did this mean to the various participants of the project delivery team who were tasked with implementing the aspirational component of the building and library, and how did the designers interpret this? A number of themes were identified in the research interviews, these have been summarised under those related to institutional legibility, those related to evolving pedagogic practice and the socialisation of academic and campus space, programmatic adjacencies and aspects of design to allow building elements to engage as models or examples in teaching and learning practice.

4.1 Institutional legibility

The Dean, Professor Tom Kvan identified built pedagogy as playing a role across a number of streams of tertiary education (T Kvan: 2014 personal communication). First, amongst these was the interest in campus planning to remove perceived barriers between the University as an institution and the general community. Built environment design was seen as playing a key role in supporting institutional legibility in becoming more open and engaging public institutions by being assessable, permeable and transparent. This extended to internal engagement between University disciplines, given current inter and multidisciplinary approaches to teaching and research, which needed to be reflected in its new building stock. Professor Kvan identified University libraries as early adopters of this shift, with library services becoming increasingly student focussed, and the approach to the provision of services and spaces incorporating a social constructivist pedagogical approach.

In interview, Nader Tehrani, one of the principle architect design directors, expanded this to include the positioning of Universities within the global environment via online education and the influence this potentially has on campus planning and facility design. Making a distinction between online access and physical access to the campus, consideration of the nature of the spatial, environmental and experiential features of the physical campus he argued takes on far greater prominence as the physical facilities provide resource capacity and interactions not possible via online education. He observed, “now that the virtual world has freed us from physical contact the idea of destination becomes even more important. So the physical access to the campus is like a bonus, the physical campus is no longer a mere backdrop for education; it is a destination for education”. (Nader Tehrani: 2014 personal communication). He saw the building and the library playing an important role in terms of institutional legibility. Transparency of the internal functions of the building was seen as the key component, with glazed components to the three public faces of the library offering views into its inner workings and
operating as a metaphor for making knowledge accessible. Institutional legibility also lay in the “transformation of a library from a quiet space of scholarship, only for higher levels of study into a place that reaches out even to the younger age. Part of the success of this building is to find a way in which this transparency, this accessibility, becomes manifest in the public it draws”. (Tehrani: 2014 personal communication).

4.2 Pedagogic practice and socialisation of space

The retention of a library within the MSD building ran counter to the University’s policy of resource consolidation, particularly within library services, as advocated in the ten-year library strategic plan which proposed the establishment of precinct learning hubs servicing multiple faculties. A major argument for the retention of the ABP library, co-located with the Faculty, was presented on pedagogic grounds. It was argued that discipline cohorts use library material differently to those of other disciplines. Professor Kvan argued that library space needed to accommodate the particular manner of study in the simultaneous use of multiple sources. He identified built-environment education as being ‘heavily focussed around teamwork, collaboration and group work’ and that this needed to be reflected in the design of spaces. He saw the library as encapsulating tertiary education’s move “from the predominance of didactic instruction to other forms of engagement and enquiry, libraries have followed lock-step with that” (Tom Kvan: 2014 personal communication).

The architects suggested that a design-based education has always operated with a different form of pedagogic practice generated from the design studio teaching method. Therani argues “that the design field is one of the only pedagogies whose main vocation and classroom context is not top down education – it is a round table which is focused on drawings, and where criticism and debate are an essential part, to flatten the hierarchies between students and professors” (Cassell and Russell, 2015).

This notion of the socialization of space and the role it plays in the situated nature of pedagogical practices, though was not seen by others as particularly unique to a built-environment education. The Deputy University Librarian and Director of Scholarly Information Jenny Ellis identified an increasing demand for shared and collaborative spaces in libraries as reflective of a pedagogic shift where students work collaboratively with increased peer-to-peer learning (Jenny Ellis: 2014 personal communication). This with the greater use of online resources has reduced library lending and increased the requirement for the provision of technology-rich social spaces where collaborative learning can occur. This pedagogic shift is recognized by the designers, with architect Stefan Mee explaining the complex nature of contemporary learning spaces providing for flexibility within an increasingly domestic approach towards interior design:

The student is more the centre of learning rather than the teacher. You start to think about designing spaces differently. It’s about how the students might learn within that space, it’s not necessarily about delivery information within a library or bookshelf - it’s about how they grapple with that and how the architecture might allow that to happen in a different way. The spaces are much more social and interactive, it is providing a lot of choice. We like to provide students with a range of different ways to occupy space. You’ve got students living nearby, in often quite small accommodation, where they are sharing, so the library becomes their lounge room. You’ve got to be aware of that and that makes an opportunity for the library to reinvent itself, reverse of how it used to be with library space. (S. Mee, 2015 personal communication).
Anne Thompson, University Project Manager, observed “it’s all about socialising within the framework of learning and providing spaces for students to do that”. Recognising the need to accommodate the students who make up the ‘community of learners’, Thompson says, “the University is providing spaces so students stay on campus so that they’re actually participating in the University environment. And the spaces that are specifically designed for that need to be flexible” (Anne Thompson: 2014, personal communication).

4.3 Programmatic adjacencies and transparency

The prominent location of the library on the ground floor adjacent to a main entry point of the building, and the role it played as a public expression of pedagogic approach was an important consideration, commented on by the research participants. This centered on the programmatic adjacencies relative to the library and within the library space and the linkages that could be generated to reinforce these adjacencies by architectural devices of transparency and connectivity.

The architects identified the placement of the workshop areas directly opposite the library on either side of the primary internal access route as exemplifying the bifurcation of the teaching and learning approach of built environment education. Meghan Dwyer explained:

We were aware that the (original) existing library on level four was not as well connected to the rest of the building as it could have been. So in all of our earlier thinking, we knew we wanted effectively a kind of ground plane where there was workshop and library and display and exhibitions spaces all together, so that this pedagogical building was one of the key aspects of the brief. (Meaghan Dwyer: 2014, personal communication).

Architect Stefan Mee, confirmed the approach taken in linking scholarship activity through program adjacency and transparency:

That’s the kind of interesting relationship across the internal street, you’ve got scholarship, if you like on one side and you’ve got making on the other. Which creates this interesting relationship between the two and it’s all very transparent, you can see what going on in the library sitting there making a model on the other side. (Stefan Mee: 2015, personal communication).

Mee also identified a new type of library space, influenced by the social-constructivist pedagogical input of Peter Jamieson, which has the capacity to operate as public space, student-use study space and library space. Located at the eastern end of the ground floor level of the library, this collaborative space is glazed on three of its facades with an outlook onto the external public and landscaped areas adjacent to one of the primary entry points to the building. With different floor levels and offering a variety of seating and study arrangements it offers configurable access to operate independently of the library.

This is part of the built pedagogy discussion, the idea of drawing out the activity into external spaces. It is an extension of what the library would otherwise do because the library is typically ring-fenced by the security of not allowing the book outside of its perimeter. (Stefan Mee: 2015, personal communication).

The idea of removing visual barriers between programmatic zones and promoting transparency and connectivity to promote a student-centred approach in service delivery was commented on as applying to the design of library staff workspaces. The open plan staff office is surrounded on three sides by glass, which allows the staff to be visible and connected to users of the library, and vice versa. The
architects explained Professor Kvan’s interest in “exposing faculty activities to the campus community” was consistent with locating staff areas behind clear glazing and within the lower level student study areas. Dwyer explained “I think it’s the transparency to the staff area that probably makes the staff presence more readily felt”, with interior designer Jeff Arnold explaining “we made an attempt to open up the office space and make it fairly transparent and visible for the library spaces” as a demonstration of an “open relationship between staff area and the student areas” (Jeff Arnold: 2014, personal communication).

The notion of programmatic adjacency as against program separation was also seen in the internal relationship between book stacks and study tables. Jenny Ellis points out, “our students do seem to read more print and borrow more than other students”. (Jenny Ellis: 2014, personal communication). As a result, the design of the ABP Library allows connections to collections. There are study tables adjacent to the journal compactus, and spaces for individual study integrated with the shelves. Jeff Arnold, talks about “activating the stacks, which is having more student activity and liveliness within every sort of available space within the library” (Jeff Arnold: 2014, personal communication). Strategies included generating sight lines through book stacks by apertures, seating areas within the stacks and integrating display elements into the stack areas.

4.4 Learning support exemplars

The original competition brief established an implied requirement for the demonstration of built pedagogy throughout the building, and for it to act as a direct teaching tool through the exemplification of architecture, construction and servicing techniques. Professor Kvan saw this as a link to the tradition of architectural education via precedents and references; one of the roles of the building was to support built-environment education by also providing an avenue for reference as a direct teaching tool (Tom Kvan: 2015, personal communication). Participants identified a number of examples as representative of direct teaching tool mechanisms of architecture, construction and servicing techniques. These ranged from such items as direct visual access to service areas from the library to mechanical service rooms, to the modelling of urban design concepts such as ‘active frontages’ in the relationship of the library entry and glazing to the internal circulation spine of the building.

The design item that was seen by the majority of participants as encapsulating the buildings ‘built-pedagogy’ approach is the ceiling of the lower library level, which has come to be known as ‘the wishbone ceiling’. As one of the main architectural features in the library, exposed reinforced concrete wishbone-shaped beams support a concrete lawn over the lower library level. The architects identified this feature as not only defining the space architecturally but also as a visible lesson in design precedent, structural ingenuity and construction technology. They inform design teaching in referencing the work of the Italian engineer and architect Pier Luigi Nervi; offer a demonstration of high-level concrete design and construction; as well as provide a talking point for construction supply chain engagement in the production of concrete formwork and achieving Class A finishes in concrete construction.

Professor Kvan identified a window located within the main collection area that provides a view into a plant room normally concealed as the capacity of the building to act as reference material:

That’s a clear statement to the students as are the wishbone beams that run across. These are statements to the students saying - use your eyes, this is physical material, it’s a one-to-one model, pay attention to it! And, the library professionals here can do that which
other libraries don’t offer. The transition from paper based to physical material. (Tom Kvan: 2014, personal communication).

He also explained that such items as the wishbone beams, which have cost attached to them, come under scrutiny during reviews in meeting project budget targets. An approach adopted on the recommendation of the quantity surveyor early in the project development was to quarantine a sum of money which could be awarded back to the project when it was identified that an item enhanced the research or pedagogical value of the building. The library ceiling structure was one such item that the project team felt enhanced pedagogic value and was the beneficiary of this early cost planning exercise.

4. Discussion

Library refurbishment works allow the expression and testing of service delivery modelling and pedagogic approaches, to be articulated in built form in shorter time frames than that of teaching and learning spaces which often may require greater stakeholder buy in. Libraries, therefore, are useful sites of investigation into the research and teaching and learning approaches of tertiary institutions, as expressed through architecture and interior design. New library building works allow the collective experience borne through smaller refurbishment projects and through current approaches in library design to be brought together as a point in time record. The genesis of the MSD building and its library occurred at a time of major changes in University structures, and permitted the building design development process to tease out the various inputs into a coherent building design response. It is valuable therefore to review the summative outcomes of these discussions through the lens of the project development team who rarely collectively have the opportunity to offer reflections on the process. The knowledge transfer mechanism and experience recording often gets dissipated, with the fragmentation of the project team. Case study based research such as this may offer a further input mechanism to inform brief formulation and guide campus development contributing to the debate on built pedagogy - as it is interpreted by architects, project managers and library managers.

Despite the term ‘built pedagogy’ not being defined by the briefing documents, all the interviewees expressed a consistent understanding of the prevailing student-centred, social constructivist pedagogical approach increasingly being adopted in campus-based library building works. Applying Fisher’s (2005) principles on linking pedagogy and space, the ABP Library was seen by the project delivery team as a working demonstration of pedagogical activity. The prominent location, its programmatic adjacencies and transparency connect the library with the activities of the Faculty and engage the wider community with its academic activity.

The close relationship of the collections and the desire for the library to be closely co-located within the faculty highlights the role that libraries play in supporting teaching, learning and research pedagogic practices. The retention of an architecture library and its incorporation within a new purpose-built faculty building, against the prevailing trend of library service consolidation, mediates the trend towards multi-disciplinary library hubs whilst maintaining historical linkages of embedded faculty libraries. Additionally, there is the explicit use of the ABP Library as a learning object itself. This was identified clearly by the Dean, Tom Kvan and by the architects, Tehrani, Wardle and Mee, exemplified not only by the concrete wishbone beams, but also in such devices as windows from library spaces into service areas and lecture theatres connecting the library to the other operations of the building.
5. Conclusion

Academic libraries play a part in supporting the research, teaching and learning activities of their institutions. University policy documents will provide the framework and an outline for strategic direction of the institution, with the implementation of these often left to the operational departments, faculties and consultant teams. The provision of new, and refurbishment of existing campus buildings provide an opportunity for the institution to articulate the expression of what it means to design a learning space in the 21st century. The communication and interpretation of briefing documents that guide the design of these facilities, however, invariably fall on individuals, project reference groups and the consultant teams who workshop and convert policy, institutional approach and spatial requirements into built form. It is, therefore, important to reflect on the issues that such parties identify as being important in this conversion process. This paper has sought to investigate, in this particular case study project, what key issues were identified in guiding the translation of educational pedagogy and student support into built form. It suggests that designers and project implementation parties have a key role in interpreting institutional strategic policy and in formulating and workshopping not only design responses for facility planning but also aspirational intent.

The MSD building has been operating for less than a year; however, anecdotal evidence indicates that library patronage has increased dramatically over all spectrums of client engagement. It suggests that the new building has met one of its pedagogic intents in generating student engagement. It is appropriate to now investigate how the pedagogic underpinnings of the library, as identified by the project delivery team, have met their designed intent and whether the issues seen as responding to the built pedagogy mandate of the brief align with library services requirements and client use through a post-occupancy study.

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