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# Transforming Design Studio Learning and Teaching through Real World, Interdisciplinary Projects

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## ABSTRACT

Interdisciplinary design courses featuring community-based projects create opportunities for students to understand pressing social issues and gain a sense of the concepts of civic responsibility and ethical practice relevant to their disciplines. They also apply specialized knowledge in the context of working with a real client, on a real site, to develop a built environment response. Through a variety of tasks, students must also demonstrate and integrate their capabilities in independent, scholarly enquiry and reflection while moving between individual and group work.

Students from four undergraduate programs in UNSW's Faculty of the Built Environment – Architecture, Interior Architecture, Landscape Architecture and Planning and Urban Development – planned and designed a unique community facility for people with schizophrenia. This Faculty elective was conducted within an action research framework with all key participants contributing to critical reflective moments. The qualitative feedback revealed a significant potential for interdisciplinary design studios to provide integrative and personally transformative learning experiences for students and community members. The products of the studio elective demonstrate the possibilities for institutions of higher education to productively interact with local communities and creatively address serious social issues and, indeed, transform individual lives within multiple contexts.

## INTRODUCTION

Professional degree programs, such as those offered in UNSW's Faculty of the Built Environment, prepare students to become practicing architects, interior and landscape architects, planners and construction managers. At some point in their undergraduate programs, most students in FBE will undertake a period of work experience, or practicum, as a requirement for graduation. These placements give students the opportunity to experience the professional reality of their chosen fields, and introduce them to the prospect of how their future endeavours might contribute to the social good. However, most work placements occur within established commercial, single-discipline practices, local or state government offices, and students are rarely exposed to *pro bono* project work that would assist them in developing empathy for the needs of disadvantaged or marginalised groups in our society.

FBE has traditionally had strong links with professional practice, industry and business and they have also maintained strong relationships with various communities within the Sydney metropolitan region and throughout the state of New South Wales.

In response to students' desires for exposure to community-based projects, a new organisational unit was created that sits outside the formal FBE program boundaries. FBEOutThere! (FBEOT) consolidates the Faculty's involvement with community engagement activities. Founded on a commitment to the principles of service learning and the scholarship of engagement, FBEOT is proving to be an expedient means of offering service learning elective courses in a cross-disciplinary or interdisciplinary mode. Electives offered through FBEOT create learning opportunities for undergraduate students in their later years of study to gain a deep understanding of social issues related to a specific locale within the context of expanding their understanding of social responsibility and ethical practice relevant to their discipline.

## I. BOYER'S SCHOLARSHIPS OF APPLICATION AND INTEGRATION

The work of Ernest Boyer for the Carnegie Foundation in the 1990s has been instrumental in encouraging institutions of higher education to reconceptualise definitions of research. In his explication of new definitions of research for a diversity of higher education endeavours, Boyer identified four unique "scholarships", two of which – application and integration – are fundamental to the *raison d'être* of FBEOT and are reflected in the principles on which FBEOT electives are developed. "Application" is now widely translated into ideas around "service learning" and "Integration" takes us into the possibilities inherent in interdisciplinary studies. (Boyer 1990)

The pedagogy of service learning has grown in prominence in U.S. colleges and universities over the past 10-15 years, and is increasingly considered to be an educational approach that can re-position universities as vital, active leaders in advancing the integration of knowledge, scholarship and community citizenship for public benefit and project research universities as 'forums for critical community dialogues' (Subotzky 1999:423).

The scholarship of application concerns the academic activities of engagement, practice and service to society. In this domain Boyer proposed that expertise, disciplinary knowledge and professional practice could be applied with rigour and accountability to social problems of importance to communities. He was interested in how 'new intellectual understandings can arise out of the very act of application [where] theory and practice vitally interact and each renews the other' (Boyer 1990:21).

Service learning has been broadly conceptualised at a number of American universities which have formalised service learning activities and resources into the mainstream of learning experiences. The Carnegie Foundation for the Advancement of Teaching endorses this direction with their "community engagement elective classification", through which institutions of higher education can publicly project an identity and commitment to these endeavours. The Campus Compact, a national organisation in the U.S. supports higher education institutions that incorporate service learning into their curricula, and our local equivalent is the Australian University Community Engagement Alliance, AUCEA.

From this international sharing of experiences, definitions of service learning have emerged that provide a framework for program and course development that feature service learning as a bridge between community engagement and deep student learning. For example, Bringle and Hatcher describe service learning as:

...a credit-bearing educational experience in which students participate in an organised service activity that meets identified community needs and reflects on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility (Bringle and Hatcher 1996:222).

Central to the concept of service learning are the following four key components:

1. the community identifies and defines the need, issue or agenda they wish to have addressed
2. community members are active participants and effectively partners in the activities with students and academic staff
3. service learning is intentionally integrated into the academic curriculum of the students' degree programs as a structured learning activity so the rigour and relevance of disciplinary knowledge is understood through its application for social benefit
4. students are co-learners with their teachers in 'discovery-based learning experiences' (Subotzky 1999:423) engendering a link between research, learning and teaching (Quinlan *et al* 2004:14-15).

## II. INTERDISCIPLINARY LEARNING

In FBEOT's experience, service learning can also be an effective vehicle for interdisciplinary learning situations. Because it sits outside the formal program structure, FBEOT electives can circumvent some of the administrative barriers that otherwise hinder interdisciplinary courses. These

electives typically integrate students from several FBE programs, generating an active, purposeful learning setting where the inquiry is directed to authentic outcomes, as has been documented by many others (Sill 1996, Barnett 2000, Lattuca 2002, Frost and Jean 2003).

In this domain, the community – academics, students and external groups – accept the challenge of risk, creativity and encountering the unknown in constituting new knowledge and shared understanding for social action by moving beyond disciplinary boundaries to interact with other disciplines and their practices in context (Quinlan *et al*, p. 5).

It is instructive to distinguish between the various prefixes used with the word "disciplinary" to describe the interactions of two or more disciplines in a common endeavour, as these words tend to be used interchangeably. Various writers have offered definitions (Newell 1994, Klein 2005, Haynes 2002), but those put forward by L. Richard Meeth in 1978 are most often cited as they are concise and precise.

**Cross disciplinary** – viewing or observing one discipline from the perspective of another...(Cross disciplinary courses) allow faculty (and students) to remain in their own disciplines while adopting only what is applicable from another.

**Multidisciplinary** – involves several disciplines focused on one problem or issue—the juxtaposing of disciplines, each of which offers a different perspective on a common question or theme... Each discipline contributes its own knowledge or approach to the theme with no attempt to integrate or interrelate ideas.

**(I)nterdisciplinary** – integrates the contributions of several disciplines to a problem, issue, or theme...(I)ntegration means bringing interdependent parts of knowledge into harmonious relationship...part to part, part to whole, and whole to part (Meeth 1978, emphasis added).

Elaborating on the last definition, Lattuca adds that a distinctive aspect of true interdisciplinary learning happens when everyone works 'on a common problem with continuous intercommunication among the participants from the different disciplines' (Lattuca 2002:712)

## III. BUILT ENVIRONMENT EDUCATION AT UNSW

UNSW's Faculty of the Built Environment (FBE) was substantially restructured almost 10 years ago, responding to federal government instructions to universities to rationalise their organisational and institutional structures. FBE's restructure sought to realign the programs to encourage learning and teaching interaction between the disciplines. Initially, this focused on elective courses and opened up core courses for enrolment by students from any of the faculty's six undergraduate programs: architecture, interior

architecture, landscape architecture, industrial design, planning and urban development and building construction management and property. Additionally, a number of academics within FBE have taken the opportunity to collaborate in their research and scholarly activities as a means to further 'share disciplinary knowledge and energise approaches to knowledge generation' (Quinlan *et.al.* 2004:9).

In its promotional materials and on the faculty's website, FBE presents itself as a "multi-disciplinary" faculty, that is, it has a number of disciplines that sit side-by-side within the one faculty. The Dean's message on the faculty website introduces this position:

We understand and applaud the idea that the design, production and management of high quality built environments, on a global scale, requires a multi-disciplinary approach in which the city is seen as a complex physical, social, political and economic system (Prof. Peter Murphy, Dean, [www.fbe.unsw.edu.au](http://www.fbe.unsw.edu.au)).

In addition to this public declaration, FBE's programs espouse "graduate attributes" for their students, some of which are directly relevant to the perceived benefits of interdisciplinary learning and teaching. These statements recognise that while students are required to demonstrate the specialized skills and knowledge associated with their chosen field of study, they also require integrative skills relevant to accessing information and understanding other disciplines. However, the challenges of being able to realise the goal of offering truly interdisciplinary learning opportunities remain, and so the establishment of FBEOT responds to Boyer's call to:

...facilitate opportunities for cross- and interdisciplinary educational ventures... removing the barriers inherent in the traditional organisation of their faculties, schools and departments, with their rigid timetables, space allocation regimes and individually vested interests (Boyer 1998).

#### IV. THE WOLLONGONG CLUBHOUSE PROJECT

The Wollongong Clubhouse, initiated by the City of Wollongong, will be associated with a global network of programs and facilities that create opportunities for people living with mental illness to become contributing and productive citizens. The Clubhouse program presents a *unique* model of integrating people with mental illness into the community, and Wollongong sought a *unique* means of achieving one of the few purpose-built Clubhouse facilities in the world by inviting FBE's undergraduate students to focus on planning and designing this community facility.

As with any community-based project, numerous stakeholders are involved in the project's inception and implementation. The Wollongong Clubhouse project emanated from the "Light & Hope Lord Mayor's Mental Health Projects" and is supported by a committee focused on fundraising and receiving in-kind contributions from local industries to support its construction and management. A

Committee member (whose daughter was a recent Planning graduate) approached the Faculty with the idea of having students design the new facility, and the project evolved from there. The stakeholders include:

- Council – Lord Mayor, Planning and Development officers,
- The Wollongong Light and Hope Committee, including representatives from the Schizophrenia Fellowship of NSW, the International Centre for Clubhouse Development and local, committee citizens
- Project "champion"
- Future carers and consumers
- FBE students and academics.

#### A. Development and delivery of the course

The course content and program was developed collaboratively by academics from Landscape Architecture, Planning and Architecture. The course was convened and led by Karin Watson, a sessional staff member and practicing architect. The class met once a week for four hours over a 14-week session and was conducted in a studio format. Eighteen undergraduate students represented four programs.

The first three weeks were spent learning about the issues of mental illness – schizophrenia, in particular – and the challenges of delivering community-based services in under-resourced circumstances. Induction included a site visit, half-day workshop at Council with stakeholders, and visiting Pioneer House in Sydney, another Clubhouse. These activities provided direct means of understanding the program requirements for the Wollongong facility. During these initial weeks, all the students were expected to gain an understanding of the issues related to mental health, Clubhouse programming and community services. From this introduction, they worked through the standard requirements for these facilities and analyse the constraints and opportunities. These findings were weighed against the project "wish list", as described by the carers and consumers.

The students worked in three groups of mixed disciplines, each group developing a separate design proposal for the building and site development. The studio environment engendered informal discussions with each other, and with visiting experts in the design and management of mental health care facilities. Halfway through the session, the three concepts were presented to the client group at another workshop in Wollongong. After receiving feedback on the three schemes from the consumers and carers, the preferred concepts were consolidated into one proposal. For the final half of the session, the entire group of 18 students all worked together to further develop the building design – exterior and interior – and site development concepts, along with the supporting documentation required for submitting the Development Application, eg. traffic report, Statement of Environmental Effects. At the end of session, the students presented their final scheme in Wollongong to the Lord Mayor, representatives from the Light and Hope Committee, and the carers and consumers.

## B. Evaluation/Key Benefits/Innovations

The stakeholders' experiences in this process of working on this project, ie Council representatives, Committee members, carers and consumers, students, was elicited through an email feedback survey of 8-10 open ended questions. Of particular interest to this paper are the responses from students to the following two questions:

- *Do you feel you improved your communication skills in this course? If yes, how?*
- *How did working in an interdisciplinary studio environment compare to the way you work in a design studio in your discipline?*

The students were unreservedly positive and expressive in their responses to the first question, substantiating that one of the key learning outcomes for this studio elective had been the challenge to them to communicate effectively with each other and with the various stakeholders linked to the project. Two typical responses are shown below:

(T)he course demanded a lot of discussion about ideas between students from different backgrounds (arch, interior arch, landscape, planning). Even though these are under the same faculty, there are different professional languages between them. I felt I improved a lot with communicating with our planner in the class; the information and advice provided by her helped during all parts of the design process. *(student)*

I had to be able to communicate well with the students in my group. We were all from different disciplines and had different ways of thinking, so it was sometimes hard to communicate, but we had to in order to work in a team and consider each other's opinions and ideas. *(student)*

The studio leader confirmed this learning outcome in her reflective comment on the students' demonstrated capabilities in relation to many levels of communication:

(The Project) taught, and re-iterated, the value of true communication. It enabled design students to interpret and write a brief in the real sense – taught them how to *extrapolate* information. They had to *listen* to what was being said (from a large variety of sources, sometimes conflicting), and then acquire new skills to *re-interpret* this information into their design-studio format. They also needed to *identify which issues* had priority or precedence over others, and *substantiate* why. The students were then required to present their design schemes back to the stakeholders, in a *non-academic environment and language*, and demonstrate that they had both *listened* and *understood* the stakeholders *(Studio leader)*.

In response to the question about the differences between working in an interdisciplinary studio environment and a design studio in their usual discipline, the students made these comments:

The teamwork also allowed for ... critical analysis of ideas, and working collaboratively for the best final outcome, compared to a more introspective analysis in a studio *(student)*.

I found students to be more helpful towards each other ... everyone was working for the same goal, rather than for individual results *(student)*.

There is a lot more expertise as a combined class ... In BArch studios, the only sources of expertise/opinion are the tutor and other Arch students. Sometimes key issues and important questions go unanswered *(student)*.

I really like working in an interdisciplinary studio. People from other disciplines make you think of things that you didn't think of or didn't know *(student)*.

Working in an interdisciplinary studio offers a more holistic approach to the project, where the disciplines get to understand each others roles better and experience how their contribution is integrated with the other aspects of the project *(student)*.

And finally, from the project champion, a comment that speaks of the effectiveness of positive student/community collaborations:

Sometimes a project team comes along that has a profound effect. Such was FBE and all its components... The project outcomes were well exceeded, best summed up by a fellow Committee colleague: "working with UNSW, FBE and the students has proved a stroke of genius".

## V. CONCLUSIONS AND CONSIDERATIONS

This project demonstrates the potential for universities and communities to work together in effective partnerships through a creative process. The process allowed many individuals to contribute their ideas to the design of a facility that will make a serious difference in the lives of thousands of people. Through their comments, students indicate this has been a transforming learning experience, drawing on their prior experiences and specific disciplinary knowledge new context that required interaction and a heightened emphasis on effective communication. A key educational outcome is confirmation that a course structure such as this one can provide an effective interdisciplinary, service learning which can lead to an expansion of genuine integrative learning experiences in future projects. In analysing its success, we are now in an excellent position to use this as a prototype for building similar electives in the future.

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