Final Report

**Project Name**  
BUILDING THE COMMUNITY (STAGE 2): DEVELOPING A STUDIO-BASED, MULTI-DISCIPLINARY TEACHING MODEL FOR DESIGN AND PROPERTY STUDENTS BETWEEN RMIT MELBOURNE AND RMIT VIETNAM

**Project Leader**  
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**Project Description**

The aim of the ‘Building the Community’ stage-2 project was to develop an innovative multidisciplinary teaching model through a live project in regional Vietnam. This proposal was organised by Dr Esther Charlesworth at RMIT Melbourne, in consultation with Don Gordon (Head of Multimedia Systems at RMIT Vietnam) and Prof. Ron Wakefield (RMIT School of Property, Construction and Project Management), to establish an ongoing elective project between the RMIT Melbourne and RMIT Vietnam campuses.

For two weeks in July 2008 a cross-disciplinary group of students from RMIT Melbourne travelled to Vietnam. Within this group there were students from Architecture, Property, Construction Management, Landscape Architecture and Industrial Design. During the first week the students stayed in Hoi An, and worked in two groups which each built on design proposals which had already been developed in Melbourne based on research gleaned from the previous year’s ‘Building the Community’ stage-1 project. The designs were developed rapidly in consultation with the future users of the building.

The aim of the project was to design a building that would provide dormitory style accommodation for 8-12 youth at risk (aged between 12 and 22 years old) who are currently being given educational and vocational training opportunities by the Lifestart Foundation in Hoi An. Young people entering the Lifestart program are given accommodation for 12 months while they undertake their training.

In the second week the students travelled to Ho Chi Minh City to participate in an intensive two day ‘Communicating Your Design’ workshop with students from RMIT Vietnam campus, at the end of which the two groups had to ‘pitch’ their design to a group of relevant NGOs and marketing firms.

The aim of the ‘Building the Community’ stage-2 project was to deliver real world teaching and community service outcomes for RMIT design and construction students and staff.
In summary, stage 2 of the ‘Building The Community’ project in Vietnam developed a platform for teaching which addressed the possibility and increasing necessity for design education to cross disciplinary boundaries and deal with larger issues of urban sustainability, climate change and globalisation.

**LTIF Project Activities April to February 2009**

April - June 2008

3 lectures/workshops were organised at RMIT prior to going to Vietnam.

April 19, 2008
Workshop 1: The students were briefed on the project, familiarized with the previous work that had been completed by the students in ‘Building the Community’ stage-1, and given a background on the skills needed in community engagement in Vietnam. Several students who participated in BTC Stage 1 spoke about the project and their experiences. The students were divided into two groups, to begin working on designs.

June 2, 2008
Workshop 2: Students developed design proposals through a design charrette.

June 23, 2008
Workshop 3: Final Design Review and meeting

July 1 - Flew to Hoi An, Vietnam

July 2 - 8 - “Building the Community” field trip to Hoi An

July 9 - Flew to Ho Chi Minh City

July 10 - 11 - Communication of Design Workshop RMIT Vietnam

July 14 - Return to Melbourne

August - September 2008 - Revision of design for scoping document and preparation for exhibition at RMIT Melbourne Campus.

10 November - ‘Building the Community’ Exhibition, RMIT Gallery Space, RMIT Building 8, Level 11, 368 Swanston St, Melbourne

February 2009 - Finalisation of LTIF Report
PROJECT BACKGROUND

Project Rationale

a. Building on work already undertaken by RMIT students in 2007

‘Building the Community’ stage-2 builds, as the name suggests, on a 2007 project led by Dr Charlesworth titled ‘Building the Community’ stage-1, which enabled teams of RMIT (Melb) design and constructions students to work collaboratively on an ‘on the ground’ community development housing project with the Hoi An community. The 2007 project resulted in 5 team developed designs and ‘press kits’, developed with multimedia students at RMIT Vietnam. Stage 1 of the 2007 project identified that:

1. The 5 design concepts developed by design and construction students provided the basis of one scheme that could be further developed through a stage-2 elective project in 2008 and with additional support from an RMIT property and construction lecturer to produce a ‘buildable’ and sustainable solution for the transitional housing project in Vietnam.

2. Collaboration between RMIT Melbourne and RMIT Vietnam students provided a highly dynamic cultural learning experience for both groups which fully embraced the ‘global passport aspiration of RMIT teaching and learning programs.

3. That the RMIT design and construction students had very good graphic skills but poor ‘pitching’ skills in verbally communicating their proposals to a non-design audience. Stage-2 of this project aimed to build on this experience through a targeted workshop at RMIT Vietnam on Marketing and Communication tools for designers wishing to work on international development projects. This workshop was held at RMIT Vietnam in the second part of the elective in collaboration with

b. Student Demand for real-world learning projects

Apart from this project there are no elective or studio courses available in any university in Australia that bring together design (architecture, landscape architecture, interior design and industrial design) and property construction students through international studio-based programs. However, there is a huge demand from local and international design students wishing to get involved in volunteer projects abroad where they can actually see the results of their efforts and can genuinely contribute to helping communities in need. These two aspects of this project - the bringing together of design and construction students in studio based programs, and their involvement in a real world learning project proved to be very successful elements of this elective.

Design Background

The brief for this project came about as a response to a need for improved housing for youth at risk in Hoi An. The
Lifestart Foundation invited RMIT University and Architects Without Frontiers to Vietnam to prepare design proposals for a transitional housing unit based on participatory, multidisciplinary and community based approaches. Two workshops with students from RMIT’s School of Architecture and Design and the School of Property and Construction were run on-site in Hoi An in 2007 and 2008 as a design generative process. In 2007, a team of 20 multi-disciplinary design students developed five concepts in consultation with the clients, local professionals and the general community. In 2008, nine students returned to Vietnam to refine the project, building on the experience of the previous year and developing two design outcomes. The multi-disciplinary workshops included students from architecture, landscape architecture, industrial design, interior design, property and construction management in their final or penultimate year. The workshops were led by Dr Esther Charlesworth, Research Fellow in Sustainability, Architecture and Urban Design at RMIT. Student participation is based on the great personal, professional and educational benefits of working with a range of design and construction disciplines to develop a sustainable design solution for transitional housing. It is also an opportunity for students to broaden their skills in the areas of community development and rebuilding through the application of problem-solving skills ‘on the ground’ in the Hoi An area.

Building the Community encourages a participatory approach to design based on the real needs and aspirations of the young adults who will be using the project, rather than a predetermined or ‘imported’ design outcome. Moreover, extensive site investigation has contributed to final design solutions that are based on solid research on user needs, site constraints and construction possibilities in Hoi An. The project’s buildability is key to any successful design solution and also the huge issue of any design proposal being able to deal with the flood and typhoon condition of the Hoi An environment. Students designs for transitional housing will be used to develop architectural blueprints. These will in turn be used by Lifestart and Architects Without Frontiers to construct a building in 2009, following the purchase of land.

PROJECT BRIEF

The aim of the project is to design a building that will provide dormitory style accommodation for 8-12 youth at risk (aged between 12 and 22 years old) who are currently being given educational and vocational training opportunities by the Lifestart Foundation in Hoi An. Young people entering the Lifestart program are given accommodation for 12 months while they undertake their training. As many of Lifestart students come from difficult backgrounds, or live far from their families, a building is preferred so that they may live in community and share kitchens, living and open spaces. The house should offer flexibility of space, as the occupants will be transitional. The house should also provide classroom spaces that could be used by both the inhabitants and the wider community.

VIETNAM

Part One: Hoi An

The students participating in ‘Building the Community’ Stage-2 had to draw on the design research and experience generated by the previous group to develop two design proposals prior to going to Vietnam. These designs were developed over three workshops held at RMIT Melbourne, after which the two groups of students had to present the design proposals they were taking with them to Vietnam. Once in Vietnam the students spent seven days in Hoi An doing fieldwork and consultation with future users of the project - the children who the accomodation is designed to house - during which there was much design review. This consultation also included meetings with local not-for-profit organisations, architects and developers which allowed the students to learn as much as possible about the real building conditions in the local area for a whole range of projects.
At the end of this week in Hoi An the students presented their final design proposals to the class group, and also to the clients and some of the local organisations with whom they had consulted during the week. The following two designs are the result of this week of consultation.
The multi-disciplinary environment in which we worked in Vietnam was vital for my professional development. I now further understand how and why professionals from other fields operate the way they do.

Adam McFarlane, Construction Management student, RMIT

The Living House is about creating a structure that provides stability for young people in the Lifestart educational program. It is a benchmark eco-design that will serve as a precedent on ways to integrate sustainable building and ‘zero waste’ buildings into a developing context.

**Integrating Spaces and Systems:** The physical structure is a three storey house with a roof top terrace, surrounded by a narrow garden area for growing vegetables and plants. The aim of the design is to seamlessly integrate indoor and outdoor space. This is achieved through balcony and decking areas that provides an outdoor area to be used for laundry, planting and socialising, a central open core, a green wall and outdoor spaces.

Beyond the indoor-outdoor space connection, the strength of the design rests on the conceptual framework for a set of ‘living’ systems that define the program for the house. The merit of a systems based approach to design is that the conceptual framework can still be applied, even if the physical form of the house changes due to site constraints.

The systems include: • Flexibility of space • Water filtration systems • Composting systems • Organic systems (including garden areas and a green wall) • Thermal management systems that use prevailing winds and natural light for natural climate control and minimal energy use.

01 The Living House encompasses sustainable building technology and a ‘zero waste’ principle. 02 Typical streetscape in Hoi An, most ideal for the Living House. 03 Community consultation was used to inform the design outcome.
2008 | #1. THE LIVING HOUSE — OPPORTUNITIES FOR LIVING cont’d

The Living House gives the inhabitants the opportunity to grow through social, educational, environmental and economic opportunities:

- Socially, by providing flexibility and multifunctional living areas allowing spaces for initiating communication;
- Educationally, the housing program is inclusive of communal areas for teaching and learning requirements, as well as gardens to grow food, kitchens and workshop spaces;
- Environmentally, through a zero waste design methodology; and
- Economically, the eco-facilities will reduce overall running costs as well as create economic opportunities such as selling organic food produce. The outputs from composting systems for example may also be sold as fertilizers.

Construction Principles and Materials: In the construction phase we intend to use local labor, building methods and materials to build the house thus supporting the local community and ensuring the capacity to maintain the house through local systems. The design involves two main principles of construction, derived from the vernacular architecture and conditions. These are multi-level concrete structure and masonry infill walls with opening for natural ventilation.

01 The building is well adapted to Hoi An’s climate, using prevailing winds for natural cooling. 02 Composting systems for household waste and rainwater treatment systems are integral to this design outcome.
2008 | #2. THE MO HOUSE — OPEN UP OPPORTUNITIES

‘Mo’ is the Vietnamese word for ‘open spaces’ and has been adopted as a key principle for this design. By implementing the underlying theme of ‘Mo’ into the design, we were able to address the climatic imperatives of Hoi An’s tropical condition. The physical orientation of the building is unfurled around the ‘breeze axis’ of the prevailing wind. The openness of this system also welcomes indirect light into the spaces without the inadvertent heating of direct sunlight.

Consultation with members of Lifestart’s youth program and Disabled Women’s Group about the rhythms of daily life in Hoi An, living conditions and community interaction which informed the program for the Mo House’s spaces. From these discussions, two design themes were identified: a need for flexibility and social interaction.

01 inspired by the opening/closing function of local lanterns, the “Mo” house seeks to create flexibility of space.
02 The building is unfurled around a “breeze axis” of the prevailing wind.
Dao’s daily routine

- Pray in the morning
- Heads to the market
- Does laundry
- Cooks a meal
- Goes to work on the farm
- Has lunch at home
- Relax/watch TV/reading
- Does some study
- Heads back to work
- Arrives home late in the afternoon
- Reads/relaxes
- Sleeps
- Cooks dinner
- Shower
- Reads/relaxes

Typical daily routines such as these were used to inform the program for the space.

Flexible Spaces: The house has the ability to open and close, dictating the type of activity the kids wish to use in specific areas. For example, the dining room transforms into a classroom to keep the space constantly activated. There is also a circulation veranda that wraps around the front of the building, with small balconies on the rear side. This acts as shading as well as a small break out private space, or alternatively allows the rooms to open up to become larger spaces.
Social Spaces: It is important not to forget that this is not just somewhere to sleep and study, but a place for social interaction, an important part of the educational process and the kid's development.

We have addressed the need to open up social barriers by providing communal spaces; and a 'privacy axis' system so kids can control the level of privacy and social interaction they require. Level one and two are divided into female and male floors, both repeating the same floor plan, minimising cost, but allowing a separation to help the kids gain confidence in a more supportive context. This home provides a social network that helps to open the kids up to a comfortable social support network they otherwise would not have.

Construction Principles and Materials: The design embraces traditional and local building techniques which as well as minimising cost, helps instill a sense of familiarity and ease within the kids. Key materials identified for use in the:

- Footing system: Slab on ground, piers as required;
- External walls: Double skin masonry with render;
- Internal walls: Single skin masonry;
- Roofing: Tile;
- Structural: Concrete block work with steel reinforcement where required;
- Window/doors: Timber/ louvres.
PROJECT BUDGET

The following cost estimate is based on the average cost of building either of the two design concepts from the 2008 workshop.

Site and Land Acquisition
Current land acquisition costs in the proposed non-flood prone area of Hoi An are $US 665 / sqm. For the purposes of the Building the Community project a typical 300 sqm site was selected.

Land Acquisition Estimate: $US 200,000.00

Cost Estimate
A current schedule of rates was not available for the Hoi An area at the time of estimation as construction commencement date is unknown, and inflation and CPI indexes are currently in the vicinity of 28% per annum therefore cost forecasting would prove volatile. In this context, cost estimates have been prepared on square metre rates for Gross Floor Area (GFA).

A basic square metre rate has been determined based on average costs for a vernacular 2-4 storey house, modified to allow for structure, applied finishes, doors / windows, services (electrical, plumbing, fire, fire detection and data), civil works and preliminaries. This equates to approximately US 350.00 / sqm of Gross Floor Area (GFA). This figure allows for all materials and labour to complete the project. The total floor area is estimated to be approximately 300 sqm over three floors. Additional costs would be required for a site supervisor, consultants and a local architect.

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\(^1\) As at Jul'08, subject to market changes. All costs are indicative only and subject to change. The rate of inflation in Hoi An is just under 30% pa.
STUDENT PARTICIPANTS

We would like to thank the multidisciplinary team of students from Architecture, Interior Design, Landscape Architecture, Property Construction and Industrial Design who volunteered for the Building the Community Workshop.

2007 Student Participants

Andrew Jia Chau  Jessica Noakes
Mimi Westhorpe  Simone Bliss
Nick McCarthy  Joanne Morris
Debra Kunda  Stacey Robinson
Oliver Hutchison  Jock Gilbert
Blanche De Guzman  Tao Oudomvilay
Elif Faziloglu  Ti Hoang
Phillipa Abbott  Michael Hubbard
Helen Duong  Maheshinee Suraweera
Robin Read  Temmety Jacob

2007–2008: Building the Community Project Team

Dr Esther Charlesworth, Project Leader  2007–2008
Mel Dodd, Studio Project Leader, Hoi An  2008
Prof John Fien, Studio Project Leader, RIUV  2008
Lucinda Hartley, Project Coordinator, Vietnam  2008
Beck Adams, Project Coordinator, Melbourne  2008
Don Gordon, Project Coordinator, RIUV  2007–2008
Richard Streitmatter-Tran, Project Lecturer, RIUV  2008

... with thanks to Prof Michael Mann, RIUV

Prof Andrew Scown, RIUV
Prof Jim Barber, RMIT
Prof Richard Blythe, RMIT
Prof Paul James, RMIT
Deb Kunda, Exhibition Coordinator
Jenine Davidson, Graphic Designer
VIETNAM (part 2)

Ho Chi Minh City - RMIT Vietnam Workshop

On July 10 - 11 the RMIT Melbourne students attended a Communicating with Clients workshop at RMIT Vietnam.

PROJECT OUTCOMES

The projected project outcomes for ‘Building the Community’ Stage-2 were:

1. Ongoing partnership developed between RMIT Melbourne and RMIT Vietnam design students and staff.

2. Development of ‘global passport’ teaching model that uses design to assist communities in need and enable students ‘real world’ learning outcomes through immersion in rural community development projects, with the additional opportunity to see their design projects actually built. The ‘Building the Community’ model, in time, could become a design teaching model used across the ATN University network.

3. Development of innovative assessment practices through student development of ‘press-kits’ of their final design schemes and assessment based on students’ ability to communicate projects to non-design audiences at the RMIT Vietnam workshop.

4. Evaluation of project conducted through proposed interdisciplinary project reference group.

5. Dissemination across RMIT and the broader Australian university sectors of the ‘Building the Community’ teaching model through a workshop at RMIT Melbourne (involving visiting RMIT Vietnam staff) and an exhibition of the student work.