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Live Projects: Innovating in the Present

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Abstract

Setting boundaries is a creative act. Harnessing the idea of student involvement and engagement in live projects to their architectural education is difficult. Attempting to define what a live project actually is in this situation has required a lot of self-searching by architectural educators. Whilst it is an accepted condition of mainstream practice that timescale, budget and brief are matched with intention and design before works starts on site, it is not at all clear that such a definitive bounding of the project is in the students' best interest in a learning environment. This paper looks at the work of the Architecture of Rapid Change and Scarce Resources (ARCSR) research cluster, and assesses the relationship between boundary setting and changing intentions; speculating on the effect of changing intentions on the education of the student.

The value of live projects for students involves to a large extent the value of the present moment of active engagement with concrete reality. With the rising cost of university education and a parallel increase in the adoption of live projects at architecture schools, new approaches to learning are required that operate on a different set of principles to those geared towards training architects for large scale, office based practice. Students should be encouraged to experiment and innovate using incremental, iterative and reflective processes embedded in a real setting and tested in the present.

Introduction

With the increase of live project teaching in institutions throughout the UK and internationally, the separation between education and practice no longer exists. Live projects challenge traditional models of architectural education, led by students, who are moulding their learning around these projects in the present, and during the course of their studies. This paper seeks to demonstrate the subtle shifts that occur during a live project, and how these relate to learning and the student experience of this process.

Setting boundaries, quite separate to the idea of setting a brief, can be used as a creative process throughout the development of a live project, where students are able to adjust these boundaries to accommodate resistances they meet during the course of the project. The idea of collaboration in a live project: an assembly, collective or partnering arrangement, encourages interdependency and flexibility. Innovation in these cases should be interpreted as a way of being ingenious in using what is available and around at a particular time and place, as opposed to an idea coming from the outside.

Situated within the hands-on, site based, building process is the opportunity for education: an experience of learning by doing. This, largely tacit knowledge, gained through practical experience on each specific site, involves place-based collaborative deliberation. This paper reviews the critical nature of such practice-based learning from the bottom up in two live projects, as a tactic in imagining the modern city. Acting as 'Urban Learning Fora' (McFarlane, 2011) these projects helped to fill gaps in existing participatory methodology (Hamdi, 2010). This provides greater depth and inventiveness to the investigation of these urban settings by architecture students, local residents and their host NGOs.

Methodology

Using examples from past live projects carried out by Architecture of Rapid Change and Scarce Resources (ARCSR) students and researchers in peri-urban settlements in India and Sierra Leone, this paper reviews two situations of collaborative architectural making (innovating in the present) that highlight notions of improvisation, changing intentions (resistances and accommodations) and incremental development.

The methodology, focused around a live project in its widest sense, argues for particular involvement – as against formulating generalisations that serve little more than guides to practice. Conversely, it is precisely the openness to found conditions and to improvisation in the context of making judgements and decisions, that is the key to understanding the nature of learning through making. In anthropological terms, the process is similar to participatory ethnography where the loss of a supposed objectivity is a gain in intensity of understanding. What guides the dialectics of action and reflection is the topic that claims all participants (for long after the actual intervention).

This methodology that we have developed begins with the exploration of the physical and cultural topography of a place. Live projects emphasise the need for a process of learning on-site, in

continual concrete dialogue with the constituents, requiring a building of trust and understanding between those involved. This may lead to a different project than first imagined; therefore a 'loose-fit' strategy (Mitchell, 2010) has been adopted. Loose fit structures therefore ensure that both the critical path of assembly and the contingencies of fit are removed or at least reduced as much as possible, so as to give more scope for deliberation over alternative pathways and outcomes. This also allows for flexibility and adaptability to circumstances of construction and unplanned or unexpected events that do not necessarily result in a directly linear process and is not completely hostage to chance but adheres to the common topic/agreed discourse, which allows for collective engagement, together with individual accomplishment (Tang, 2014a, p. 35).

The background to this research is a rolling studio programme with an annual field trip where students engage with a rapidly changing, under resourced, transitional, local situation, devising imaginative responses to specific cultural and technical issues. Out of this, live projects emerge which use local physical and cultural resources to change urban contexts as the vehicle of collaborative self-empowerment. Upgrading incrementally and iteratively using several small live projects (dispersed initiatives/interventions) gradually raises the discourse surrounding urban poverty issues within the settlement.

A cyclical process of experimentation, focused group criticism and modified proposition allows for continual reflection during the act of making that progresses in a dynamic manner, allowing flexibility for adapting the proposed intervention as necessary.

Involvement in live projects brings together the three strands of teaching, research and practice in architecture. This enables these strands to operate in parallel rather than in series allowing for flexibility in the wider project/programme and more opportunities for innovative student learning, with narratives running side by side that occasionally meet, crossover and collaborate. Vertical teaching within ARCSR through the School of Architecture at the Cass enables conversations between students enrolled in Degree, Diploma, MA and PhD courses.

Though we have yet to include a PhD student in our work in Freetown, Sierra Leone, other ARCSR live projects have greatly benefitted from exchange and involvement with research students at MA and PhD level. In India, ongoing ARCSR live projects (since 2007) have been initiated and taken forward by students involving water and sanitation infrastructure in a resettlement colony in Delhi, and conservation and heritage in Agra.

Learning through making

This process of learning through making using live projects is focused on the idea of collaboration and collective involvement, understood here as 'negotiations'. Some participatory theories and methods put into practice can result in a static process, lacking flexibility and adaptability to changing situations. In order to set up the horizons for praxis, there is a need to understand and engage with the different levels of engagement (domestic, neighbourhood, city) as a way of creating an assembly of involvement. This creates a nesting of various stages, where hierarchy refers to an intensity of holistic participation.

Well-established participatory methods developed since the 1980s have been adopted as standard practice by NGOs, development agencies and practitioners. Chambers's (1993) Participatory Rural Appraisal (PRA) focuses on the incorporation of knowledge from local people, developed from Rapid Rural Appraisal (RRA) – techniques that could bring about a 'reversal of learning' (Chambers, 1986). Cooke & Kothari (2003) highlight the limits of such participatory approaches. These include a failure to engage with issues of politics and power, instead creating a 'technical approach to development' (Hickey & Mohan, 2004). They suggest instead a transformational approach that addresses citizenship and political capacities within a civil society.

There are several toolkits for participatory design in building and urban decision-making (UN-HSP, 2001, Joseph Rowntree Foundation, 1994). However, most of these strategies focus on community consultation and design prior to building, with involvement ceasing once construction starts on site. Hamdi's *Placemaker's Guide to Building Community* (2010) focuses strongly on participation at the design and decision-making stages and social engagement following a strategy called PEAS (provide, enable, adapt and sustain), but with less emphasis on engagement through making. Within the framework of social sciences, conventionally practiced research methods are well developed and clearly defined processes, offering well-tested formulas for carrying out fieldwork in the fields of anthropology and sociology, amongst others.

Today participation is widely regarded as the consensus for grassroots initiatives promoting inclusive community engagement in their various projects. Organisations such as Architecture Sans-Frontieres (ASF) promote a community-led participatory design approach to building communities. Their recent action research workshop, *Change by Design* (2011), explored the opportunities and limitations of this approach through concurrent investigations at the 'macro' institutional scale, the 'meso' or neighbourhood scale, and the 'micro' dwelling scale.

The formation of reliable, trustworthy relationships between those involved in a project takes time before it can lead to a sharing of commitment. McFarlane (2011) has argued that participants can learn from one another in both formal settings (training) and through informal exchanges. The manner and decorum of engagement becomes a negotiation of the very nature of participation. When it works well, participation can build healthy relationships through the manner in which resources are shared between informed citizens who have 'space to have a voice' (Appadurai, 2013). Once consolidated into a trusted and familiar manner of exchange, these processes can lead to more capable civic engagement.

However, when applied to architecture, these methods focus on quantitative and qualitative approaches and, used on their own, tend to: 'flatten' our understandings (Ingold, 2011). Engagement through building and making, on the other hand, can deepen understanding of the setting by generating self-conscious spatial practice. Judgements made throughout such practice can form the basis for a hands-on learning experience.

Andrew Pickering in his book *The Mangle of Practice* (1995, pp. 22-23) discusses a view of the context for such practice:

'The dance of agency, ... takes the form of a dialectic of resistance and accommodation, where resistance denotes the failure to achieve an intended capture of agency in

practice, and accommodation an active human strategy of response to resistance, which can include revisions to goals and intentions as well as to the material form ... in question and to the human frame of gestures and social relations that surround it.'

Pickering's ideas of self-conscious practice are useful in understanding the notion of learning through making. Here the 'actors' (Latour's Actor-Network Theory, (2005)) include the material conditions, the significance of the place in the community discourse between artisans and citizens and officials, each with different kinds of virtue, skills, commitment and generosity (Tang, 2014a, p. 31). Mitchell (2010 chapters 1 and 2) has discussed the application of Pickering's insights into student practice in Delhi and elsewhere in India, and this paper builds on this work.

Most potential building sites and their surroundings are full of rich existing resources ready to be exploited. They include the physical materials found in and around the site (earth, vegetation, scrap materials, the remnants of existing buildings), the physical characteristics of the site itself (topology, orientation, passive response to climate, local water and energy sources) and also, of course, they include cultural resources: established skills and ways of building, and knowledge of local conditions.

To explore, interpret and transform these local resources through a process of experimental innovation into a valid, competent and singular intervention is to avoid premature, snap shut, closure of the fitting process. Design, in this case, is not a simple technical task completed prior to the start of construction by the application of a known technology, but requires skills, which are more akin to those of the crafts person than the technician.

The idea of innovating in the present in the context of learning through making is focused around thinking on your feet, working with what is available to you at a particular time and place and adapting your ambitions to suit. Improvisation plays a large part in this. Even during initial investigations of a transitional neighbourhood students can gain understanding more immediately through small making projects than through more conventional survey techniques. Such mini-projects have ranged from painting a wall (to create a place for celebration) to a market stall (adapted from a mobile cart) and just this year, a simple bamboo frame structure (for shade over existing bamboo benches in a main square).

The limited timeframe to carry out such an idea, which includes discussions with community members, sourcing of materials and equipment locally as well as implementation of the idea itself, involves a great deal of creativity, ingenuity, resourcefulness and improvisation from both the students and their collaborators. Such experimental exercises can sometimes lead to further intervention through live projects, usually facilitated by a local NGO, such as the two case study projects reviewed below.

Innovation, improvisation and creativity

Everyday limitations caused by conditions of scarcity are overcome by transforming places through improvisation – what Sennett (2012) calls 'users' art'. Dealing with physical conditions of

scarcity releases immense resources of creativity within the people. A cyclical process of negotiation, adaptation, resistance and accommodation, as opposed to problem and solution, can be used to find and sustain a good fit between places and people. In his book *Together*, Sennett (2012) coins the term 'dialogic skills' emphasising the need for listening for intention rather than meaning. In Sennett's view, the distinction between cooperation and collaboration is the idea of cooperation as something with an end result. Following this notion of improvisation and creativity as being intrinsic to the very processes of social and cultural life, places can be transformed through collaborative improvisation.

Ingold (2013, p. 20) takes a view on improvisation in relation to creativity – he writes:

'With regards to creativity, it distinguishes the improvisatory creativity of labour that works things out as it goes along from the attribution of creativity to the novelty of determinate ends conceived in advance.'

His treatment of creative improvisation sees: 'collaborative and political dimensions of creativity and thus challenge[s] the idea that creativity arises only from individual talent and expression' (Hallam and Ingold, 2007). Taking this idea further, Hallam and Ingold (2007, p. 2) discuss the difference between improvisation and innovation:

'[It] is not that one works within established convention while the other breaks with it, but that the former characterizes creativity by way of its processes, the latter by way of its products. To read creativity as innovation is, if you will, to read it backwards, in terms of its results, instead of forwards, in terms of the movements that gave rise to them. This backwards reading, symptomatic of modernity, finds in creativity a power not so much of adjustment and response to the conditions of a world-in-formation as of liberation from the constraints of a world that is already made. It is a reading that celebrates the freedom of the human imagination – in fields of scientific and artistic endeavour – to transcend the determinations of both nature and society.'

Joi Ito, Director of MIT Media Lab, in his 2014 TED Talk: *Want to innovate? Become a "now-ist,"* uses the term 'now-ist' to suggest that we move away from traditional rules, and instead encourage bottom-up innovation and the notion of learning over education. He says:

'We could not have planned this whole thing, but by having a very strong compass, we eventually got to where we were going... this idea of compasses is very important... it's about stopping this notion that you need to plan everything, you need to stock everything, and you need to be so prepared, and focus on being connected, always learning, fully aware, and super present.'

ARCSR students are required to move quickly to carry out transect walks and measured surveys, to sketch and interview and even build directly so as to embed themselves straight away in the situation in which they will intervene. The very act of measuring is a performance by itself, and can provide an entertainment to residents and a key to open the door to a range of cultural exchanges that give insights into the relationships between people and place. This approach rejects the futurism of fundraising, institutional collaboration, a future plan, the accumulation of stock, and

specialist skills; and instead embraces the super present 'now-ism' of new no-cost permission free intervention, where innovation is pushed out to the edges: where the power of pull is greater than the burden of push. To address the contingencies of city complexity and shortage of time, students have worked by a process of resistance and accommodation to the contingencies of situation. The students always have a compass but never a masterplan.

Boundary setting and changing intentions

Project 1: Classrooms for the children of migrant stone quarry workers, Navi Mumbai, India

ARCSR began a project working with NGO Association for Rural People's Health and Educational Needs (ARPHEN) in Navi Mumbai (New Bombay) in 2008. Two undergraduate students spent five weeks over the summer carrying out a physical and cultural survey of a previously unmapped 15km stretch of stone quarries and migrant worker settlements. Following this study, we accepted an invitation to return to the quarries by ARPHEN. The nearby Lotus Eye Hospital had been conducting annual eye health camps with volunteer student groups from L'Hermitage School in France for quarry workers. Setting up on temporary sites along the quarry belt, they would conduct eye tests, and provide glasses and referrals for treatments (such as cataracts) at local clinics. Early discussions held in London about possible collaboration were focused around the design and construction of a temporary shelter structure for holding eye clinics that could be erected on a number of sites along the quarry belt.

A preliminary design for a simple bamboo structure was made by ARCSR graduate researchers working for the ASD Projects Office (now known as CassProjects), who then took the design to Navi Mumbai with the intention of constructing a full-scale prototype with ARPHEN over a five-week period.

On arrival and following visits to the sites and discussions with ARPHEN, it was apparent that the need for permanent learning spaces providing basic education for children in the settlements was greater than that of temporary eye clinics. As a result, students and researchers from the Cass went on to collaborate with ARPHEN in the construction of two community classroom buildings, providing a bridge into state education for migrant quarry worker children (see fig. 1).



Figure 1 Changing intentions: from temporary eye clinic to permanent community classroom building
[Source: Shamoon Patwari]

Incremental building and precedent

The design of the Baban Seth quarry classroom building began as a simple raised platform, following a precedent of plastered brick community plinths common to rural villages throughout India. During initial discussions between students, NGO and residents, key issues of the site and fundamental requirements for the learning space were raised. Monsoon flooding on the site was a major problem, leading to a proposal for a raised stone platform with drainage infrastructure. Once the stone platform had been constructed, a simple lightweight roof (supported by a locally fabricated steel truss structure and covered with profiled plastic sheeting) was erected, to provide shelter from the sun and rain (as well as stray rocks from the quarry blasting). Next, a low wall surrounding the building was constructed, to create more of an enclosure (and to prevent children falling off the one foot high platform).

The quarry classroom place evolved from a platform to a building, consolidated with the introduction of the final major element: security. During the construction of the rendered brick walls, several women approached the project team, to express concern that drunken men would misuse the building in its open state. This led to the addition of steel grilles and a lockable gate, securing the building, whilst allowing for ample light and ventilation (see fig. 2). The result of this process was a classroom building that had developed from an initial imagined gathering place as a raised platform to a covered, gated enclosure (Tang, 2014a, p. 42).

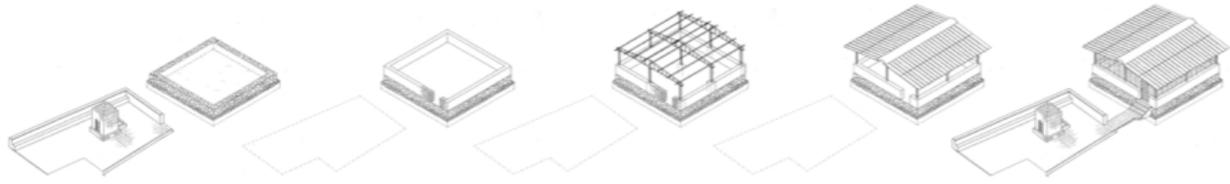


Figure 2 Development of the building, Baban Seth quarry classroom, Navi Mumbai [Source: Bo Tang]

The following year, improvements were made to the classroom by students, ARPHEN teachers, local residents and contractors working together, including a connection to electricity for fans and lighting, seating and lockable cupboards, new internal floor tiles, monsoon blinds and bamboo sunshades (see fig. 3). A second classroom at Tata Press quarry was also constructed by a group of Diploma students, using the first classroom as precedent.



Figure 3 Students, NGO, local residents and contractors working together, Baban Seth quarry classroom, Navi Mumbai [Source: Bo Tang]

The making of a building is integrated with and very much a part of the design process. Proposals are crafted by capturing, framing and harnessing ideas from precedent, and by a dogged process of trial and error, balancing resistances in the worked materials with appropriate accommodations in methods and ambitions. Each of the interventions: platform, roof, screens, paths, were built at different times, fit loosely together and have their own name and recognisable internal coherence. They also fit loosely with elements constructed before and afterwards. They were inspired by precedent and have in their turn acted as precedent for classrooms elsewhere. The project

provides an example of a fluent making trajectory, which for very little financial cost has up-scaled from making a building to making a contribution to, and an exchange with, the changing topography of the city.

Timescale, budget and brief

Project 2: Ivor Leigh Primary School, Freetown, Sierra Leone.

ARCSR's work in Freetown, Sierra Leone, began with a simple ambition to assist in the design and construction of a primary school building with NGO, Community Empowerment Support Organisation (CESO). The village of Kaningo is located in the Lumley Valley on the peri-urban outskirts of the capital, Freetown. A number of student groups were involved in the collaborative process between 2008-2010, initially travelling to Kaningo to conduct physical and cultural surveys, followed by research on local materials and construction/skills for a Freetown Construction Manual.

The research process developed at ARCSR is one of testing resistances and making accommodations to locally encountered realities. Partnering in the construction of Kaningo primary school gave access to a stimulating and provocative academic learning environment. The purpose of the first student field trip in 2008 was to gain an understanding of the local topography in and around the school site sufficient to both ensure an appropriate fit for proposals and to sustain an educational programme. Students were able to interrogate the part physical landscape played in enabling residents from very different walks of life to collaborate in making a protected safe place, even when that place had an uncertain future and even when the residents' role in that future was equally uncertain. Practical activity was building new relationships, helping to build the city.

In order to help to imagine a city to which citizens might aspire, where more transparent and democratic structures might support and enhance the capabilities of its citizens, ARCSR extended its research to two other neighbourhoods. The aim of this part of the research was to raise awareness of the architectural history, culture, environment, topography and future potential of these three protected urban pockets (see fig. 4).

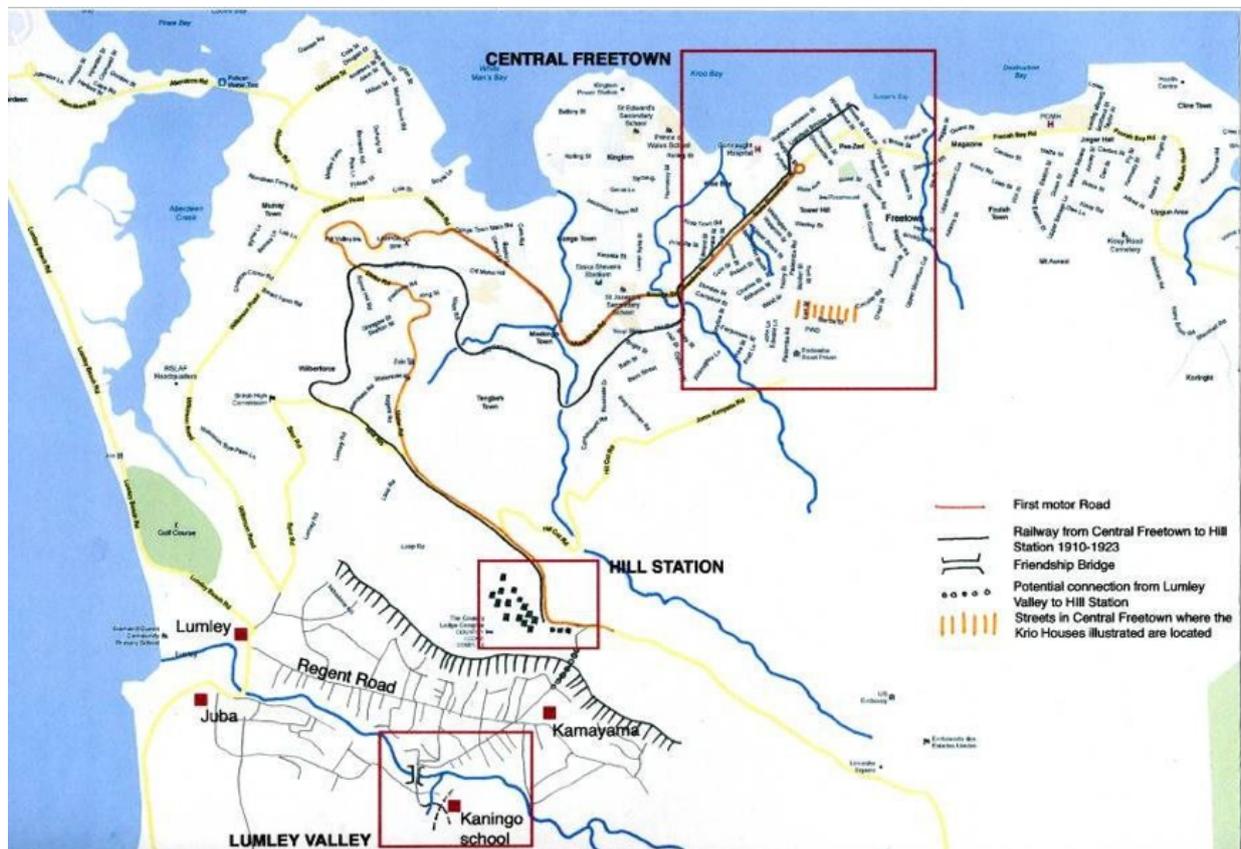


Figure 4 Since we began our live project in Kaningo, our research has expanded to three neighbourhoods in the city [Source: Maurice Mitchell]

Since 2011 ARCSR students and researcher have been carrying out measured surveys of houses in three Freetown neighbourhoods. They have also assembled data from the literature and recorded oral histories in order to facilitate a comparison between them. Partnering with CESO and the residents of Kaningo over a relatively long period has allowed time for negotiations for students to facilitate practice in challenging circumstances. Ethical practice and research have been combined to generate tools and skills whilst training emerging researchers and practitioners to co-produce outputs.

Exposure to these projects shows students how they are appropriate not only because they change lives and add value, but also because they do so within an ethical framework extending beyond conventional research practice, to include the associated environmental, social and cultural costs. This promulgates a way of thinking and practising, which by accommodating strife and minimising side effects and hidden costs, can become strategic. Thus this ‘bottom up’ research is providing insights, which are now scaling up and contributing to city culture and policy (Mitchell, 2013, p. 19).

In the summer of 2013, students carried out a furniture workshop, as a response to a lack of adequate desks and benches within the Kaningo School. Some benches of local hardwood had already been provided but were in need of repair. The design of the new furniture was based on the repaired locally made version but with stronger joints. Without electricity, students worked diligently with a local carpenter and apprentices, to plane, cut, varnish and assemble locally sourced mahogany boards into school furniture over a period of three weeks, using only hand

tools purchased at the local market. Given the time constraints, students made an early decision to limit their ambitions to making furniture to kit out only the largest of the classrooms (where three classes take place at one time). Sustainable quality furniture was produced using local skills and resources, providing an opportunity for learning for both students and local carpenters. Apprentice carpenters acquired skills through this exchange that would enable them to continue making furniture, as well as repair the existing furniture, for the remaining classrooms after the departure of the students (see fig. 5).



Figure 5 Student and apprentice notching timber posts for classroom furniture [Source: Dominic Dudley]

With the aim of linking the peri-urban place-making efforts of Kanningo residents, both spatially and historically, to the wider city, an exhibition of most of the collection of drawings and photographs were exhibited together in London as part of the International Architecture and Design Showcase 2012, and again and at the British Council Headquarters in Freetown in July 2013 (see fig. 6).



Figure 6 Exhibition put together by students, held at the British Council Headquarters in Freetown, Sierra Leone [Source: Dominic Dudley]

Foday Jalloh, The Director of Cultural Affairs at the Ministry of Tourism opened the Freetown exhibition, and recommended links with the Department of History and Cultural Studies at the University of Sierra Leone (USL). As a result one of our students carried out a project for the design of a National History Museum as their thesis project last year. At talks associated with the Freetown exhibition, USL engineering students expressed their desire to study architectural in Freetown. The Sierra Leone Institute of Architects (SLIA) asked for our collaboration in their ongoing efforts to link with the UK Royal Institute of British Architects (RIBA) and establish such a school within the University, which led to another of our students taking on this project for their thesis project in 2013/14.

In April 2014, London Metropolitan University signed an agreement with the University of Sierra Leone and the Sierra Leone Institute of Architects to collaborate in founding Sierra Leone's first School of Architecture. The new school will use ARCSR's research into Freetown's historic neighbourhoods as the basis of its history curriculum. It will also use the building methods and

attitude to sustainable design pioneered by ARCSR as the basis of its design curriculum. During the first three years of the school students from Freetown and London will collaborate to construct a public room for the new school based on Joe Davis' 5th year scheme – see fig. 7 (Tang, 2014b).



Figure 7 Imagined Sierra Leone School of Architecture Year 1 live project to build their own studios at the University of Sierra Leone Campus in Freetown. Joe Davis began developing a scheme for the School of Architecture building itself based on the upgrading of an existing redundant hall of residence and a new timber studio shed. [Source: Joe Davis]

More consideration should be taken for horizons of time as well as space. This creates different opportunities, testing resistances and accommodations. Although we started off with a focused direction (for example, in Freetown, to build a school), we allowed the project to have its own trajectory and timeframe. At the same time, as the project developed, we shifted and broadened our gaze to look at the city of Freetown as a whole. In terms of architectural education, we originally began with small groups of students learning how to build in a particular situation, which will eventually lead to students from Sierra Leone having the opportunity to study architecture in their home country. The issue of not being able to study architecture in Sierra Leone means those who are able to study abroad in West Africa or further afield (US or UK for example) often do not return, and those who do come back tend to bring with them Western ideals of 'good' architecture, which may not necessarily be appropriate for the physical and cultural context of their particular city or country.

Conclusion: value of live projects and working in the present

To innovate in the present involves a culmination of dialogue, cooperation, participation and engagement, as seen in Navi Mumbai: an intended eye camp became a school and the shared the notional precedent of a village platform became a civic complex which included both a classroom and a shrine, consolidating the settlement. We should encourage a culture of learning from making, shifting the focus from decisions made at the top or from the outside, to those learned from being embedded in the setting: from the bottom up. It was in this way that the dynamic nature and identity of Freetown was discovered by the students, through investigations embedded within and around the process of making a school.

The project and partnership cycle, running alongside rather than in series with an academic programme offers students a forum for discussion inside the project. Neither of the live projects followed the exact same process or involved the same levels of participation. Proposals developed at the start were later modified by students, taking account of the resources available. These included materials, skills, labour and time, as well as interest and enthusiasm for the project shared with residents. As such, the live projects were vehicles for learning and understanding, not applications of a remotely planned design divorced from the concrete conditions on site.

The value of live projects is in the moment of active engagement with concrete reality. Building incrementally is essential to achieve appropriateness and fit. The effect of changing intentions on the education of the student is instant. Lessons of on-the-spot creative thinking and ingenuity are learnt quickly and continuously as a live project progresses. This is a clear demonstration of the very lessons to be absorbed and understood throughout the process.

Mainstream architectural practice and planning is increasingly carried out remote from the site, designs being fully resolved prior to construction and containing much which is of a generic rather than a particular nature. This flattens fit. Currently the opportunity in academia to work hands-on with live projects for those with the greatest need has enabled the architecture student to adopt a much deeper role. Working through resistance and accommodation to the setting without a pre-determined outcome, students have been able to assemble the meagre physical and cultural resources available into an entity, which is greater than the sum of its parts. Testing fit through a process of trial and error when accompanied by shared deliberation can validate creative action at the time of making.

In the context of the future of architectural education, ARCSR live projects offer opportunities for students to gain hands-on architectural experience working in real situations in rapidly changing contexts. An environment for innovating in the present, students are able to experiment through reflective architectural practice and making, providing them with a platform to begin their careers in architecture early, encouraging and motivating them to build their own learning experience and career paths whilst they are still in education and can afford to take risks. Live projects offer learning challenges that can make students more aware of things that are happening outside of the classroom, but they also help students to actively embrace the possibility of grassroots

innovation happening in future.

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