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# Architecture live projects - Advocating a co-design methodology across academy and community

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## ABSTRACT

Architecture live projects have been undertaken at this institution since 2009. The completion of New Wortley Community Centre (NWCC), a £759,497 building is the most complex.

Using the definition of co-design put forward by Sanders and Stappers<sup>1</sup> referring “to the creativity of designers and people not trained in design working together in the design development process”, stakeholders including students and tutors of architecture, graphic art and design, landscape architecture, product design and creative writing, community association, service users, contractors and design consultants, collaborated to design the building as an example of co-design. Co-design is presented as a situated learning environment<sup>2</sup> and co-existing in both the academy and community it is further differentiated.

This paper describes and evaluates an emergent model of co-design adopted by the writers, considering the positive and negative outcomes, with the aim of evolving the methodology for forthcoming live projects involving students and external communities.

Extending the fora of co-design workshops used throughout the design of the building, the reflections, perceptions and personal learning experiences of the participants are collected using face-to-face dialogue and critical discussion. Evaluation takes the form of summative qualitative analysis and involves the co-design group in forming conclusions for final consideration of the writers.

The results suggest that:

a, co-design fosters situated learning environments where learning is deep and the experience is rewarding for all co-designers.

b, situated learning environments of formal learners from the academy (students) and informal learners from the community working together has a positive and reciprocal effect on their learning.

c, academy and community collaborations have a beneficial social, cultural and economic effect.

d, the co-design process to deliver the NWCC has established a co-design methodology. By reflecting on aspects which were successful alongside those which were problematic the co-design method is further informed for new live projects being undertaken.

This model of co-design, where the academy and the community work together on a design project has generated meaningful, diverse and rich learning experiences for all co-designers that also contributes to economic, social and cultural regeneration in the community. This experience has identified key characteristics of academy and community co-design that can be activated in a co-design methodology for future co-design projects.

**KEYWORDS** co-design, live project, community, architecture, situated learning

## INTRODUCTION

The integration of live project learning into the architecture course at Leeds Beckett University (LBU) has led to a number of notable projects, the most significant of which is a new community centre building in Leeds' most deprived area<sup>3</sup>. This paper accounts for an eight-year journey to construction and the development of a co-design model, explaining the method of practice involved through the underpinning theoretical approach.

This body of work has evolved from the writers' experiences of the disconnection between orthodox architecture teaching and real-world complexities and experiences. Inside and outside the academy a constant argument in architectural educational discourse remains the tension between education and practice. The writers have developed a direct approach to its critique (and in so doing offer a pedagogical alternative) through the architecture live project. A very useful definition of the live project is provided by Rachel Sara<sup>4</sup>. The live project is significant as it is not merely a point of critique from the safety of the institution but places the student and academics in an environment that is in the real-world, with its uncertainties and complexities where both learn from their interactions and roles within an external community.

Mel Dodd<sup>5</sup> writes, "If art (and culture) is understood as an emancipatory and transformative project for society then we might argue that the art school should be a place of resistance; somewhere that contests institution norms and fixed hierarchies.... Clearly for architecture, resistance is much easier in an educational setting than in a practice one, where compliance with legislation frameworks is essential. Architectural education has therefore (to its cost) often retreated to the academy, to visionary or utopians schemas, released from reality's constraining and normative pragmatism. Although arguably a form of critical practice, the lack of pragmatism and real-world application in this strand of the visionary has opened up a problematic and enduring gap between education and practice." The live project described here at New Wortley, although complying with legislative

frameworks in a relatively traditional model of architectural production simultaneously acts as a territory of 'emancipation and transformation' for students as they learn about themselves and their situation within society through fulfilling (and critiquing) the role of the architect in real time, in real situations with real consequences.

With the territory of the live project, an appropriate design method is required to maximise it as an experience of 'emancipation and transformation'. Co-design is an obvious approach that amplifies exchanges between students, academics, professionals and the community. Co-design gives structure and space to the production of the project. Further, where co-design also exists in an academic setting it gives *all* participants opportunities for learning beyond the scope of the commissioned production, i.e it is 'emancipative and transformative'. This might be its greatest achievement.

### New Wortley, Leeds

The LS12 postcode of inner-city suburb New Wortley is Leeds' most impoverished with 34% of people claiming out of work benefits. The needle exchange at the pharmacy next door to NWCC is the most heavily used in Leeds. Coupled with the highest suicide rate in the city, New Wortley has an average life expectancy of just 50 years of age. New Wortley Community Association (NWCA) was set up in 1982 to support the community to tackle these issues amongst others.

In 2009 NWCA's aspirations had outgrown their existing centre, and they were in urgent need of additional space. Having no funds for traditional architectural consultancy NWCA approached the Leeds School of Architecture (LSA) requiring a 'design' to allow fund-raising to begin. The brief called for an inspirational multi-purpose space with commercial functions that would enable the centre to expand its reach and sustain itself in the future. An extra-curricular ideas competition won by BA2 student Vahagn Mkrtchyan in January 2010 was developed following a series of student led community consultation events to RIBA Work Stage 2.

### Project Office

Over the next three years capital funding applications were made using student drawings to demonstrate the vision. Most of the £759,497 was raised through Big Lottery grants. This meant there was a need for a continued consultancy role aiding the client team which led, in 2013, to LBU launching Project Office (PO), its in-house architectural consultancy forming a design and research collaboration of staff and students. It applies 12 'Rules of Agency'<sup>6</sup>, which demonstrate its ethical principles and how to occupy a space concurrently within the academic institution and architectural practice. PO is co-directed by architecture lecturers and paper authors Simon Warren and Craig Stott.

The model developed uses the resource of architecture students design studio modules to provide architectural design for *real* clients. Student participants are remunerated for their time, either through credits toward their degree or financially if the work is not part of the course. The approach equips students with a valuable learning experience relating to real-world complexities through the vehicle of live projects, whilst simultaneously supporting the needs of socially cognisant organisations who cannot afford standard architectural consultancy.



figure 1: New Wortley Community Centre (Will Ton)

### New Wortley Community Centre

The new community centre, constructed on time and on budget, opened on 29th July 2016. The new building supports an expansive range of activities, programmes and collaborations managed by NWCA including an ex-offenders programme, housing advice, employability skills, creative arts groups, health and wellbeing activities, youth groups, breakfast

club, job shops, café, laundrette, and much more. The building has attracted a host of new users, volunteers and opportunities, with the centre having grown from 2 paid staff to now having 15 supplemented by 52 volunteers. This step change has been crucial in enabling NWCA to offer the range of services the New Wortley residents requested from their community centre.

### TERMINOLOGY

A number of terminologies are used throughout this paper, these are outlined below:

#### Co-design

Sanders and Stappers<sup>1</sup> define co-design as "the creativity of designers and people not trained in design working together in the design development process".

#### Community

'Community' is the word that NWCA and centre users use to describe themselves. Thus, in the context of New Wortley the writers' terminology builds on Sutton & Kolaja's<sup>7</sup> description as "a number of families residing in a relatively small area within which they have developed a more or less complete socio-cultural definition imbued with collective identification and by means of which they solve problems arising from the sharing of an area," but goes further to include a diverse collective of people, not all of whom live in the defined catchment, but all participate and have interest in social cohesion, governance and regeneration of the area. Consequently, the notion of community has an extended affiliation to those engaged with the processes of making a more liveable area, and cites Wenger-Trayner's<sup>8</sup> definition, as illustrated in Figure 2:

#### 1. Community of Place.

Everyone who resides within the geographic locale and subsequently is the intended beneficiary of NWCA services.

#### 2. Community of Interest.

An amalgam of individuals and groups interested in the increased and continued improvement of a previously overlooked locale.

### 3. Community of Practice.

The overlap between the *community of place* and *community of interest*, working collaboratively to facilitate change, includes community activists, a number of political, professional and academic figures, such as LBU, who have embedded themselves over a number of years.

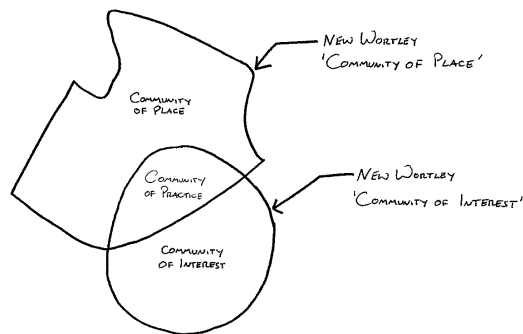


Figure 2: Relationship of Intersecting Communities (Craig Stott)

### Situated Learning Environment

The PO model invents *situated learning environments* as espoused by Lave & Wenger<sup>2</sup>. In contrast with most classroom learning activities that involve abstract knowledge which is out of context, Lave & Wenger argue that “learning is situated; that is, as it normally occurs, learning is embedded within activity, context and culture. It is also usually unintentional rather than deliberate, or a process of ‘legitimate peripheral participation’”. Knowledge needs to be presented in authentic contexts — settings and situations that would normally involve that knowledge. Social interaction and collaboration are essential components of situated learning — learners become involved in a ‘Community of Practice’ which embodies certain beliefs and behaviours to be acquired. As the beginner or novice moves from the periphery of a community to its centre, he or she becomes more active and engaged within the culture and eventually assumes the role of an expert.” PO also recognise that participants are already ‘experts’ of their own experience. PO use *situated learning environment* theory to distinguish all participants as ‘learners’ in each co-design situation. In doing so the opportunity for learning, exchange and collaboration is

extended and the design output should be enriched.

### CO-DESIGNING

The NWCC building is the culmination of wholehearted participation by local residents and volunteers with LBU students, academics and building professionals. The architectural approach is a ‘work of many hands’, where discrete elements have been the design concern of specific student groups.

In total 196 people have directly participated in the design of the building. PO coordinated with other academics across design courses to generate an array of student work, as illustrated in Figure 3 including:

- Architecture students providing feasibility studies, conducting community consultation, component integration, and future phase design work.
- Landscape architecture students designing the public realm.
- Graphic design students designing wayfinding, signage, and a historical based art piece using work generated by the community led by a LBU cultural studies academic.
- Product design students designing built-in furniture.
- Technical design delivery through PO’s employment of architectural technology students. Supplemented by recent architecture graduates employed to contribute to the technical building design and administration of the construction contract.

From inception, PO aspired to extend participation of live projects beyond the architecture courses. In this project, students from four courses participated as part of their coursework. In each case the work related to the module timing and building programme, requiring considerable advanced planning and negotiation with all collaborators.

Unfortunately, the ideal time for design input, determined by the building programme, fell during the summer months when students and staff alike were away. Consequently PO included several Provisional Sums in the contract documentation for landscape, wayfinding, signage and inbuilt furniture etc. meaning that these elements could be designed during semester two whilst the building was under construction. Negotiations with a number of course tutors undertaken in

semester one prepared for student involvement in semester two, with each developing a brief that satisfied both New Wortley's design needs and module outcomes for their courses which did not pose much of a hurdle, the project aligned very well with all four courses, partly because of a history of working with clients in product design, landscape architecture and graphic design, so learning outcomes reflected this.

In architecture the learning outcomes for modules are linked directly to the jointly held criteria of ARB<sup>9</sup> and RIBA. Where students have undertaken work in undergraduate Design Studio modules most of the applicable General Criteria GC1 – 'Ability to create architectural designs that satisfy both aesthetic and technical requirements', GC2 – 'Adequate knowledge of the histories and theories of architecture and the related arts, technologies and human sciences' and GC3 – 'Knowledge of the fine arts as an influence on the quality of architectural design' relate broadly to design that is equally covered by a theoretical or live project.

At LBU, GC5 and GC6 are learning outcomes for undergraduate Design Studio. It can be argued that live projects are better suited to deliver learning outcomes GC5 – 'Understanding of the relationship between people and buildings, and between buildings and their environment, and the need to relate buildings and the spaces between them to human needs and scale' and in particular GC6 – 'Understanding of the profession of architecture and the role of the architect in society, in particular in preparing briefs that take account of social factors' than traditional design studio projects. It is also worth highlighting that each of the General Criteria (GC) are broken down further in to three bullet point statements which, more specifically, further reinforce live projects as an appropriate pedagogical approach in design studio. For example, GC6 bullet points – 'The nature of professionalism and the duties and responsibilities of architects to clients, building users, constructors, co-professionals and the wider society' and 'The potential impact of building projects on existing and proposed communities' resonate highly with live project pedagogy. In the instance of live projects these

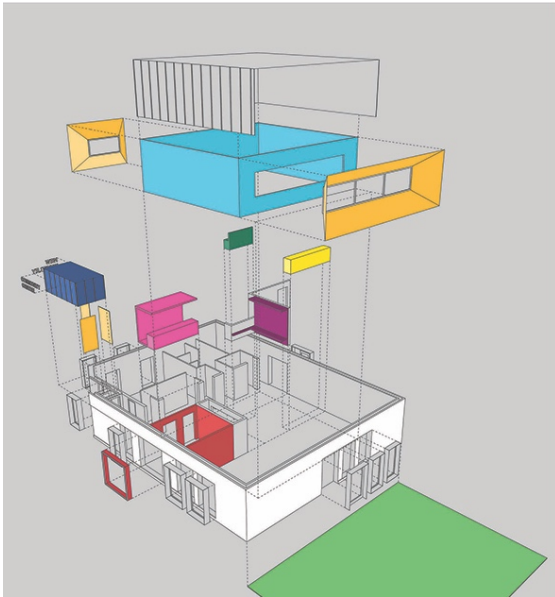
criteria are achieved in a real rather than speculative way.

As fruitful as this first exploration was to extend a live project to other courses, there was a lack of collaborative working between them. In most situations, each worked on a distinct design task, to a deadline, within a framework organised around an academic brief mapped to its relevant module outcomes. PO had hoped for some informal work, for example, graphic students discussed the design of built in furniture with product design students, but no collaborative working was undertaken. This could be due to several reasons; PO didn't manage this sufficiently well, tutors felt it added a complexity too far, or the pressure of work on academics was too great. It is possible to review this with the tutors but as participants in the project the writers prefer to appreciate live project pedagogy as messy, things happen and sometimes things don't but it is down to the participants to decide. PO has developed a technique termed 'fleet of foot' for seizing opportunities when they are revealed.

However on reflection, this is one instance where collaboration between courses should be written into the briefs as it is a fertile learning experience yet to be explored.

Live project learning is a key component in the student experience at LBU, where exposure to working professionally in multi-skilled environments begins to equip students for professional careers.

The *community of place*, empowered by the process, brought many skills (local knowledge, making and constructing, consultation, grant funding, management and coordination, briefing, financial acumen, collaborative practice, friendship and support) to the project. A key NWCA stakeholder believes "The close involvement between the project team and students with the residents through regular meetings and consultations resulted in a building that genuinely reflects the community needs and provides the space we badly needed."



*Figure 3: Co-design axonometric illustrating student designed elements during the construction phase (Project Office)*

### Architecture

Architecture students were involved at numerous points throughout the six-year design process. As this was the first undertaking of a live project at LBU no strategy existed for its implementation, as such the learning environment was improvised as a traditional ideas competition, effectively mimicking practice protocols. Despite this, the outcomes were strong given the quality of the winning scheme by Vahagn Mkrtychyan, who explained, “The design went through numerous iterations. As we engaged more with Maureen, Bill [of NWCA] and the wider community, our aspirations for the centre and the desire to regenerate the area quickly pushed and evolved the design from what was initially a small outbuilding to a more generous, inspiring and a truly sustainable community space, securing support from the Council. The process was a great learning opportunity working with clients, stakeholders and dealing with design, technical and financial constraints. Although it took almost 7 years to complete the project from its inception – it is a great testament to community engagement and perseverance in the face of so many challenges. Overall the project was a very rewarding experience that I would recommend to all architecture and design students.” Brief development was conducted through architecture students facilitating community

consultation events. These took many guises, from questionnaires and information stands, to participatory events and attendance of community meetings.

Consequently, the student learning experience for this stage relates to methods that focused on data collection which enabled informed design decisions further on in the process. As an aspect not usually covered in architectural design studio modules, community engagement provided the opportunity for architecture students to widen their skillset. Student contributor Adam Fulton reflected, “I’d had little experience of presenting an architectural project to members of the public before the consultation event. This opportunity gave me hands on experience of how to tailor my oral presentation to suit those with an untrained eye, making sure the delivery of the information was clear and pertinent. On a number of occasions this included a description of the significant drawing types such as plans, sections, elevations.”

Whilst the construction of the community centre was underway, phase 2 of the project, to convert the existing community centre into a Health & Wellbeing Centre commenced as a design studio project. A grant covered the installation of central heating, renovation of toilet facilities, and a new entrance to designate the change of use. A BA2 design studio project sought ideas for the new entrance. However, to achieve a brief that fulfilled the learning outcomes of the module the writers’ augmented it to include new uses to be speculated by the students. The students worked from the existing building on a number of occasions, immersing them in the physical context of their design work and enabling continual dialogue with staff, volunteers and centre users throughout the process. Working in teams further challenged perceived studio culture norms, encouraging genuine discussion with the *community of place*, resulting in a rich experience for all participants as surmised by Kimberly Frangos, NWCA board member, “With the building we are trying to raise people’s aspirations, both personally and for the area and their community. We would like New Wortley to be a place people can be proud to live in. For many visitors, engaging with the students is something totally new, yet to see they care about their area makes a



massive difference in helping us achieve our purpose.”

### Landscape Architecture

The building budget included for modest landscape proposals, notionally suggested within the planning application. New Wortley is a harsh physical environment. Therefore landscape architecture students were invited to explore the design of a wider urban realm as part of their Design and Community module. One of the principal functions of the experience was to provide opportunities for third year undergraduate students studying landscape architecture to experience the theory and practice of landscape design in association with client groups to develop social awareness and professionalism. A common problem of co-design within LBU is that the client's project and student learning outcomes do not immediately match. The skill of the live project educator is to develop briefs where learning outcomes are met and the client receives the work it has effectively commissioned. In this instance the landscape brief for the immediate area around the building was not of sufficient scale and complexity for the learning outcomes of the academic module, therefore the scope of the brief was enhanced to include a larger area beyond the centre. In this instance, it emerged that this was also to the benefit of the *community of place*, as the design work became a dialogue about their future needs which will form a further design phase.

### Graphic Design

Whilst working in New Wortley, PO picked up on interesting stories of its history from centre users. In discussion with them it was agreed that a co-design artwork should be created for the new building's double height café space. This presented an opportunity to bring in another LBU expertise in the form of creative writing.

LBU and NWCA encouraged the *community of place* to reflect on their life in New Wortley. The output became part of Dr. Katy Shaw's Y21 Yorkshire Socio-Cultural Regeneration project.<sup>10</sup>



figure 4: Co-designing creative workshop (Graham Davey)

Starting with a series of workshops advertised as 'Bringing the community together to create a mural celebrating and sharing stories of the history and life in our area', these one day workshops encouraged participants to share their knowledge of local history, including anecdotal events that have become part of the area's story. The aims of the workshops were to generate a narrative that tells the history of New Wortley. Professional creative writers and drama practitioners led sessions on community history, creative writing and performing the past.

The outputs enabling an artwork to be produced were hand written stories encapsulated through specific writing activities. These were collated and passed on to the graphic design course team to convert into the art piece. It was requested by the cultural studies academic that the authenticity of the original writing should be retained and not modified, so this became an exercise in filtering key comments, not creating new wording from them. Initially a BA3 graphic design student took on the task of transforming sixty five A4 sheets into a coherent work as part of his module studies. This, unfortunately, proved too much for the student in the time frame, consequently his tutor undertook the work. The design was converted into working drawings by PO and routed into plywood panels at the university's workshop, before being installed on site by the main contractor. The artwork exemplifies the co-design method of many hands being directly involved in its production, from the generation of the idea, through its design and implementation. Although the final piece is successful, the complex process of its production meant that working with *fleet of foot* attitude was



necessary, as illustrated by how the team pulled together when the designated student failed to produce the graphic design in a timely way. This is a normal incident in live project pedagogy – *contingency* and *messiness* are worthy of further study.

### Product Design

BA2 product design students were set the challenge of designing three complimentary elements for the interior of NWCC; reception desk, built-in seating and computer hub. Students were given a construction budget and required to design all three pieces as a cohesive set, with one piece developed in more detail with technical drawings for manufacture. To help, a specialist local joinery firm, Chippendale Projects Ltd (CPL), was appointed at the start of the module, taking part in co-design sessions between students and client over a ten-week semester period. PO also participated, meaning the *community of practice* included NWCA, residents, manufacturer, product design students, product design tutors, and architecture tutors. This ensured the three day-long co-design sessions were highly productive. The first sought a spatial understanding, with all attendees involved creating a 1:20 scale model of each designated area, followed by a tactile materials exploration from the many samples provided by CPL, enabling students to develop concepts for discussion at session two, two weeks later.

Product design tutor Jennifer Chalkley reflected on the power of the initial session, “None of the clients or residents had built scale models before, and the majority struggled to visualise how the internal layout would feel three-dimensionally. Thus the exercise provided everyone, not just the students, an important learning outcome which enabled a far more engaged collaborative discussion because the community representatives no longer felt isolated by their lack of design training.” In session two, students ‘built’ a collage drawing in front of everyone to express their concept. Again, this visual descriptor encouraged participation, and the remainder saw each collage continually reimagined until each design truly represented the client needs via the student narrative. The first detailed tutorial with CPL occurred a week later, providing students the construction knowledge to develop their

now resolved concepts in an accurate and justified manner.

The third co-design session before final review took place in the half-constructed community centre building, with scale models and drawings for each piece placed in location. An excellent *community of place* turn out reviewed the work, leaving written feedback on all pieces following student presentations and discussion. Many were intrigued by the iterative design stages, with one remarking, “I thought you just drew something and that’s it! It’s amazing to me to see how they’ve changed and how much better they are now than at the start.” Thus the co-design sessions embodied a situated learning environment where everyone involved gained tacit knowledge.

Following a second detailed design session focusing on affordability, students presented a range of interesting and well considered final designs to the community of practice, who subsequently voted on their preferred scheme. Megan Fitzmaurice’s work was chosen as the preferred design with her notion of the furniture creating ‘rooms’ within the space to delineate usage and inhabitation. Following the result Megan said, “We worked very closely with the staff and members of the community centre to find out the requirements they wanted from the hub areas. I engaged with the users of the centre to find out the pros and cons of the existing hub to ensure my design was suited to the users in a way that will benefit everybody, also creating an environment to bring comfort and relaxation as the centre is an important place for so many people within the surrounding community.”



figure 5: Co-designing (Simon Warren)

With the help of CPL, Megan finalised her design and PO oversaw the detailed construction drawings. Another student, Tobias

Bridger had designed a construction method that was better suited to fabrication and this was integrated, so a practical hybrid evolved. Commenting on the end result Megan continued, “Once the design had been manufactured and installed, seeing it coming together was an incredible experience knowing I had been a part of something that was going to be applicable in so many ways to benefit people's lives. I thoroughly enjoyed every minute of this project, it has greatly influenced my attitude towards the designer I want to become which is focusing on people centred design.”

### Consultancy

NWCA appointed PO as architect and contract administrator using funds from the Big Lottery grant. This income enabled PO (through LBU) to employ architecture and architectural technology students in an alternate co-design situation. Whilst still a valuable learning experience, the pedagogic outcomes of project delivery (particularly the production of construction drawings) did not align with module outcomes in the academic setting in this instance. Thus a new condition is created where interaction with the *community of practice* takes place as *professionals* rather than students.

In this scenario, the learning experience for the student is clear, an expectation and requirement for high quality output as a paid professional. Affording this opportunity within the School of Architecture is unusual and is captured by RIBA Stage 1 employee Graham Davey, “Involvement with PO as both a student and a working graduate has been very rewarding. The difference between the two roles has been fundamental with increased responsibilities and the change from participant to facilitator, however both have been great experiences allowing me to really make a difference to those less fortunate in my immediate area.”

### LEARNING OUTCOMES FOR A CO-DESIGN METHODOLOGY

The writers have learned much about co-design methods from the New Wortley project and others in their live project portfolio.

Reflecting specifically on NWCC there are lessons to be carried forward to future live projects:

1. The role of the live project educator  
Somehow the live project educator must simultaneously occupy the role of *participant* and project *enabler*. This is paradoxical but not impossible, yet further complicated by the educator also being an academic assessor of the student learning. PO managed seemingly conflicting positions by being continually aware of these roles in each learning environment. This warrants further study; the writers are captivated by the *paradoxical* conditions within the live project and co-designing.

### 2. Maximising Participation

During the project the writers started to apply Lave and Wenger's *situated learning theory* to each design interaction. To intensify the effect of situated learning environments, co-design has offered participants an equal opportunity to develop knowledge and capabilities. For example a volunteer commented after being involved in the café artwork workshops, “I was uncertain as to whether my ideas were being taken seriously by the organisers during the exercises, but my words are in the artwork, I read them every time I go in.” Asked more about how this made her feel, she added, “Mostly just proud but it has also made me think I can get involved in more things at the centre even if I don't know much about them, I usually have a opinion on them.”

To achieve high levels of successful participation, the writers, as live project educators, recognise that their relationship with all participants is vital and complex, and can be differentiated in particular situations. This means leading from the back, inquisitiveness, openness, sociability, conciliation, intervention, optimism, self-effacement, honesty, to be questioning, etc. This takes commitment, energy and time which requires building into planning the project.

### 3. Fleet of foot

*Fleet of foot* is an overarching condition of the live project educator. Constantly be receptive to opportunities for co-design situated learning; see them, invent them and do so quickly so that the moment does not elude you.

#### 4. Structured and unstructured co-design techniques

Co-design techniques can be structured or unstructured. It is enough sometimes to have everyone in the room and see what happens. Sometimes collaborators are self-organising without the involvement of the live project educators. More structured co-design sessions such as the oral artwork example are successful but need significant planning time. The advice is to plan in advance but accept that projects have the capability to self-organise at any moment. If they do, go with it (see point 3 above!).

#### 5. Missing the boat

A capital construction project has a specific programme and there are significant (financial and/or time) penalties if the 'client' does not achieve deadlines. At NWCC the opportunity for implementation of co-design activity was missed on numerous occasions (the deliberateness of undertaking co-design processes normally takes longer than orthodox design) so that construction deadlines could be met. This usually meant that PO solely carried out design work quickly for integration, rather than with co-design stakeholders. Although this was disappointing at the time, the complexity of this live project meant that having the PO architecture consultancy to fall back on prevented delays occurring. Without it the project simply could not have been achieved.

#### 6. This is fun.

Flippant as it might sound; being open and inviting a diverse collective to participate towards a common goal is very rewarding and enjoyable. The *communities of practice* and of *interest* become a gang to identify with. It is a social experience.

### CONCLUSION

Live projects are particular situated learning environments at LBU facilitated by PO's design and research collaboration of staff and students. In focusing upon delivery of the NWCC building, this paper advocates co-design as a methodology to enrich situated learning environments successfully across both practice and academia.

Based upon the driving desires of a *community of place*, LBU has become embedded in a

*community of interest* looking to support those ambitions, which led to a *community of practice* primarily constituted by students, professionals, centre users, and local residents. The reciprocal relationship between students, academics and the *community of place* has resulted in beneficial social, cultural and economic effects.

The Social Mobility Group of Universities UK<sup>11</sup> (SMGoUUK) makes comment about the role of many Universities as 'anchor institutions within their local community, working with local and regional partners to promote economic, social and cultural regeneration.' Although LBU has not directly expressed itself as this (yet), it is clear that there are many initiatives across the university that can be defined in this way. Live projects, across academy and community by definition fulfil this aspiration.

The collaboration at New Wortley is important for at least the following reasons:

1. Mostly, normative student design work is an end in itself in pursuit of learning. The live project not only achieves this but also produces a piece of work for an external collaborator. Students through their productive endeavour achieve meaningful contributions to society. Extrapolated, students are the one resource that universities have in abundance and if this student workforce is mobilised as a collective *force for good*, the positive effect on society is potentially huge. At New Wortley, the significant output is a new community centre. The construction of the building itself has contributed to the economy, but more significantly in just its first year the activities it houses have contributed considerably to the local economy and social capital through job creation, shop, the ex-offenders project, room hire, café, education etc.

2. The physical university is defined as the campus and most learning exchanges happen within it to the exclusion of the wider community. By embedding learning outside the institution's walls a transformative situation is in train. SMGoUUK espouses social mobility as an objective but closer to the writers' aspirations is how live projects and other programmes can be seen as a means to

reduce inequality. LBU has been visible in New Wortley for the last eight years, the *community of place* has become familiar with it and its personnel, and accepted it as part of the *community of interest*; it is not perceived as a world apart. Conversations around education to encourage first time applicants into higher education, or at least the possibilities of formal education have occurred. During a feedback session one of the writers asked a volunteer, “What was your most memorable moment of being involved in the building project?” The reply was startling, “I spotted a few spelling mistakes on the student’s sketches so I corrected them, not in a nasty way but in a jokey way, saying that I had no qualifications and he was training to be an architect.” The writer asked why he remembered this so much, he replied “It gave me confidence to go and sit with other students and do the same thing, I helped a couple more students with spellings. It also meant that some students started asking me questions about the design, and I felt confident enough to say what I thought.” The writer asked the volunteer if he thought that getting qualifications might be useful to him. He replied, “no, not at my age but I have been talking to some of the younger volunteers and told them that they should do it”.

3. Universities can bring specialisms and expertise that augment the skills on the ground to produce work that is richer. The community centre design is an example where the ‘quality’ is better both because of the co-design process but also the participation of the academy.

4. The positive social and cultural effects of collaboration are in part because the co-design methodology dilutes hierarchical positioning. Feedback from students and community points dramatically to the progressive knowledge transfer between participants involved in co-design live projects. For the students, this entrenches the ethical and social responsibility of designers in the built environment. Whilst delivery of a new community centre is a significant milestone, in reality the journey continues, as the aspirations of the New Wortley *community of place* continue to increase, LBU’s role as a *community of interest* stakeholder will endure, enabling more students to participate in co-design projects further enhancing the area whilst

simultaneously facilitating the writers continued development of this strategic approach to live project education.

Given the points above, it is felt the co-design undertaken for the delivery of the new New Wortley Community Centre has significant, and measurable, added value due to the process. Co-design therefore is a worthwhile endeavour for those wishing to equip design subject students with an understanding for real world complexities whilst simultaneously enhancing the community’s physical, cultural and social environment.

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