

DESIGN.LIVES LABS: INTRODUCING SOLUTION-FOCUSED METHODOLOGY TO DESIGN AND CIVIC EDUCATION

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ABSTRACT:

This paper reports the latest development of the collaboration between design researchers and a sociologist on the practice of designing participation. This focus of the paper is to pinpoint the reason why we employ the solutions-focused approach and to elucidate the basic tenets of this approach. Based on two recent Design.Lives labs organised for a design school and a civic education organisation respectively in Hong Kong, we reflected on the nature of design practice in the light of the methodology combining solution-focused approach and non-verbal means for reflective communication. This choice is related to our understanding of the nature of experience research in social context, where wicked problems dominate and abductive logic is needed. In our view, design process implemented in the form of solution-focused ways of knowing is a valuable kind of experience for general learners.

1. INTRODUCTION: WHAT IS DESIGN.LIVES LAB?

Working as a team, which is composed of design/culture researchers and a sociologist, we launched the **DESIGN.LIVES Projects** in 2009 to provide training and experience for people to learn how to appreciate design participation as a way to reach for social inclusion as well as to design their own lifestyles. Our approach echoes one of the ideas proposed in the UK's 'Higher Education for Capability' (HEC) programme 'to assist students in their development of the capability to benefit from and cope with modern life, and to contribute productively to their society' (Engel, 1991). It was based on the *Education for Capability Manifesto* published by the Royal Society of Arts (RSA) in 1979. Apart from the traditional purpose of higher education of fostering scholarship and of valuing knowledge, education for

capability has become another important purpose. For our Design.Lives projects, we conduct labs to develop learners' capability to deal with important issues of social exclusion and their own ways of enhancing social inclusion through design practice. We believe that fixation on the role of designers as the decision-maker and the suppression upon reflexivity on designer-user relationship would create power disparity, which leads to social exclusion. We need alternative mindset for the formulation of theoretically feasible frameworks to guide us to achieve social inclusion through designing participation.

'Based on the idea that the learner's perspective defines what is learned, not what the teacher intends should be learned. Teaching is a matter of changing the learner's perspective, the way the learner sees the world' (Biggs, 2003:12), this is why we initiated Design.Lives Labs as extra-circular activities instead of a formal subject. Instead of calling it 'workshop' or 'challenge', we prefer to call it 'lab' since we challenge the traditional position of formal teachers and name it as 'cultural curator' to ensure sufficient space for learners to take risk and design their ventures. Furthermore, we adopt the participatory model of authenticity which is based on the assumption that the authenticity of a learning activity should be derived from learners participating in a real world setting, dealing with real-world problems and being in an authentic context (Barab, et al, 2001). The classroom should not be confined to formal classroom setting. Thus, we design our learning setting in the form of a lab and allow all are learning and doing design in such an authentic context. We invite THREE groups of people to interact and define their own perspectives of the real world:

1. Learners including different levels
2. Mentors with strong design skill and interests in social development
3. Invited social groups from local communities by cultural curator as part of the creation context in which both learners and local people could interact and develop design ideas together

The major component of the labs is learner-led activities and the mentors work with cultural curator to relegate to a secondary position at which together they give coaching sessions to individual learners so as to facilitate them to develop learners' own innovations. Bringing in local people with different backgrounds is to let our learners to share knowledge and experience with them. Of most important, these interactive sessions would provide platform at which learners and local people could develop their own methodologies to design practically feasible and sensible ideas and products that would make both parties' own lifestyle different.

1.1 LEARNING THROUGH EXPERIENCES

Main aim of our labs is to create situations for learners to experience the practice of Inclusive Design. Through the process, cultural curators facilitate the learning experience and enable the learners to understand the concept and finally adapt to the own practice. Biggs (2003) stressed that '*learner has to do to create knowledge*'. This echoes our idea of 'working with our learners' to allow them learning through doing. They are also

required to base on the interactions of the world as a learning tool as suggested by the concept of Experiential Learning (Kolb, 1984). In fact in our case, it is not just a method to allow learners to learn through experiences but the learners do have control over their experiences, which will be more related to their everyday experience, which based on two basic tenets.

Firstly, this approach requests us to understand how different learners understand the subject matter of their study. We make reference to Biggs's (2003:48) Structure of Observed Learning Outcome (SOLO) taxonomy¹ that is a learner-led approach, which we need to find how much our learners understand when we teach them before we continue our activities. This exchange between teaching and learning explained by the SOLO taxonomy become a useful tool to define different levels of understanding of our learners as well as explaining the selection of methods of engagement.

Secondly, we identify the practice of inclusive design and other forms of social design that clearly requires a high level of understanding. It suggests that attitude changes in design practice and to our everyday lives are possible. Learners also require an extended abstract level of understanding, where they can make connections not only within their subject area but also beyond it and are able to generalise and transfer the principles and ideas underlying the specific instance. Its effect depends on personal experience and personalities of the learners and not directly reflected by their education level.

1.2 WHY SOLUTION-FOCUSED METHODOLOGY?

Starting from individual experiences, more important for us as the 'cultural curators', we want both the learners and their teachers (our learners) to understand and practice a new way of designing as a professional practice as well as a life skill to design their own lifestyles and the others. In comparison with the conventional ways of problem-solving approach to design, the use of solution-focused approach is related to the nature of problems in design practice as *'design problems are inherently ill-defined, and trying to define or comprehensively to understand the problem (the scientists' approach) is quite likely to be fruitless in terms of generating an appropriate solution within a limited timescale'* (Cross, 2006:18-19). Underlying the solution-focused approach is the abductive logic in the sense that while *'...induction shows that something actually is operative; abduction merely suggests that something may be...It is therefore the logic*

¹ John Biggs (2003) *Structure of Observed Learning Outcome (SOLO) taxonomy*

1. *Pre-structural - The task is not attacked appropriately; the student hasn't really understood the point and uses too simple a way of going about it.*
2. *Uni-structural - The students response only focus on one relevant aspect*
3. *Multi-structural - The students response focus on several relevant aspects but they are treated independently and additively. Assessment of this level is primarily quantitative.*
4. *Relational - The different aspects have become integrated into a coherent whole. This level is what is normally meant by an adequate understanding of some topic.*
5. *Extended abstract - The previous integrated whole may be conceptualised at a higher level of abstraction and generalised to a new topic or area.*

of conjecture' (Cross, 2006:19). As Cross (2006) pointed out, the core features of design ability comprise strengths to:

- resolve ill-defined problems
- adopt solution-focusing strategies
- employ abductive/productive/appositional thinking
- use non-verbal, graphic/spatial modeling media

In our view, design does not start with any propositional logic or scientific hypotheses then employ scientific methods to identify the 'real' nature of the problem, and finally put forward designers' solutions. Conversely, we starts with a view put forward by Cross that which emphasises *'the role of the conjectured solution as a way of gaining understanding of the design problem, and the need, therefore, to generate a variety of solutions precisely as a means of problem-analysis'* (Cross, 2006,17). At the same time, we also stress on Schon's ideas (1987) of *'a reflective conversation with the situation'* and design learners are encouraged to use non-verbal ways of knowing as design works might happen outside the boundary of verbal discourse.

In light of the combination between solution-focused design methodology and non-verbal means for reflective communication, we would highlight the limitations of designers themselves. Our reason is related to our understanding of the concept of experience. Certainly, design process in the form of solution-focused ways of knowing could be regarded as a kind of experience. Actually, it is a kind of learning experience. When doing inquiry into the problem in our hands, we, together with potential users and even the public, constitute a community. By conceptualising the context in which designers encounter potential users as 'the community of inquiry', we encounter the issues arising from the nature of such a community, which are uncertainty, complexity and undetermined zone of practice. We are dealing with a real life situation of which we have limited knowledge and understanding.

In this sense, it is owing to the nature of problems in design practice, i.e. wicked problem, and we should employ solution-focused methods to start a design process. The teaching and learning of this kind of method would be facilitated if abductive logic is introduced. Underlying the application of abductive logic is the opening up of the practice community where both designer and potential users are involved. Finally, we bear in mind that rational deliberation and communicative rationality would govern design practice (Ho and Lee, 2010).

1.3 INCLUSIVE DESIGN BY, INCLUSIVE BY DESIGN

In planning the labs we were always baffled by a methodological question about the relationship between designers and the people at large. From the concepts of Inclusive design to Design Participation(s) and further to making social changes collectively, there are three ways that describe the relationship between designers (who make decisions) and people (who receive the designs):

1. Design for - in which designers study and consult people in their role as experts in the design process;
2. Design by - in which designers act as facilitators to enable people to make their own design decisions.
3. Design with – in which designers share the design process with people, who become active participants in the work
(www.designingwithpeople.org)

This also relates to the discourse of new model for ageing and disability, i.e. the cultural model is about co-designing ideas for a better world based on inspiration from interactions with disabled people. As Heylighen et al (2010) referred three models:

1. *Medical model of disability*, as 'considering disability as an individual, physiological, disorder to be treated or cured'. The medical practitioners would implicitly act as the dominant figure and put patients at the subordinate positions. This in fact entails the political tension between experts and followers, doctors and patients.
2. *Social model of disability*, as the main tenet is just 'recognizing the interaction between a person and the context of his/her actions', and put just more emphasis on the social responsibility of the environment.
3. *Cultural model of disability*, as 'the potential of disability [is] as a source of refreshing perspectives, which challenges categories that tend to be taken for granted in design, and reshuffles boundaries in between them. Subject to this questioning and reshuffling are boundaries within the material environment, boundaries between the material environment and people/the body, and boundaries between (groups of) people'. This new concept of disability acknowledges both the medical and social dimensions of disability but also attaches more importance to bringing the discourse and practice to a new level that stresses the potential of disability to question normative practices and prevailing frames of reference in society (Devlieger, Rusch & Pfeiffer, 2003). In the case of this new model, there are no difference between the experts and the users, i.e. everyone has different role. This leads to the practice of 'Design By', which we intend to implement through our attempts in conducting our Design.Lives Labs.

2. THE CASES: DESIGN.LIVES LAB TO RETHINK DESIGN FOR AGEING, DISABILITY AND COMMUNITY

In order to introduce solution-focused design approach to address social inclusion and design thinking for the sake of enabling creativity, we have conducted Design.Lives Labs with different organisations and in this paper, we compared two of them happened in Hong Kong: a professional training for a design institute and a social innovation generation project for a civic education organisation.

2.1. AIMS: INVESTIGATING THE DESIGNERLY WAYS OF

DOING

Originally, we were invited by a design education organisation to conduct a research project about developing design implications for the ageing population. Upon our reflection we decided expand the our scope of study from aged people to ageing process and local community in order to rethink the design implications for our future selves and social impacts of a new design school to local communities. In order to introduce solution-focused design approach to address the specific issue of social inclusion, we conducted a three-week Design.Lives Lab in which we served as visiting scholars in collaboration with the staff members of the design school. This is a new campus built in 2010 and surrounded by six different housing estates where over 20,000 households are residing (Figure 1a) in this new town of the Hong Kong city.

In the other Design.Lives Lab (figure 1b) that we developed for another social organization, its main purpose is to stimulate participants who are without design experience to design 'things' to address disability. We have learnt in our previous labs that many of the ideas ended up as 'design for' people with disability but not inclusive (see Ho, Ma and Lee, 2011). As a result, we conducted a series of Labs and coaching sessions as a continued learning experience and treat people with disability as ambassadors to participate as one of the team members. The aims of the labs are as follows:

- Bring different young people together to experience 'designerly way of doing'
- Create situations to let young people with different abilities to share designing and co-ownership, it is not about helping disabled but enabling everyone through design.
- Stimulate co-development of creative social ideas for a better world and through a co-designing/inclusive process



Figure 1a (left): Design.Lives Lab with six housing estates around the design school

Figure 1b (right): MaD X Design.Lives Lab

2.2. PROCESS: EXPLORING METHODOLOGY

Both labs got a common question about how to make social differences through design. However the starting point was different, one with design

students to learn about solution-focused of designing and the other is about participants who are interested in making differences and hope to be equipped by design as a new way to achieve their social missions. For both cases, we created situations for learners to experience and define the differences between the approaches of problem-solving and solution-focused through three stages.

In the first stage, we allowed more free space for learners to practice problem-solving methodology in the sense that they just employed their favourable methods to find out their concerns, such as visits, interviews and data mining and we conducted short design exercises or games (Figure 2) to give learners chances to present their tentative results and building team spirit.

In the second stage, we intended to challenge learners' habitual ways of knowing. Therefore, we conduct games for them to understand the significance of non-verbal experiences. Finally, learners were asked to try their ideas in real situations with real people and through the process, we introduced the concept of prototyping as solution-focused experience.



Figure 2a (left): 2D-3D workshop to challenge learners creativity in form building as well as building team spirit

Figure 2b (right): Collective game for team building

3. RESULTS: DESIGNING PARTICIPATIONS

Even though our design labs are not limited to design disciplines learners but we ran our labs like a typical design project that we kick off project briefs to our learners. However, the brief to students was unlike ordinary design projects, i.e. we did not ask for a final design proposal. Learners were briefed to act creatively about the concept of design outside their knowledge and beyond. Working in team and each team is responsible for designing 'something' with different people in their team or outside the field.

The Lab for design education was with six teams formed with over 30 Higher Diploma design students from three-design discipline: Interiors, Products and Graphic Design. During a three-week period, learners experienced problem-solving, solution-focused design and participatory methodology in

design with local communities. Each team was assigned to engage residents of one housing estate around the design school. Instead of designing objects for sale to celebrate Chinese New Year, students were asked to design means of participation to engage the local community. We commissioned a local bamboo structure master to build six traditional temporary market stalls for the teams to install their designs. The result was six design booths to create a Chinese New Year Market to 'sell ideas' to the local residents, in order to build bridges between the design school and the residents of the six estates in the neighbourhood. Each team was guided to identify an object to represent their experience (Figure 3) and design their booth around the object. After two days construction, the final task for each team was to 'run' their stalls and develop operation ideas for further interactions with residents (Figure 4):

1. Team Balloon - encourage residents to have more physical interactions than online debates, they used balloon as a mean to invite people to leave messages for the others.
2. Team Leaves - focused on developing methods for residents especially with those are disabled to express their wishes, they collected fallen leaves for people to write message on them and send them back to the others.
3. Team Lantern - A big lantern was constructed with colourful colanders to attract visitors to make Chinese New Year wishes.
4. Team Recycling plant pot - using used newspaper to recreate plant plots for fresh plants to give back to local residents.
5. Team Furniture - collected many unwanted furniture and deconstructed them into new pieces of furniture to demonstrate new ideas of uses.
6. Team Shouting - made many paper speakers for people to shout on the design school campus as an alternative public space to their gated community.



Figure 3 (left). Six objects identified by students for six interactions,

For the version with civic education organisation, two separated Labs were conducted in two months. In Lab 1, there were total 8 teams with over 150 participants who are youngsters (age 16-30) from Hong Kong and Southern China with mixed backgrounds and abilities. The format of this design lab was a mixture of taught content and hands on exploration. Special game-like activities were designed to provide 'learning through doing' experience for them to learn to be designers to design inclusive lifestyles. We

introduced another three layers for all participants to learn about creative process through three levels of experience: *personal, group and community*. 6 ideas were selected and each team went through individual coaching and prototyping sessions. Then they were invited back for Lab 2 to present their ideas to apply seeding funds for future development.

Comparatively, the results for the civic education programme got longer-term development. The result after Lab 2 each team was assigned with a mentor and a collective seed funding was set up for the next step development:

1. Social movement to get people to give seats to needed – mentored by a sociologist
2. Campaign to promote standing in public transport system in order to let the seats for needed – mentored by famous graphic designer/artist
3. Social project to encourage intergenerational communication through the act of letter writing – mentored by design researcher, expert in ageing and design research

4. CONCLUSIONS AND REFLECTIONS: RELATIONSHIPS BETWEEN LEARNERS AND TEACHERS

In conducting Design.Lives Labs, we found that learners always perceived as problem solvers, opportunity seekers or change makers/agents, to name a few roles. This reflects that they regarded themselves as craft makers whose responsibilities are to produce appropriate artefacts or ideas to solve problems. This is our attempt to incorporate solution-focused design methodology into social awareness projects.

We do not regard this methodology as one of the many methodologies that could be employed by designers. Rather, we argued that, as Cross suggested, the nature of design practice is necessarily determined by its target, i.e. the wicked problems and by the ability it needs, i.e. design ability. It has been pointed out by Cross (2006, 19) that '*design ability is therefore founded on the resolution of ill-defined problems by adopting a solution-focusing strategy and productive or appositional styles of thinking*'. By using appositional styles of thinking, we understand that no one can claim any prestigious position to judge what the best practice is. In light of this understanding, we suggest the opening up of the design practice community in which both designers and potential users should be allowed to involve in the design process, since the knowledge and practice of both parties would contribute to the design process. At the same time, we explore how to change public awareness of design and its application to social issues. Through conducting Design.Lives Labs for different organisations, it is clear for us that it is essential to introduce solution-focused design methodology as a way to stimulate collective creativity between different social groups. However, by comparing our experiences with these two latest labs, we reflected and identified *four issues* that can improve our future development:

1. Support for group working – we reckon that it is essential to develop tools to stimulate group working. During the process, participants were not willing to work in team esp. they do not know the other before. It was fine in the beginning esp. after participating in team-building games but the relationships were broken during the coaching process. Differences between cultural backgrounds, ages and abilities are the key factors to affect team spirit development.
2. Demanding customers/passive learners Vs active participants – Participants might got wrong messages; they are attending taught courses or they are recruited to come to learn how to 'design' things for the others. The fundamental problem of this attitude is that they did not behaved as active participant and prepared to contribute and taking responsibility of the solution development. Since the preconception is to come to 'design' for the others, they expected to receive instructions and forgot to recognise their own abilities and respect their team members' ingenuity before they can understand the others' needs.
3. Misunderstanding of 'design'– the main issue aroused was that general misunderstanding of the act of 'design' is about creative ideas and not realised the best designers develop the best ideas based on 'learning through doing', which focus on refining the solutions through prototyping. We introduced the concept of prototyping and encourage participants to try their ideas and they really enjoyed the experience and expressed it is a good tool for idea development. However, in general, they are lack of the ability to reflex and extract lessons from the prototyping experience. Instead of refining their ideas into better solutions; what they did was to replace the failed idea with another idea.
4. Design based on assumption not supply/demand model - The more complicated issue is that they started the exercise with their preconception that they are joining an experiment to develop ways to 'help' the others. With the misunderstanding of the act of design and social inclusion, during their prototyping exercise, they realised that their assumptions of the others were wrong but instead to refine their solutions, they started it all again. Therefore, during the coaching sessions, we guided them to first design for themselves and their friends before trying to provide services for the others that might not be necessary. We also briefed them the eco-system approach to develop social-innovation, which is a tool for self-reflection while testing ideas in order to achieve a balance of social cost. The results were that many of them are confused about the approach. Thus, they kept going back to the social model and got frustrated while testing since people do not need help or they cannot offer better solution to help the others.

In conclusion, while we are transferring the knowledge of how to practice solution-focused methodology to our learners, at the same time, we are also prototyping our ideas of Design.Lives Lab with different organisations. The process is part of its evolution.

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