

'Teen-scape': Designing Participations for the Design Excluded

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ABSTRACT

Aside from designing *artefacts*, designers can also design *participations* with people. This paper is a reflection of an eighteen-month design experiment by a design researcher with different designers aiming to develop a relationship with staff members and students of a secondary school. From this responsive experiment, four identified types or steps of design participations were identified: 1) *innovation* led by designers; 2) *collaboration* between designers and the 'users'; 3) *emancipation* focuses on how users invite professional designers to share design thinking and finally, 4) *motivation* is about projects initiated by 'users' to invite designers to co-designing. The result of this period of engagement is '*Teen-scape*', a new school playground, designed by a design graduate, through exposure to methods for design inclusion. The introduction of creative thinking from design studies into the secondary school environment, through this design engaging process, demonstrates how design can instigate a transformation of lives, whilst highlighting the importance of people participation and the role of design facilitators who instigate and inform the participation. The main aim is to urge a new design discipline, entitled the *Design Participations*, which is a design study area extending creative thinking to design processes that engage people in design.

Keywords

Design Participations, Inclusive Design, Children Participation, Design Exclusion

1. WHY DESIGN PARTICIPATION(S)

Designing Participation(s) is about exploring creative ways to enable people to participate in design processes. The term was introduced in 1971 at the Design Research Society (DRS), the first international conference, which

addressed user participation in design. This event initiated the discussion and defined 'Design Participation' as a specific field that aimed to bring 'everyman' into the design process [4]. After this initial conference and the subsequent discussion on this new type of design activity [8], the field of Design Participation was more clearly defined. However, over the years and with the evolution in design research '*from a user -centred approach to co-designing*' [24], the term 'Design Participation' began to fade and different design practices acquired their own definition of 'participation'. Therefore, by re-introducing this term as an umbrella term, the aim is to encourage more interactions between different types of user-related design practices and stimulate new developments in the field.

In addition, after more than thirty years of the DRS conference, the general practice of design is changing. Designing is expanding from the creation of things to the design of experiences, services and processes. Therefore, involving and understanding end users within design becomes an essential part of design research [23], and the practice of facilitating participations becomes one of the important elements of designing [2]. Where 'participation' becomes a fundamental part of most design processes, the key issue is how to involve people's participation in design, generating questions on '*how do these involvements happen?*' [20], and '*how does it lead to design for or with people?*' [25].

With long history of participation development and with more participations taking place, it is important to clarify that user participation in design may require 'paralogy' rather than 'innovation'. According to Lyotard's proposition [16], '*Paralogy must be distinguished from innovation: the latter is under the command of the system, or at least used by it to improve its efficiency; the former is a move (the importance of which is not recognized until later) played in the pragmatics of knowledge... The stronger the 'move', the more likely it is to be denied the minimum consensus, precisely because it changes the rules of the game upon which the consensus has been based*'. This can be explained why the 1971 DRS conference, and uses the title Design Participation (DP) *not* Participatory Design (PD) because PD can be considered innovative and one of the rules to control the design game but DP is an

altogether new attitude or way of thinking towards playing the game that attempts to rewrite the rules. With more co-designing or participatory design projects happening, future users are co-creating tangible design outputs, and the role of designers is changing, providing useful design thinking to address the challenges of wider global issues [24]. In addition, the multiple roles of design are developed to include those of the developers, facilitators and generators in design [11]. Thus, it is essential to develop a special study area in designing participations, which can bridge the balance of stakeholders' involvement, by applying design thinking.

Apart from the debate within participation practice, which is mainly related to designers, another main discourse about design concerns design becoming an everyday activity rather than a professional study and its wider consequences to people. Mau et al [18] expressed such concerns when he commented that '*It's not about the world of design. It's about the design of the world*'. This transformation is relevant to participation in design since it concerns the relationship between designers and the people who are going to be affected by design, and raises the question of '*What are the new roles of professional designers under this transformation?*' [13]. On the other hand, with the help of technology, and without formal disciplined education, people are already designing interactive websites, creating amazing photos, producing innovative videos and music. Von Hippel [26,27] has identified such actions as those of 'lead-users', who develop and modify products to fit their own specific needs.

As our world generates more complexity, more holistic thinking methods are needed to tackle rising global issues. It is essential to note that Design Participation does not involve a single set of rules, but of multiple interactions, therefore, participation is not a singular event but that which occurs on a number of levels. 'Participation' should be seen in the plural to emphasise the many engagements that take place during the process. Therefore, the new design study area or discipline: *Design Participations*.

2. HOW TO DESIGN PARTICIPATIONS WITH DESIGN EXCLUDED

If Design Participations is a new design discipline as this paper is suggesting, how does it relate to other disciplines in design practices?

Sanders [24] produced a snapshot of design practices and identified that '*we are moving from the design of categories of "product" to designing for people's purposes.*' Fig.1 shows Sanders' differentiation of the traditional and the emerging design disciplines with the position of Design Participations and Inclusive Design.

Similar to Design Participations, Inclusive Design or Design for Social Inclusion can be classified as the emerging design practices which focus on designing for a purpose and centre around people's individual needs or

wider societal needs with different approaches of longer investigation for larger scopes of inquiry [24].

The traditional design disciplines focus on the designing of "products"while the emerging design disciplines focus on designing for a purpose
<ul style="list-style-type: none"> • Visual communication design • Interior space design • Product design • Information design • Architecture • Planning 	<ul style="list-style-type: none"> • Design for experiencing • Design for emotion • Design for interacting • Design for sustainability • Design for serving • Design for transforming • Design for social inclusion (new) • Design for participating (new)

Fig. 1. A snapshot in time of traditional and emerging design practices by Sanders (2008)

Historically, design has been practiced as an egocentric process with designers looking within themselves for answers to address the problem [20]. Each designer tackles a design brief using their own aesthetic values and their own likes and dislikes. This can often lead to design exclusion [21], where the intended user cannot use and therefore rejects the design. In the UK context, the development of social inclusion at policy level has reinforced the development of Inclusive Design, which was first introduced by Roger Coleman in the early 1990's. The UK Department of Trade and Industry [10] defines Inclusive Design as "*a process whereby designers ensure that their products and services address the needs of the widest possible audience*". It proposes that the users' needs and abilities change throughout the life-course, and should therefore be taken into account within design processes and design outputs. Such considerations can improve the design of products, environments and services for the majority of potential customers in ways that are not associated with negative perceptions of age or disability or other excluded groups [7].

This concept of design for social inclusion is quickly emerging as a potentially important driver of positive change, and central to this premise is 'getting to know your users' [3]. Through identifying those being excluded by design and involving them in the design processes, more inclusive products, systems or buildings are designed for the mainstream market. Instead of conducting design courses in a traditional way, a research project entitled i~design, was set up to define the inclusive design purpose, identify good practice and develop tools for designers to understand its principles. Action research methodology is adapted to set up situations for designers and industrial

partners to experience the process and develop their own inclusive design processes.

Therefore, the development of Design Participations can contribute to the engagement with those being excluded by design. At the same time, Design Participations do not follow traditional learning and teaching modes but adapts the ‘learning through doing’ methodology from Inclusive Design and identifies good practice and formulas for designers to pick it up and utilize in their practice.

3. TACTICAL DESIGN EXPERIMENT FOR DESIGN PARTICIPATIONS

Through reflecting a progressive engagement between a design researcher and a secondary/high school, this paper aims to demonstrate real cases for the four discreet stages, which are called *Design Participation Tactics* [11,12,13,15]. All these cases were responsive to real situations and they validated the choice of tactics opposed to strategy. Based on De Certeau’s concept of ‘Strategy’ as the ‘*calculation of power relationships that becomes possible as soon as a subject with will and power can be isolated*’ [9]. Whereas, ‘Tactic’ is ‘*a calculated action determined by the absence of a proper locus. No delimitation of an exteriority, then, provides it with the condition necessary for autonomy*’ [9]. In contrast to ‘strategies’, ‘tactics’ are based on time and opportunities and offer a more hands-on experience of Design Participations, by putting designers within people’s field of everyday life.

3.1. How did it start?

The partnership started through a conversation between Lee (a user research tutor and researcher of Inclusive Design) and a high school education manager in West London. The diverse cultural demographic of the area includes young people from Afro-Caribbean regions, as well as South Asia, the Middle East and Eastern Europe. Each community has their own language and customs and most of the communities are ‘close knit’ and tend to not integrate with each other or the larger indigenous population. To engage such a diverse yet segregated community is the main task for the education manager and her work is to steer students to the ‘real world’. Design students and professional designers from a number of varied cultural backgrounds were brought into the school environment at a range of stages. During a period of eighteen months, the participations between designer and users were designed by Lee, evolving from design-led to user-driven processes through four defined *Design Participation Tactics* [11,12,13,15], these tactics were:

- DP for Innovation
- DP for Collaboration
- DP for Emancipation
- DP for Motivation

The four tactics essentially explain the user-designer relationships with different purposes. The terminologies were inspired by Lyotard’s [16] notion of narrative of speculation and of emancipation, which have legitimised modern science. As McGuigan [19] elaborated, *[narratives of speculation] comes closest to scientists holding the exclusive right and power to legitimise their own work: ‘science for science’s sake’... narratives of emancipation have stressed the social usefulness and purpose of science and modern knowledge generally.’*

Additionally, in referring to Lyotard’s concept of innovation and paralogy, the four tactics invoke Lyotard’s terms; hence in Design Participation for ‘innovation’ and ‘collaboration’, practitioners are working on the system of performativity, and are mission-oriented. For them, knowledge is reduced to its instrumental value. As such, they are conducting Design Participation activities with designers *for* people. In contrast, the ‘emancipation’ practitioners are designing *with* people. Finally, the ‘motivation’ category is about design processes that are motivated by people. With this type of Design Participation, the users have autonomy to steer the design process. In “The Alternative Culture” for Design Participation Banham concludes that in order to make the designer-user game more interesting, it is better to have no fixed rules.

3.2. Four Developing Design Participation Tactics

The aim of this action research is to introduce design thinking into this cultural and design-excluded high school and explore new ways to design participations. It also provided a platform to teach and explore Designing Participations together with design students and professional designers. The four-steps-process between designers and users was intuitive and responsive but naturally developed meanings through the process by the design researcher.

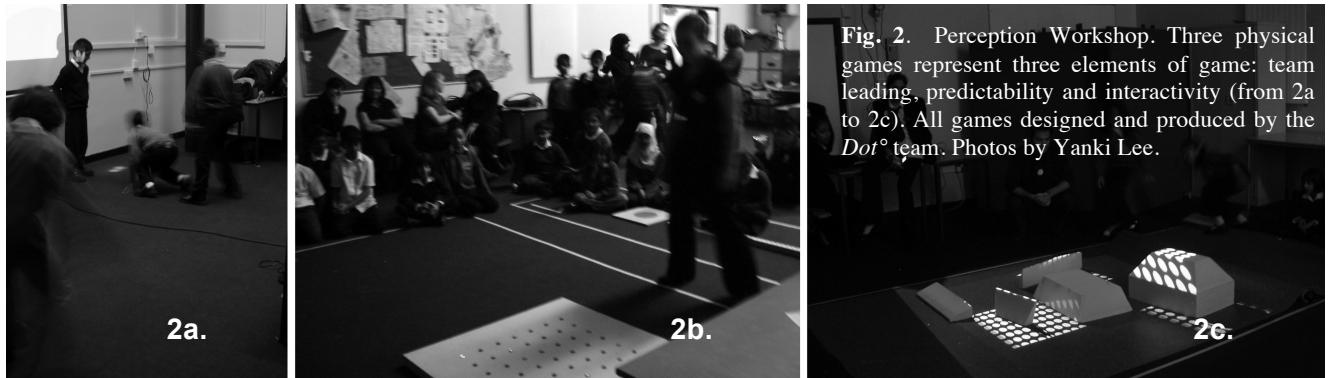
3.2.1 Designers-led innovation

(User research activities by design students)

This first tactic happens as the result of the separation of the designers’ space and users’ space with the development of professionalism. When the two spaces separated, designers focused mainly on the design outputs. Many designers who seek for interesting design concepts develop various ways to understand their users and hope to get inspiration from user interactions.

In this case, two design-engineering and one interaction design student decided to develop a new interactive and physical playground with children when they realised physical interaction in playing is vanishing rapidly as a consequence of the increased use of digital games and computers in everyday life. In order to trigger the unlimited scope of children’s imagination with the best available technology, the design team developed an interactive playground that can be unrolled like a carpet. It

can be easily installed onto any outside space and uses interactive pressure sensors and lighting to illuminate a game interfaces onto the surface of the playground. Different games can be uploaded and started at any time. This design concept was first inspired by personal



school design [29] and the design of a screen-based book for easy English leaning [30]. However, whilst these participations appeared collaborative in reality they were based in one-way relationships where design students wanted to get inspired. Even though, the users (the school

childhood experience and the design students hoped to develop their project further by taking part in an Inclusive Design student awards mentored by Lee. Learning how to involve future users into their design process helped further develop the new playground idea for everyone [14].

Originally, the team wanted to work with a group of children aged eight to ten years. However, with no previous experience of working with children, the team was guided by Lee to design a participatory design process that would create a mutual beneficial relationship with those who participated in the user research and help the design team to set up collaboration with a high school. Instead of working with a small group of children, the design team ended up working with over fifty children and also gave 'training' to five high school students (aged fifteen to sixteen years old) as team assistants to facilitate the design workshops (fig.2). Throughout the process, the high school students, as team assistants, filmed the workshops and interviewed the participants. The resulting short film documented the process, and was used as part of the presentation of the project.

This new design concept went on to win design awards for the excellent concept. The team also won an award for best multi-disciplinary collaboration in an Inclusive Design graduate awards programme. One of the judges, designer and strategist, Michael Peters described, the project as;

'a collaboration not only between industrial designers and interaction designers but involving schoolchildren as co-creators of the project, which addresses child obesity. Great fun. Love it!' [25]

The legacy of this exchange experience included activities that expanded into other disciplines in the awards programme. Design students from Architecture and Communication Design went to the school to 'consult' school students and staff members about the future of

children) really enjoyed the process their roles were passive and illustrated a lack of control in the participations. They were just receivers of design information.

3.2.2. Designers-users collaboration

(Collective Learning Exercise for multi-cultural designers)

The second project was initiated after a period of self-reflection by Lee, concerning what is the purpose of designing participations. Is it for designers' inspiration only? Or is it possible to develop mutual benefit participatory design processes for all the parties that took part? The aim of this second tactic is to develop an equal exchange between designers and users. This participation started with the equal relationship between experts of using and experts of designing.

Lee initiated the programme of '*Designing Across Boundaries*' with Brazilian designer, Paula Dib¹ and sent out call for participation to design community. Dib's design philosophy is based on an exchange model in which she identified local materials and processes with local communities and created a range of 30 products including ceramics, textiles and weaving that would go on to be for

¹ Winner of the British Council's International Young Design Entrepreneur of the Year Award 2006, intervenes with rural communities throughout Brazil to create social product design that bring back both economic and social benefit to the communities. Her intervention began in December 2005 when the Supereco Institute in Brazil invited her to develop a project focused on economic development through the use of eucalyptus forest by-products. Instead of designing in abstract space with her friends or fellow designers, Paula decided to adapt the participatory methods and visited 16 different areas located in the extreme – south of the Bahia State of Brazil [11]. Choosing São José de Alcobaça as a base for a pilot project as the 'Regional Brazil' is under-developed and under-valued.

sale in urban areas and overseas markets. The result is that traditional craftsmanship is transformed but sustained. At the same time, economic incomes from the market flow back to the areas to improve quality of life for the communities [13]. This aligned with the second tactics of Lee's design experiment with the high school: in which designers become advocates of design coming out the abstract space where they work and leaving their comfort zone to work with people without any agenda.

A secondary level of complexity was added to this project in the mixture of multi-cultural designers working together. The project began with a group of Brazilian design students and a group of young designers and design students from London coming together to experience what Dib called a 'collective exercise'. The exercise was based on the 'Design Challenge', an Inclusive Design Education mechanism [6], which brings together people with different backgrounds to design collectively. The collaborative working model was changed from predominately designing with disabled users to designers from different cultures working with school children of different ages and culture backgrounds. The challenge within this project focused on the limited time in which to work: sixty-hours was given to three teams, made up of designers and school children, to create a sustainable product, service, or environment that could be used within the school context.

For Dib, her starting point for the new collaboration in London was to contextualise her social design practice in Brazil and translates it from rural Brazil to urban areas in another culture. Dib and her Brazilian colleagues were the team leaders with three to five designers and five school children in each team. After briefing, the teams were spread within the school environment and let the school children lead the development by expressing their perspective of their school. Thus, the leaders, who are all experienced social designers, act as the facilitators to inspire designers and the students to exchange ideas through translating both cultural and practical language.

Day one consisted of defining and understanding the issues within the school. On day two the design teams explored some design ideas with paper, the only chosen material, and showed their ideas to the school children for comment. Scoping and deciding the design ideas, design teams were encouraged to open up the design processes for the students to participate and experience designing. Finally, on day three, each team did a ten-minute presentation about the issues, process and solutions. This included a five-minute video inspired by a filmmaker who was introducing film as a creative tool and documenting the process. The idea of giving greater weight to the process rather the need for finished results led the teams to conduct in-depth conceptual studies in behavior, personal and territorial relationships within the school. As part of this process, the school children were supplied with video cameras, which enabled everyone to take an active part in focusing on the most relevant issues involved. The result was three distinct

proposals addressing different issues raised by the participants:

- a. I-Scope (Fig.3) – creating masks with holes for eyes. The purpose here was for the students to pay greater attention when looking at "cut out" details in the space they occupy, rediscovering each detail and reinforcing the feeling that they belong there. (Coordinated by Paula Dib)
- b. Ped – built a tree to install on the school patio. Here, students could hang drawings and notes with messages for fellow students and teachers. The emphasis was on students living and communicating together. (Coordinated by Renata Mendes)
- c. Magnetic Field – this involved a contingent of students producing a series of small flags placed strategically around the playing field. The flags represented the identities and various levels of relationships among students based on their content and position on the field. (Coordinated by Fernando Maculan)

All these proposals shared a common objective: They aimed to encourage greater reflection on the specialty of the school and the characteristics and potentials for using specific areas; through constructive and collective investigations, a means of preserving the identity of each student within the multi-cultural group was identified; by encouraging the students to take a closer look at their school and their feelings of belonging there; the teams created methods for the students to communicate and integrate. As the process took the form of a challenge competition, there was a vote between all the participants. The winning project, '*i-scope*', was a device to encourage school children to look at their school environment from different perspectives and aims to arouse more cultural events within the school, which the school children think is very important for their school lives

Although comments were expressed concerning the loose structure of the sixty-hour collaboration, in general, all the design team members enjoyed the experience of this 'collective exercise'. For the school students, it was a meaningful experience since they were respected as young adults and even more importantly valued as part of a design team being invited to present with design teams at the Royal College of Art. This participation gave them the opportunity to experience both technological aspects of a post graduate college and to demonstrate an understanding of design thinking. As one of school children commented on the school intranet, "*[t]o sum it all up in one word...WOW pretty much covers everything! It was a great opportunity and I'm so grateful that I was chosen to take part.*"

As part of the project, the whole experience was presented to design professionals and other organisation during the 100% Design Show in London. Like many other process-oriented design events, the most common question for a

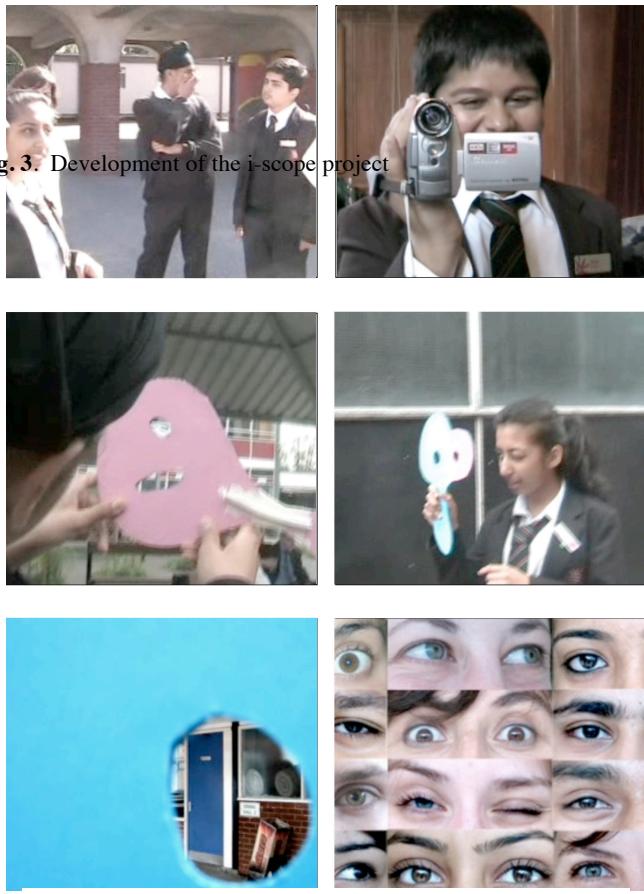


Fig. 3. Development of the i-scope project

most of the students study related subjects. However, with the enclosed-community situation, most of the students are not familiar with the occupations of designers or engineers because they are not common occupations within the local communities. The involvement of external professionals in the school learning process was believed to widen the scope of the school children experiences and perspectives.

After long meetings and discussions, all parties agreed on a trial for the academic year. Three young professional designers were recommended and selected based on their disciplines. Communication, engineering and printmaking designers were paid to run three sessions within the Design Technology department to stimulate students' creative processes with expert input. The three sessions started with demonstrations of their works, which aimed to let school students (approx 100 fifteen to seventeen year-olds who are in their last two-years of secondary school) understand how the 'real world' works (Fig.4). They were then given 'real' design tasks by designers with professional tutorials and critiques. Within the three sessions, students experienced both hand-on practice and stimulus of creative thinking for their future career consideration and preparation.

In addition the teachers were also emancipated by design and realised the possibility of influencing secondary school education through design thinking. This involvement between the postgraduate design school and the high school is under review and a formal relationship is in planning. The aim is to develop this user-led project to tie in both secondary and postgraduate art and design education.

sixty-hours event concerned the legacy of the project and the initiative. From experience working with different communities, the group reflected that this was just the pre-design exercise and were clear that Design Participations is an intensive process, which requires more time and resources than ordinary design activities. Intensive sixty hour challenges can be treated as Inclusive/Participatory Design experiences for designers and a warm-up exercise for school children and staff members, that may lead to more inspiring projects to be considered.

3.2.3. Users- led emancipation

(*Professional designers were invited to teach at the high school*)

After this 'collective exercise', one of the legacies was that teachers of the high school were inspired by the experience. With the help of their education manager, they suggested to the head teacher that professional designers should be invited to become part of the teaching team.

This idea was developed when the teachers interacted with those designers who participated in the 'collective exercise' and they realised that teaching design and technology could be extended from a practical study to a more discursive subject for probing solutions for everyday lives. Since this high school is registered as a Technology and Arts College,

3.2.4. User-driven Motivation

(*Design project commissioned by a group of high school*



students)

In addition to emancipating the teachers, the secondary school students were motivated in areas other than just redefining their cultural identities. Through the interaction with 'external designers', the students adapted creative thinking to actively think about and subsequently change their own school lives.

Discussed with teachers and as part of the celebration of the school's 100th centenary, the Student Voice Committee, founded by students with members who had participated in the previous design activities, has initiated the concept to evolve their school to becoming an eco-school. Their long-term plan is to completely transform the school into a self-sustainable environment in terms of using less energy, resources and materials. In the shorter and more achievable term, the first plan was to build an eco-playground at a brown-field close to the school. The student committee applied to the Youth Capital Fund, a funding scheme for young people aged 13-19 for projects, activities and equipment and were awarded £35,000 to build a sustainable playground that is active, educational and fun for all students.

This was the real success story of how design can inspire creative thinking. However, the system of design in practical terms did not match the continued development of Design Participation. From expressing an interest in design to the actual building project, other experts were brought into the process, who did not share the participatory mindset. A first proposal (fig.4) was presented by a company who has expertise of designing and building playgrounds. Yet, both staff members and students were not satisfied with the standard design that they got from the market. The education manager then reminded them about the Design Participations experience with design students and suggested inviting those design students back to develop a customised design through involvement of the students who had won the funding for the project.

Hence, one design graduate from the initial Design Participations engagement described above was commissioned by the students to design their 'dream' playground.

The first observation from the school children was that there is a fundamental difference between playground for children and one that accommodates older youths. Research on the perspective of youth in the public realm suggests that it is important to dismiss the normal clichés and labels, that are attached to young people as these are usually culturally and socially defined in ways beyond their immediate control [1]. Experience of Inclusive Design process led the appointed designer to start a user-oriented design process. The first workshop focused on *preference* and invited students (ten students aged eleven to sixteen years old) to choose a set of images from designer prepared materials that could represent their dream playground (fig.6). Disposable cameras were given to the students to take photos of preferred outdoor space as homework after the first workshop.

In the second workshop on *planning*, they presented their photos to the group and did a small survey among their friends. With all the preferences, the group produced collages together with the designer in a brainstorming session. Three design proposals were further developed and a series of presentations were given to both staff members



Fig. 5. Proposal from a playground building company

and students. The designer commented that, "*the presentation day was amazing...the kids were incredibly happy, their mouths open and their eyes shining!... I feel they understood completely the importance of their role in the project and that they felt that all proposals were designed for and by them*" [31].

After the presentations, students suggested putting three proposals on the school intranet for everyone in the school to vote for their preferred choice. Within a few hours, posters were everywhere in the school to invite students to express their opinion on the proposals. After three days of



feedback, the concept PLATFORM was selected as the most appropriate with evolving and participating characters.

After the project, the designer reflected on her experience by creating a list of facts related to this project, this included;

- 1,300 students consulted*
- of 35 nationalities*
- with 1,750 sqm to refurbish*
- at £15 budget per sqm*
- 3 days to meet the students*
- 6 days to generate 3 concepts*
- 24 days to finalise and produce the chosen design*
- 12 days to build it*
- Covering 1,200 sqm of new asphalt*
- Using 300 sqm of green paint*
- 40 m of climbing wall*
- 35 concrete precast benches*

25 concrete precast boxes
 4 moulds
 1 crane
 3 lorries
 4.22 GB of files
 3 teachers
 14 students
 7 friends
 4 mentors
 16 builders
 3 contractors
 1 little designer :)

Fig.8 Design Participations projects flows

Clara Gaggero [32]



Fig.7 Final design for Teen-scape. Platform, Photo by Adrian Westaway

This ‘little designer’ is very impressed with how her ‘users’ enjoyed the design (Fig.7). The role of designers and users shifted in this project with the designer becoming the service provider and enabling people to make their design ideas come true. Passive users reacted as active clients and commissioned the designers to explore the users desires and translate them into tangible design outputs.

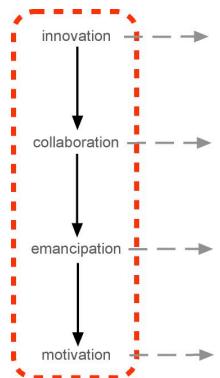
4. IMPLICATIONS OF DESIGN PARTICIPATIONS

To conclude the first part of this on-going design experiment, there are a number of implications in the development of Design Participations in relation to design practice and education. The four parts of the design

experiment described in this paper can be seen from two levels: Firstly, as a holistic process of progressive Design Participations. Secondly, as a series of individual situations in which different levels of participations were employed. Like other process-oriented design disciplines and designing for purpose, it is important for the development of Design Participations to incorporate good practice that stimulates designers and design researchers to adopt this practice. In addition, it is important to develop tools to aid and help designers understand participatory practices.

4.1. Performing good practice of Design Participations

Fig.8 represents the four projects demonstrated as a process of engagement. It shows the possible stages for Design Participations to happen and a learning path for beginners to follow. Individual projects may also give specific insight for different situations that designers and/or design researchers can refer to in their own projects. Each project has its own potential for development. For example, project two of the Design Participation Tactic for collaboration in the ‘Design Across Boundaries’ initiative, is going to be developed in order to deliver tangible designs to improve school lives. These arose directly from the interactions in part one. Similarly to the project on Design Participation for motivation, the school commissioned the designer to design another part of the building. Thus more creative activities of Design Participations are required since the ‘users’ became more active and expect more involvement in the design processes. Sanders et al. [24] note that as ‘users’ became more equipped and familiar to the system, like healthcare professionals in the design of new healthcare system, ‘users’ certainly become co-designers. That was the expectation in this design experiment.



Over a period of one-year this design experiment by Lee in collaboration with a high school and the co-operation of the education manager presents a good example to illustrate the *importance of facilitations*. Working with schools can be very stressful especially for external agents since schoolteachers are very busy working around the school schedule and students are classified as vulnerable subjects to work with. That this experiment could happen at all was based on the trust developed between the two facilitators: Lee working with the design community and the education manager co-ordinating the users / school children. They translated and moderated the processes. This indicates that effective facilitations are essential for participations practice since all participants have different languages and ways of working.

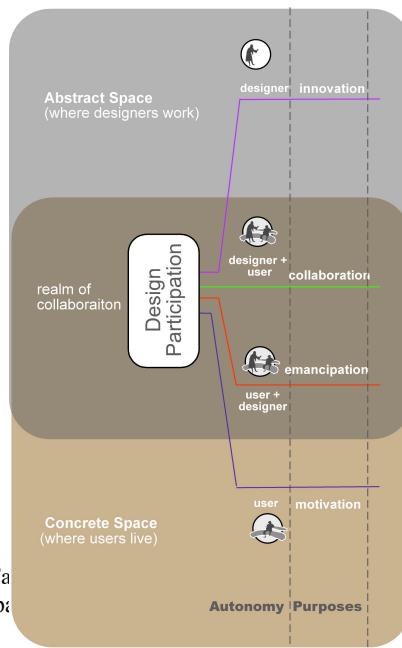
The other layer of influence of this experiment is more related to individual situations within the whole process. It was a unique opportunity to have such a linear but also in-depth development with one organisation. At the same time, the complexity of each situation showed that it is important to work in tactical ways as design advocates, and customise participations for different situations. As an exemplar of good practice of Design Participations, this design experiment proved that Designing Participations could enhance multi-disciplinary collaborations and showed how people with different cultures and background can work together. It is about considering and understanding all stakeholders in the process and customising creative activities to engage them.

From this holistic and in-depth process of Design Participations, another consideration is that a ‘bottom-up’ approach, is not only limited to the power struggle between social status but is also needed to pay more attention to generational and cultural difference. Beunderman et al. [4] suggest to let children and young people learn the game of participation and be involved in decision-making roles that can create better sustainable designs by strengthening their sense of belonging to a locality and thus inspire them to be competent participating citizens. This sense of ownership also enabled students in this enclosed community to go out and explore the outside world and develop their sense of belonging with active stakes in wider society [1].

The whole experience reinforces the development of the discipline of *Design Participations*, which needs more resources to explore and should aim to become one of the main and independent subjects of design education. It requires expertise to explore creative processes that engage participants as well as insert design thinking into everyday lives.

4.2. Developing tool to understand Design Participations

Thus, how to make Design Participations work? Apart from practical applications, the four defined Design Participation Tactics referring to Lee’s Taxonomy of Design Participation (fig. 9) [12] and are developed as a theoretical framework supported by the cases from this design experiment. Functionalism, Design Research and Design Methods all belong to Design Participation for innovation at the pole of designer autonomy. The next two types are those working in the in-between spaces. Community Architecture, Participatory Design, Collaborative Design, and Inclusive Design are examples of Design Participation for collaboration that occur in the mixed realm of designers and users. The next category includes practices involving users in order to emancipate them and transfer design knowledge, which include Self-Help, Cultural Jamming,



and Non-plan experiments. The final type is at the other pole of user autonomy, which includes DIY and vernacular architecture under the model of motivation. With the help of the Design Participation Taxonomy and the coding system, different design practices can be classified as different types of Design Participations. Apart from a classification tool for design practices, it is also a tool for comparison of different design practices for design research looking at how user-centred projects are. For users and those who are effected by the Design Participations outputs, they can use this tool to measure how far the participations have been implied from the abstract space of experts and how close it has been executed

to the concrete space where people/users live. After positing the practice, it can help to decide the direction for the next step and extend the legacy of the project.

4.3. Just the starting point

Finally, it is noted that this design experiment aims to be the start of the discourse of Design Participations and demonstrates that it is essential to research the methods of Design Participations and to explore more tactical ways by reflecting with real world cases.

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