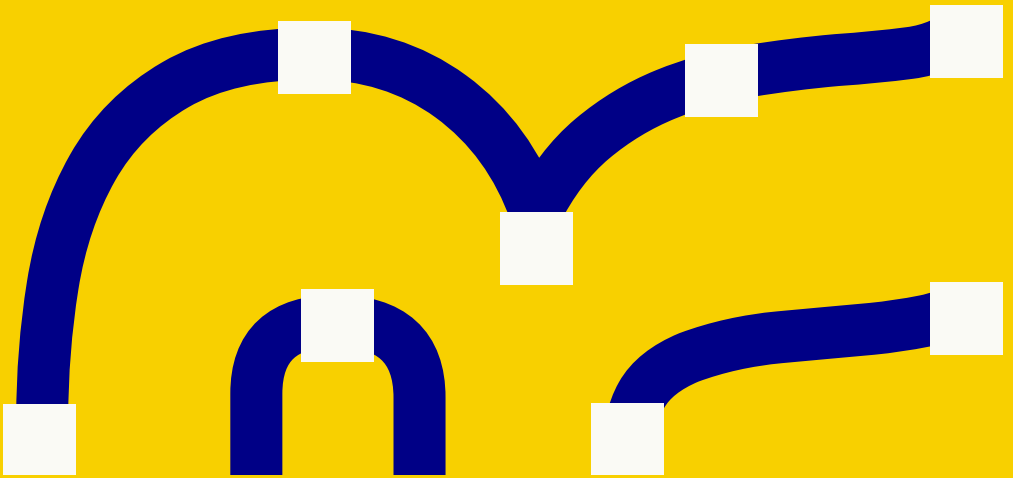


TO GET THERE: DESIGNING TOGETHER

Cumulus Conference Proceedings Paris 2018



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TO GET THERE: DESIGNING TOGETHER

Cumulus Conference Proceedings Paris 2018

Cumulus Conference
Proceedings Series

Cumulus Association of
universities and Colleges
of Art, Design and Media

Paris 2018

Spaces of Play and Language Games

In a conversation with Fulvia Carnevale and John Kelsey published by *Artforum* in 2007, Jacques Rancière suggested that: “The fundamental question (was) to explore the possibility of maintaining spaces of play”. This phrase could summarize the whole Cumulus-Paris project “together/to get there”. And all the more so since he added that: “The main enemy of artistic creativity as well as of political creativity is consensus”. Living, speaking and working together doesn’t mean living, speaking or working within given frames and following given rules, but producing language games and accepting the inherent possibility of misunderstandings. Being together is not thinking, speaking and producing everything alike, and consensus is far from an ideal as soon as we want to create! Quite the contrary, being together means recognizing what divides and opposes us, and being able to overcome differences without foreclosing or erasing them. Therefore we have to speak about discrepancies, we have to show them. In fact, we are at a crossroads and we need to question design and its forms and functions. The Paris Cumulus conference would like to address contemporary issues through conversation and critical spirit. It aims to bring together different

design practices and theories, in order to create an open forum for debate between different points of view and practical confrontations. It should set out to recover positive disparities and pluralities within design practices, beyond classical boundaries. It should even stage moments of dissension in order to explore the possibilities of dialogue and perhaps to demonstrate a new type of porosity or permeability, or even new cultural values. It aims to recognize various forms and various degrees of the discipline in order to forge a space of play where making things together is a priority and where we can engage new social subjectivities. Beyond the questions raised by design itself, being together points to the complex intertwining of languages we could share. But emphasizing language certainly does not imply emphasizing semantics or meaning in a postmodern way. Here language is to be approached from the political dimension of being together. Let's hope a conference can be an experimental engagement through conversation which allows us to smoothly shift our attention from everyday life. Let's hope it could have a catalyzing effect on the design community by opening up debate. Being together should allow new connections to be made while asking what we have in common, while pointing out similarities among supposedly polarized practices, but also while recognizing differences and stating that they can co-exist.

Claire Brunet

Head of Design Department –

Lecturer at École Normale Supérieure Paris-Saclay

President of the Scientific Committee

Dear Cumulus Members, Colleagues, Students, Friends,

We were back in Paris, the city of Freedom and Revolution, of Love and Poetry. Cumulus is constantly attracted by Paris.

We came here in 2002 thanks to the Cumulus conference hosted by ESAG with an incredible exhibition at the Carousel du Louvre called European Way(s) of Life (EWOL) as visited by over 23,000 people in two weeks. At that time, Cumulus was just European. In addition, one of the students of our member universities that exhibited in EWOL, he is today, in 16 years, the chief designer officer of Pepsi Co. His name is Mauro Porcini. It seems, based on this experience to be in Paris brings luck and broad perspectives! We came back in 2011 hosted by Strate College, after Cumulus conference in Nantes France in 2006; we were already a global association. We came again to take part in this new 2018 Cumulus conference in France organized by the four schools of Art and Design of the city of Paris, the Ecole Boulle, Duperré, Estienne and Ensaama.

The four Cumulus member universities in Paris, also known as Conférence des écoles supérieures d'Arts appliqués de Paris (CÉSAAP), were created in the late 19th Century to educate the best artisans and creators of textile, fashion, metal works, furniture, graphics, etc. adopting a cross-curricular and interdisciplinary approach; combining design with the intelligence of the hands; fostering innovation as well as increasing and updating the values of tradition and handcraft.

In partnership over the past two years within the framework of CÉSAAP, these four Parisian schools decided to welcome Cumulus back to Paris: To share their expertise, to mutualize experiences and display the results through exhibitions and presentations. Quite a brave decision....and what a challenge!

We all know how challenging but always rewarding, too, it can be to organize a Cumulus conference as a single institution; we can just imagine the complexity in sharing duties and responsibilities for this demanding task among the four different institutions spread in four different locations in the city of Paris. Thank you to all the heroes and their staff for making it possible: Annie Toulzat, Josiane Giammarino, Annie-Claude Ruescas, Laurent Scordino-Mazanec, Etienne Périn, Claire Pinault, Claire Brunet, Laurent Bailly, Anne Barrois, Isabelle Basquin, Caroline Bougourd, Bernard Bréchet, Lucinda Caton, Lyne Cohen-Solal, Gilles Deléris, Jacques-Antoine Drouard, Éric Dubois, Mariette Dupont, Lauriane Duriez, Damien Ehrhardt, Brigitte Flamand, Marie Jonquet, Élisabeth Lafay, Natacha Lallemand, Héloïse Leboucher, Raphaël Lefeuvre, Céline Mallet, Clémence Mergy, Luce Mondor, Yves-Marie Pinel, Rémi Roudeau, Jean-Louis Soubret, Emmanuël Souchier, Apolline Torregrosa, Jean-Christophe Valleran, and all the members of staff of all four schools. This conference was a super positive and a very advanced Cumulus case study.

The title of the conference was summarizing this shared spirit and approach: TOGETHER.

The term Together deeply condenses the fundamental principle of our beloved Cumulus Association to: Do things together; design together; imagine, learn, think, seek, innovate, create, make and build together; To educate and to research together – leaving behind all that divides, opposes and excludes; creating solid and beautiful bridges between different competences, visions and perspectives, cultures and traditions. We met in Paris in April 2018 TOGETHER,

and Cumulus platform being essential to that, to create spaces and times, where and when; to help us all in a collective manner to share perspectives and expertise; to remind us values and meanings.

As in the past conferences, I liked to stress the fact that, I was there on stage alone but not serving the association alone but TOGETHER with wonderful colleagues. Starting from the Cumulus Vice Presidents Elsebeth Gerner Nielsen Denmark and Sam Bucolo Australia that unfortunately couldn't be here with us, and Cumulus Executive Board members José Allard Chile, Mariana Amatullo US, Robin Turner South Africa, Lorenzo Imbesi Italy, Ulrich Schendzielorz Germany, Xiao Yong China, Sara Hyltén-Cavallius Sweden and Rachel Troye Norway: Concluding the list with our essence of Cumulus: General Secretary Eija Salmi and Cumulus coordinator Justyna Molik both from Finland. Thanks to all their support I was able to welcome all conference delegates and contributors to these inspiring days.

TOGETHER finally means to me also to be open to the new, to the ones that are not part of our community yet: New members, new colleagues, new students, new partners.

During these days, we were welcomed new special guests:

The two Cumulus Student Ambassadors nominated by the last 2017 Conference organizer: Ms Saili Palyekar and Mr Nitish Chopra of the Srishti Institute of Art, Design and Technology, Bangalore, India. And the three representatives of Cumulus Plus+ program and coming from Brazil, Macedonia, Tunisia, who brought new horizons for Cumulus by joining this Paris conference: Mrs Polise de Marchi, architect and designer, SENAC University Center, Brazil; Mrs Gordana Verncoska, vice dean of Faculty of Art and Design, European University, Macedonia, Mr Dhafer Ben Khalifa, lecturer at the Higher Institute of Fashion Design Monastir, Tunis, Tunisia.

This conference also opened the door to 25 new Cumulus full and three associate members.

We really invite you to discover these new realities and to start including them deep in our Cumulus Family.

All TOGETHER.

Luisa Collina

Cumulus President

Call for papers and selection procedure

We are very pleased to present the online Paris To Get There – Paris Cumulus Conference Proceedings 2018. The conference call received a great international response with over 180 submissions from more than 50 countries. 62 papers, 2 films and 1 poster were selected from a total of 188 proposals, and all contributions were double-blind peer-reviewed by the international review panel of 80 members. These papers and films were accepted for our Parallel Sessions including oral presentations.

We offered our contributors the possibility of submitting academic or professional proposals (32 academic papers – 33 professional proposals including films and a poster). We would like to take this opportunity to thank all the presenters for submitting their work and attending the conference at École Boulle, École Duperré, École Estienne and Ensaama in April 2018. The Cumulus Conference 2018 in Paris adopted a cross-curricular interdisciplinary approach which highlighted collective and collaborative interest. Thanks to your contribution and the participation of almost 350 delegates during the 3 days of the Conference, we contributed together to make otherness a positive force, and to ensure that design and this union of talents become an undeniable tool for action on reality.

Thank you!

Césaap

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Estienne, Ensaama)
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www.ecole-boulle.fr

www.duperre.org

www.ecole-estienne.paris

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Teaching Interior Design for Young Children through Participatory Design approach

Ngoc Pham, Trinh Bui, Davide Fassi

Abstract

In the last few years seen the booming of “Design for Change”, the platform has witnessed an exploration of innovative skill education, nationally and internationally. It is strongly indicated that creativity, entrepreneurial skills, risk-taking adaptability, innovation capacity, problem-solving, skills related to effective team works and sharing information, knowledge are all be taken into consideration of competitive advantages. In specific with primary education in the Vietnamese context, more than any other level of education, needs to first implement the new approach in innovation-related skills so to prepare for those who will lead the future. The Design Department of National University of Civil Engineering (NUCE) has adopted the Design Educational Program named “Kids Think Design” to answer the call “Doimoi”, a government action for Vietnamese education for 2010–2020 in which Design students, educators, and young children work together through the design process. Design education plays the role not only in designing things beautiful or functionality, but also young children can learn many things about creativity and innovation from the design process. Especially in the field of interior design, by using participatory design methods, young children can design better-built environments with a better perspective of their future spaces and learn about natural sciences, mathematics, geography, and model making all at the same time. Additionally, with the contribution of intergenerational groups in the design team, children can be actively involved in the design practices and solve real world problems. This paper will describe a case study in the form of participatory design approach and co-design session. The results of this study will be identified and discussed in four following categories, namely: 1) Adults as facilitators, 2) Fun and balanced relationships, 3) Participatory design methods, and 4) Educational benefits

Theme: Actors

Keywords: participatory design, co-design, interior design, design education

1. Introduction

Based on the Multiple Indicators Cluster Survey 2006 of Vietnam's General Statistics Office (GSO, 2007), the children at the age of primary and secondary school in Vietnam are typically learned with fundamental skills in reading, writing, mathematics, art, geography, history and physical. The program at this level will establish a solid foundation for learning and understanding core areas of knowledge, personal and social development, in preparation for higher education (GSO, 2007). According to Tarim (2016), with the purpose of physically and mentally prepared to learn in primary and secondary school, children need the freedom to be children because it is their natural instinct as children to be physically creative that enhances brain development which improves learning. Stevens (2012) believes that this has all been denied them by those heavy backpacks, the stress and silly homework cause, and the absence of physical activity during and after school. Moreover, there is a lack of sufficient collaboration with entrepreneurial stakeholders in teaching and student's practices and a lack of intergenerational learning. Young people need to be supported with tools, resources and an open environment encouraging experimentation and development of joint projects (EC, 2017).

In the last few years seen the booming of "Design for Change", the platform has witnessed an exploration of innovative skill education, nationally and internationally. It is strongly indicated that, creativity, entrepreneurial skills, risk-taking adaptability and innovation capacity, problem-solving, skills related to effective team works and sharing information, knowledge are all be taken into consideration of competitive advantages (EC, 2017). In specific with primary school education in the Vietnamese context, more than any other level of education, needs to first implement the new approach in innovation-related skills in order to prepare for those who will lead the future (GSO, 2007). This is a big challenge not only for educators but also sharing the responsibility of parents, communities, entrepreneurial stakeholders and policymakers.

The Design Department of National University of Civil Engineering (NUCE) has adopted the Design Educational Program named "Kids Think Design" to answer the call "Doimoi", a government action for Vietnamese education for 2010–2020 in which Design students, educators and young children work together through the design process. Tashiro (2011) indicates that design education plays the role not only in designing things beautiful or functional but also children can learn many things about creativity and innovation from the design process. Especially in the field

of interior design, it is strongly believed that, by using participatory design methods, children can design better-built environments with a better perspective of their future spaces (Butterworth, 2000). Additionally, with the contribution of intergenerational groups in the design team, children can be actively involved in the design practices and solve real-world problems. In this paper, the author will describe a case study in the form of participatory design approach and co-design session for running the “Kids Think Design” program and possible contributions to this project.

2. Participatory Design with Children

The importance of collaboration between children and adults was emphasized and explored by Durin (2002). He strongly believes that children who are unskilled in the design process could be inspired and empowered by their collaboration with adults in order to generate new ideas or looking for better solutions. Moreover, Melonio and Gennari (2013) identified three main benefits for both children and adults when involving in the design process at various stages: 1) gaining a better understanding of people’s need and requirements, 2) creating realistic expectations in target groups and 3) marginalized groups are empowered. In this study, participatory design approach was used to run the “Kids Think Design” program in Vietnam and to assess the usability of the intergenerational design team. There are a number of reasons for this selection. First of all, it seems to be so complex and abstract to discuss with children about interior design and design professional. Yoo (2000) showed the distinction between children and adults in terms of developmental characteristics, particularly with respect to short-term memory span, immature languages and difficulties encountered when engaging in highly cognitive processes. Baek and Lee (2008) claimed that children are accustomed to visualizing ideas by drawing, sketching or making things because of these methods of generating ideas are distinctive childhood pastimes. Secondly, participating on collaborative activities with generative tools including visual collages, simple mock-ups and low-tech prototyping will stimulate interest among children and helps them to overcome passive attitudes or shyness and to establish common goals that contain abundant data on cognitive characteristics (Vaajakallio and Mattelmäki, 2007). Finally, with its element of fun, the participatory design approach is less dependent on language and professional skills, while at the same time encouraging children’s potential for creativity and imagination (Mazzone et al., 2012).

3. Case Study

3.1. Context and Participants

The study was part of an educational program called “Kids Think Design” and a long-term intervention with a Primary school named CGD (Cong Nghe Giao Duc – Technology and Education) in Hanoi–Vietnam. This connection was made through social relationships and the introduction of some educational experts. An intergenerational Co-design group was built of adults and young children with the slogan of “building little thinkers”. The whole Design team consisted of 30 young children at the age of ten years old from CGD Primary school. Accordingly, the young children at the age of ten were selected for this study because this age is considered to be old enough for participatory design approach but still young enough to think as a child (Guha et. al, 2004). On the other side, the adult groups consisted of core members and project partners. There were 19 fourth-year design students, five third-year undergraduates, five assistants (all from Interior Design Department – NUCE) and the author (leader and observer) participating as core members. The project partners included five primary teachers (CGD Primary school), non-profit organizations and university researchers. All the participants were divided into five groups, that each composed of six children, four students, one class teacher and one design instructor working together in a common project theme: “Re-designing the interior and exterior spaces of the CGD primary school in order to promote creativity and encourage learning attitude of primary pupils”.

3.2. Method

The literature reveals many examples of participatory design with children, especially shows a favour and interest in the field of human-computer interaction and game design, but lacking both knowledge and experiences in the interior design discipline. We still need to examine real-world interactions, and the “Kids Think Design” educational Design program is one of the very first prototype so to unpack this challenge. As a result, we employed the case study method in term of action research with the purpose of examining what engagements and interactions occur in participatory design sessions, conceptualize adult-child partnerships and develop a framework of teaching interior design for young children.

3.3. Data collection

The study was conducted through one-day planning, 3 co-design sessions in three different workshops and a one-day indoor exhibition, placed at CGD Primary school in Hanoi–Vietnam. Each session lasted for about from 2 to 4 hours and was allowed to use the camera to record all the design progress and adult-child interactions. The researchers observed the on-filed co-design sessions, photographed the activities and collected artifacts, then wrote analytical memos for each session. The author (primary observer) read the memos again, watched the video recorded carefully and took notes on the interactions between adults and young children. After that, design assistants (secondary observer) checked other working diaries, watched the same videos and added to the primary observer’s notes.

All the sessions of this project took place in summer 2017 before the official school year begins and consisted of the following procedure.

3.3. Procedure

Day 1 – Planning for Participatory Design sessions (10/08/2017) placed at NUCE. Time: 8h30 – 12h30. Two Primary school teachers involved in the project were invited to the Design Studio Lab at NUCE to discuss with student groups on the detailed plan for upcoming Participatory Design sessions. In this meeting, an introduction of the CGD Primary School was presented by two teachers through PowerPoint. The presentation displayed not only learning activities but also a wide range of creative activities such as fashion design, classroom, and school campus decoration. Furthermore, the two primary school teachers also presented their experiences and skills of interacting with children as well as the way to capture the psychology of young children so to build empathy, gaining trust, stimulating interest and creating cohesion. Then, they worked together with Design students to identify the best methods to make acquaintances with young children. Five groups presented five ideas on designing the warm-up game and then selected the most appropriate one in order to satisfy the requirements of time, creativity and objectives. The last part of the planning day was to finalize a list of interview questions for young children based on psychological and pedagogical approaches.

Day 2 – Coming together (15/08/2017) placed at CGD Primary school. Time: 8h – 12h. The first day of the co-design session with young children was started with a playful game named “quick sticky-notes”. A series of words

in Vietnamese or English was written on the sticky notes and handed to the young children. Within two minutes, the player had to quickly pick up his notes and find out the words similar to those on the paper which were attached to the students' body. Although the welcoming game did not seem to be related to the design work, the purpose of this game was to sweep away the embarrassment of the young children, creating a fun and friendly atmosphere. After the warm-up game, young children were divided into five groups corresponding to five groups of students, becoming 5 intergenerational Design teams. Firstly, Design students introduced to young children the topic of the project, activities involved and expected outcomes. Secondly, all participants visited the school to explore the surrounding campus. In parallel with the on-site investigation, the groups of students also conducted the interview with young children who played the role of both main users and co-designers. For example, group 1 chose to ask some unrelated and easy questions first to make the interviewees feel more comfortable, such as: "What is your favourite singer? What is your favourite food? Or what subject do you hate the most?" After warming up with some kick-off questions, the interview went directly to the main point by focusing on young children's desires to change their interior spaces and surrounding environment with the purpose of improving creativity and learning attitude. All the information and data were documented by capturing direct quotes as saying by children rather than interpreting what they are talking.

The spaces investigation and interviews were conducted in 30 minutes. After that, all groups returned to the classroom to start their group work. The young children were asked to draw back from their memories the surrounding campus that they had just visited – Figure 1. They were also requested to color what they particularly liked and not color what they disliked. Subsequently, each individual of the group presented his/her drawings including: location of works, special spaces, spaces to be changed, learning and entertainment activities based on his/her unlimited and creative imagination. Other members of the group jointly voted for the best idea based on established criteria such as: creativity, fascinating and feasibility so that the selected idea was developed in the next stage.

Day 3 – Design activities (22/08/2017) placed at CGD Primary school. Time: 8h15 – 10h30. The second working day was divided into two steps. At the first step, the team leader summarized the entire work of the previous



Figure 1. The young children were asked to draw back from their memories the surrounding campus that they had just visited

working day and highlighted the activities and methods employed for the next task. The groups visited selected sites for conducting space analysis and take a snapshot of the status quo. Under the guidance of the students, young children were allowed to directly use measuring tools such as tape measure, laser measure, paper, pen, and camera to measure and record necessary dimensions of walls, floors, columns, windows and daily basis items such as desks, chairs and tables. After that, the necessary parameters were collected consisted of the plans, facades and sections were drawn with a full note of the size. These drawings were then copied in many versions.

The second step was to generate ideas in which a variety of participatory design methods were selected according to specific circumstances. For example, team 4 might use the “storyboarding” method to render animated games that have been practiced or seen in the media. Then, placing these game in various scenarios such as on beaches, in forests, in mountains or on the sand with the increasing level of difficulty. Afterward, all personal drawings were collected together to discuss and find out new more interesting games by combining randomly two or three existing games. Team 1 and Team 3 were divided into smaller groups or subgroup. The members of each subgroup included two young children and one student that implemented the “collage” method – Figure 2. The subgroups selected and cut the images prepared by the students and then pasted these images on the most appropriate position of the newly measured drawings. After that, the subgroup gathered presented their ideas and discussed so to choose only one plan for building the 3D prototype.



Figure 2. The “collage” method that young children selected and cut the images prepared by the students and then pasted on the most appropriate position of the newly measured drawings.

Day 4 – 3D Prototyping (29/08/2017) placed at CGD Primary school.

Time: 8h15 – 10h30. In this session, 3D prototyping was the main method used by all Design teams. 3D modelling was quite time-consuming so that the student groups had prepared one or two sets of frames to make sure the task completed on time. In addition, young children were also handed the toolbox including necessary materials and tools such as knives, scissors, colour paper, cardboard boxes, etc. Interestingly, some new ideas may be also found and developed in the 3D prototyping session. To illustrate, the little designers of team 3 have added quite a lot of new features to the Art room instead of the existing ideas generated last week such as: large walls running along the Art room are free to write and draw on; or there is a space for woodworking, crafts, sewing and handmade items. Furthermore, one child of this group had the creative idea of creating a special corner called “spider spaces” where anybody could hang himself in the air, creating a sense of adventure and amusement. The team 2 “Music land” designed and made their own musical instruments with cheap and simple materials such as cardboard, colourful straws, etc. – Figure 3. Some of the young children researched and made by themselves several types of sound self-emitted models.

The 3D prototyping session ended after more than two hours and all Design teams almost completed more than 90 percent of their work-



Figure 3. Team 2 “Music Land” designed and made their own musical instruments with cheap and simple materials.

load. The teams put altogether their models in the middle of the class to begin the presentation session. The principal and teachers of administration board also attended in this activity. Each team nominated one child to make a presentation and then finalized these according to the comments and suggestions of the audiences before demonstrating their ideas to their parents and other stakeholders in the exhibition taking place on the opening day of new school year.

Day 5 – Indoor exhibition (05/09/2017) placed at CGD Primary school.

Time: 9h – 11h. The exhibition integrated in the opening day of the new school year on September 5th, 2017, as part of the program of introducing extracurricular innovative activities of the CGD Primary school. The participants attending this event included lots of parents, representatives from the Ministry of Education and all teachers of the CGD Primary school. The exhibition was prepared on the previous day, using cardboard boxes as the main frame for decoration. Each team selected its own key colors in order to easily distinguish from other and making attention. The exhibition show was held from 9 am to 12 pm, including a range of activities, such as introduction section, presentation section and getting the consultation from parents and relevant stakeholders. The exhibition was regarded as an official closing event of the Program “Kids Think Design” in the first season.

4. Results and Discussions

All the Design progress was allowed to capture by photography and video recording due to an agreement and ethics on privacy and security issues. Through on-field observation, video review and focus group discussion, the findings of the program were qualitatively analysed and evaluated, and the framework of the design educational program was initially described in four following categories, namely: 1) Adults as facilitators, 2) Fun and balanced relationships, 3) Participatory design methods and 4) Educational benefits.

4.1. Adults as facilitators

The main goal of the program is to encourage the involvement of children in full stages of the design process, however, it is observed that the success of the whole project and fluency of the participatory design progress firstly depends on the role of adults (Design students, instructors, teachers, and researchers) as facilitators which divided into three corresponding roles when designing interior spaces with children. In this particular case study, each adult's role is the complement to each child's role:

- 1) when children are learners, adults will be interpreters and organizers,
- 2) when children are users, adults will be researchers and observers,
- 3) when children are designers, adults will be design partners.

The first role that the adults served as the “interpreter” concerning the translation of the professional design knowledge into the language that is the most intelligible and most closely related to children's everyday life. In order to involve the children in the design of a specific topic, the interpreter have to carefully check with the teachers whether or not the design theme is appropriate for the selected group of children to work on, or looking for other more suitable groups, or need to modify the current topic to the assigned group. Instead of using professional concepts related to interior design, the students presented in simple and straightforward language, for example, “Let's Design your dream school”. Moreover, it is essential for adults to organize and manage the flow of the design sessions such as brainstorming, storytelling, co-designing and 3D prototyping in terms of duration of tasks, activities, breaks, unexpected events, and should facilitate all the group members to contribute to the process equally. When children are users, the adults play the role of researchers and observers. By using a variety of research methods based on anthropology and educational psychology, adults attempt to deeply un-

derstand how children as users react on their existing spaces and what it says about their interests, hobbies, routines and unforeseen desires. Finally, when children walk in the shoes of a designer, adults can take on the role of design partners. Throughout the entire process of interior design, adults and children work with each other as equal stakeholders. The process was implemented via co-design session that the adults were briefed beforehand to allow the children to generate as many ideas as possible and support these by constructivist advice instead of deciding the final solution for them. By considering the voice of children in the design process, the whole group may come up with unimaginable ideas which contribute to the innovativeness of the resulting designs (Hagen et al., 2012).

4.2. Fun and balanced relationships

“Fun” is the first word that comes out from the interview of children when they were asked about their feeling of the project. On the other hand, the children considered each task to be a form of play, not work. It is observed that “fun” plays an important part in keeping children stay focused on the schedule. As a result, all three co-design sessions began with snack time and paper gaming (15 minutes), in which children and adults ate and interacted with each other. Moreover, at the end of each session, group members usually took a selfie and together played some art game such as “animal drawing” and “tattoo on hand”. Besides the environment of “fun”, it is indicated that balanced relationships are a necessary component in the participatory design process. The findings also revealed two types of social interaction between adult-child that lead toward more balanced co-design partnerships. Firstly, it is observed that children and adults showed no boundary of age and distance by acting “silly” together outside of the design sessions. For example, adults did not only build a warm-up game for children but also involved directly in the game and expressed their emotions when winning or losing like a child. These unplanned interactions that cause children to feel more comfortable around adults and break away from traditional adult-child power structures. The second type of social interaction was shown as the strong appreciation and respect between adults and children during the co-design sessions, especially in the ideation phase when they generated and mixed ideas together.

4.3. Participatory design methods

The results of the described actions were often influenced not only by the atmosphere of the team but also by the type of methods and toolkits using for different purposes, activities and the size of groups. A different and mixture of methods for involving children in the design process have been identified in the literature of both Product Design and Human-Computer Interaction (Hagen et al., 2012). However, within the interior design discipline, there is lack of specific methods that can be used for dealing with children at different stages of the design process. As a result, this case study will not present any new techniques but focus on available generative and formative methods that creating the environment where children are actively encouraged to be creative, selective and critical. Although these methods used by the groups were not necessarily the same or even slightly different from the original, they all concentrated on the importance of implementing collaborative work in all stages of the design process. Particularly, in the inspiration phase in which the purpose of discovering emotions, requirements, ideal situations are an essential part of user research, “Contextual Inquiry” is considered to be the most appropriate technique. It is a method developed by Druin (1998) with the purpose of conducting an on-field interview with users in the workplace. In this experiment, children played the role of users but also acted as the “school tour guide” in order to share, discuss and develop an interpretation of the common work. All the data were collected in the form of pictures and sketches. The ideation phase demonstrated the design’s dynamics when design teams have chosen different methods and techniques so to make their participation interesting and enjoyable. For example, group 1 and 3 used generative methods called “Collages” that support children to create ideas through choosing images from a large set of visual stimuli and this activity bring out discussion of the intangible feelings and emotions (Melonio and Gennari, 2013). The other groups have chosen their own approaches by the combination of distinct methods such as, “Storyboarding” and “Mixing ideas”, “Sticky notes” and “Bags of stuff”. In the implementation phase, it is explored that, the idea and concept continue to evolve in the “making” activities. In fact, the children did not build exactly what they thought or sketched but were continually shaping their idea via physically doing and making it – Figure 4. Obviously, some children found much more interested in prototyping than drawing or sketching and expressed themselves more clearly through form and function than through dialogue. Additionally, the chil-

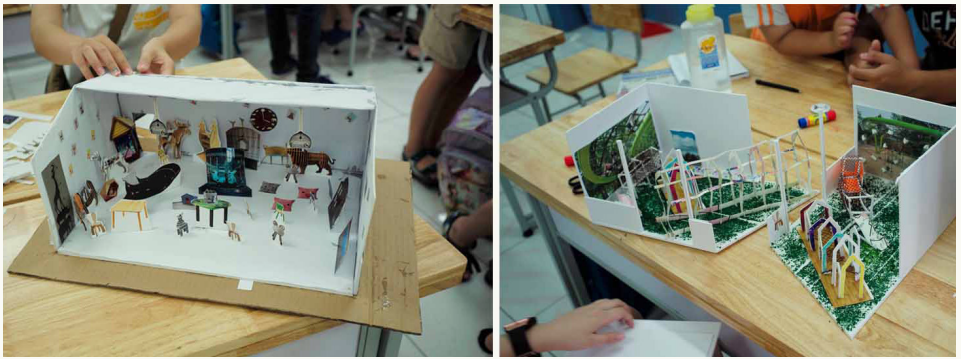


Figure 4. Making a prototype of a “ZooLab” where children can play with and learn from diverse kinds of animals, such as, how to feed the animal and how to take care of them.

dren who had difficulties in the ideation phase discovered more elements and details needed when making 3D prototypes. This is the moment when all the participants became aligned around the common idea and allowed their innovation to be presented in a more complex fashion (Beamer, Conkic, and Sallaerts, 2017). With all these methods, children are no longer passive responders to interior design but rather active designers in the process (Arnold, Lee, and Yip, 2013).

4.4. Educational benefits

These are indeed a number of educational benefits that the program “Kids Think Design” could offer to both children and adults. Firstly, from the side of children, through hands-on experience, they are able to observe and reflect on design fundamentals and learn about the relationship between the human spaces and nature, light, and shadow, colours and materials, scale and proportion, etc. Children get acquainted with analysing the spatial experience and examining interior elements by measuring the dimensions of all major aspects of their own classrooms such as doors, windows, and furniture. While performing the design tasks, children learn how interior designers work, how to generate ideas and how to present concepts to others by drawing themselves. This project utilized a wide range of participatory design methods but emphasized 3D prototyping, which has proved to be very effective in learning so to understand the spatial creation. By building miniature models, children can make discoveries by themselves instead of being given answers

by adults. Moreover, working in the intergenerational team stimulates competition and cooperation between children and helps them to develop social and entrepreneurial skills.

Secondly, as looking from the perspective of adults that are mostly groups of fourth-year interior design students, they can significantly benefit and learn from involving children as expert users in cooperative design sessions. It is obvious that the way children see the world is completely different to adults, both physically and metaphorically (Druin, 1999). By cooperating and co-designing with children, interior design students do not only benefit from gaining unique insights of user's perceptions, inspiration, and needs (Arnold, 2019). It could also be an effective way to achieve valuable knowledge in terms of how to address a problem in an innovative approach and improve the designer's creativity (Hagen et al., 2012). It is evident that, children tend to approach their works through curiously, rich imagination, and less restricted by reality, and doing in a surprising way that adults themselves may have never thought of (Hagen et al., 2012). For example, the project shows the unique idea which is never existed within the primary schools in Vietnam. This is the design of the "Zoo Lab" created by group 5, where children can play with and learn from diverse kinds of animals, such as, how to feed the animal and how to take care of them. Actually, this concept does go beyond the traditional interior design and closely related to the emerging design discipline called service design. Furthermore, within the "Kids Think Design" program, interior design students from NUCE needed to work through a multidisciplinary profession, so they had to take into account different fields of expertise, including anthropology, sociology and especially pedagogical skills (Hagen et al., 2013).

5. Conclusion

To be concluded, our project has created an innovative educational program and collaborative learning environment in which both children and adults are working together in the interior design process. Applying participatory design methods allows adults to listen to children's stories behind their creations of imaginable spaces while primary pupils are no longer passive responders to interior design but rather become active designers in the process. Through hands-on experience, children are able to observe and reflect on the built environment and spatial design and learn about natural sciences, mathematics, geography, and model mak-

ing all at the same time. Although the “Kids Think Design” program tends to first focus on the important role of children and educational benefits for primary level, the adults as design students are not an invisible partner to be ignored and even seen as a key instrument to how the partnerships run (Yip et al., 2017). It is strongly believed that the comprehensive model of adult-child relationship (learners – interpreters/ organizers, users – researchers/ observers and design partners – design partners) contributes to the field of interior design and provides a clear framework for researchers to examine equitable practices in the participatory design discipline.

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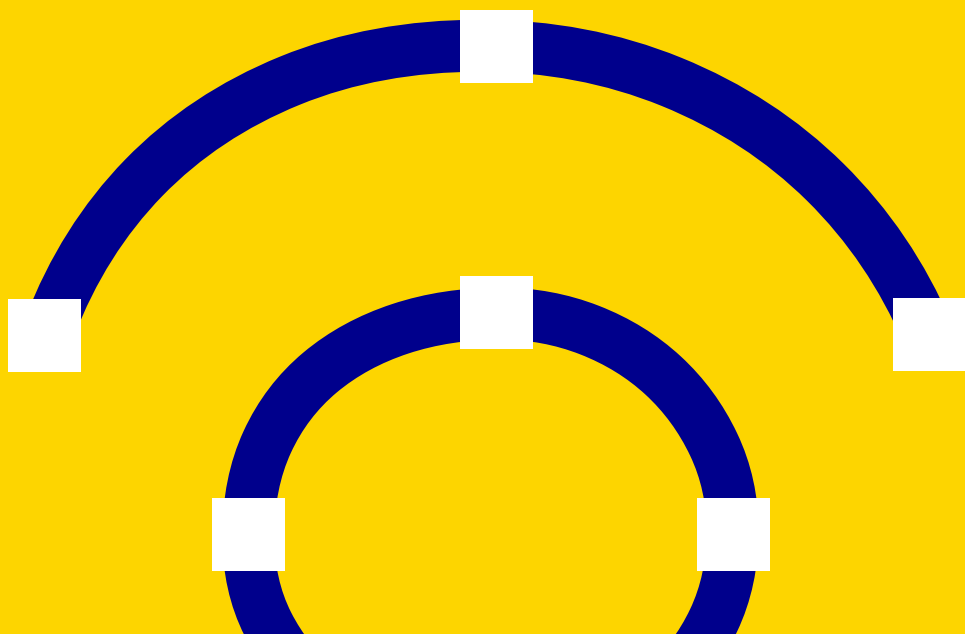
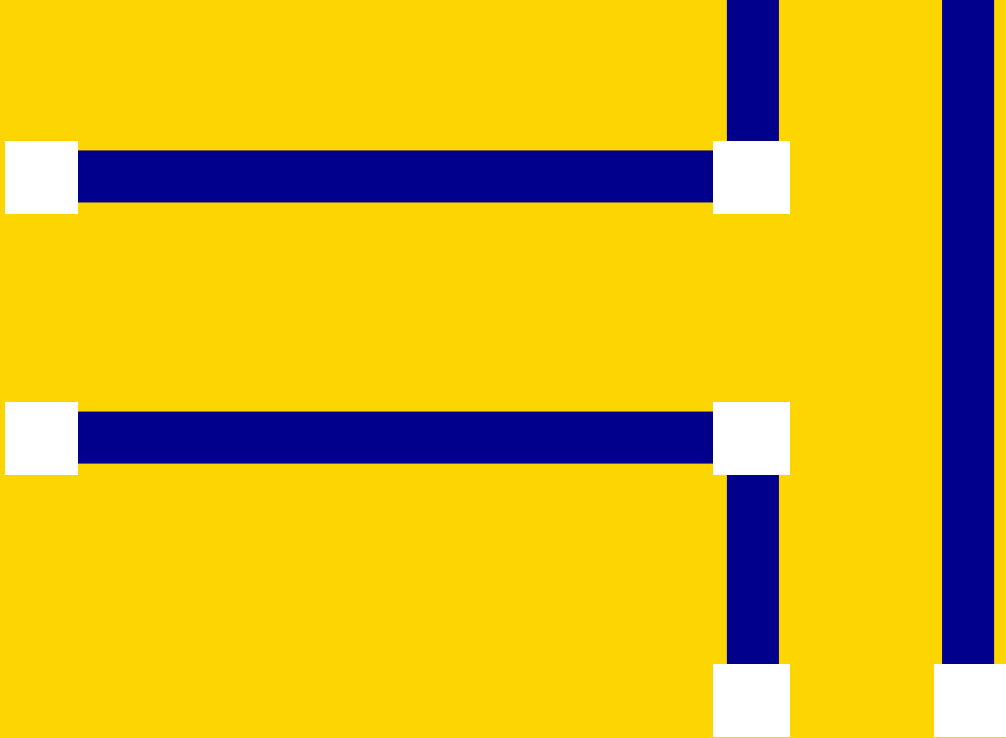
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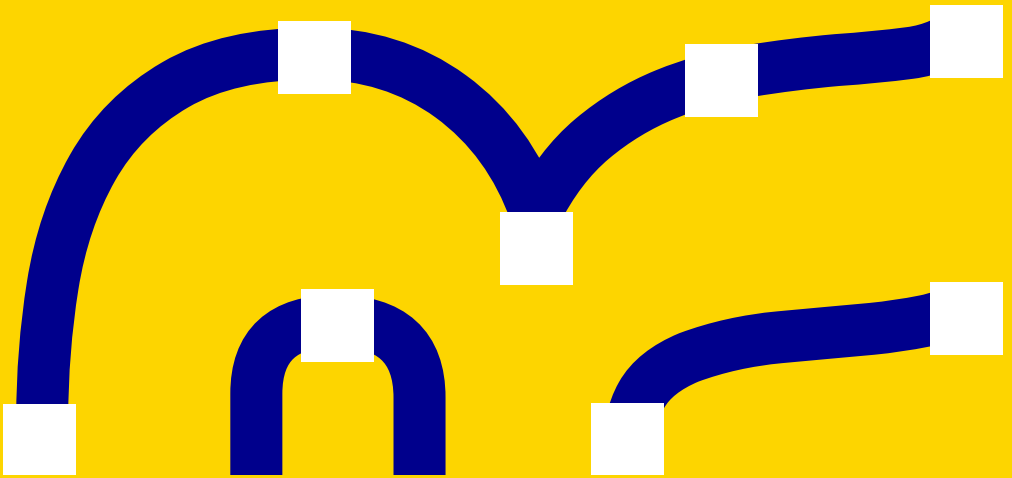
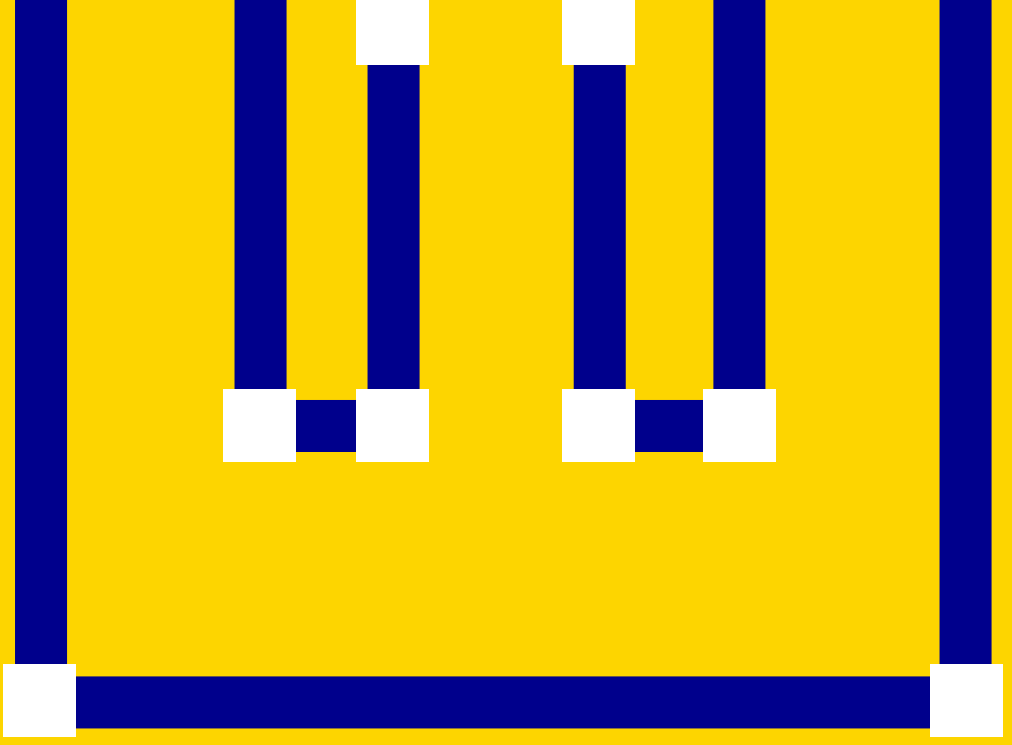
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