Design lessons in Public Schools

Renata Paraense
Rio de Janeiro, RJ
Brazil
paraensere@gmail.com

ABSTRACT
"Oficina Criativa" is the project that I created to help students to think and execute creative solutions. The objective is to empower kids since kindergarten and make them see that they are capable of coming up with relevant solutions and projects by themselves. During this classes, kids think and discuss ideas and solutions. They learn how to work together in order to accomplish what they want. They work mainly with disposable materials to create their prototypes and sometimes, their final products.

Keywords
"Project Based Learning" ; "Hands-on" ; "Design Thinking"

DESCRIPTION

Description of our setting
One day, I was working as a fashion designer at a big brazilian fashion brand and I've just realized that I wasn't happy. The thing is, I've always loved design, but I wasn't loving the way I was working as a designer. After a great reflection moment I decided that in order to be happy with myself I should be a teacher. But I didn't want to give ordinary design lessons at some university, I wanted to bring design's methodology to schools. And that's how "Oficina Criativa" just happen. As a designer I've already been selected to important design events like, Rio+Design, São Paulo Eco Fashion Week, Expo Milão and Dubai Design Week. I've worked as a product designer and as a fashion designer and I fully understand design's methodology and project planning. So I decided to study pedagogy in order to understand the teaching part.

I live in Rio de Janeiro, Brazil. At this moment, I'm working at a private school as a Makerspace teacher but my objective with this project is to take design's methodology to every school, specially the public ones where is rare to find resources to work with. So last year I volunteer to give this lessons in a public school called Escola Municipal Brito Broca in a slam here in Rio. It was magical.

Description of the educational experience
The learning goals of this project are:
- Develop creative thinking
- Instigate curiosity
- Work indepence and authorship
- Motivate collaboration
- Comprehend and work responsibly towards the environment
- Motivate initiative
- Create a place where they can express themselves, where they feel capable, participants and producers of knowledge.

Here I'm going to write down the 3 first lessons diary to show the importance of bringing design's methodology to public schools.

Day 1:
I've presented myself for the class. There were 30 students from 6 to 8 years-old. I told them that I was there to make them think and create things using their own hands. Then, I asked them to think what was unsatisfying in their class, if there was any problem that they wanted to be solved, if there was something that could be better… They started to speak their thoughts and I started to take notes at the board. - We

want robots to play - We want finger spinners to play - We want dolls to play - So I asked them, as we could see at the board, what is our problem in this class. One student told me: We want more toys to play in our class. Yes, that's the issue that we need to figured out how to solve. I told them, that we needed to decide what was going to be the first toy that we were going to create and how. Plans to create it, materials, tools, everything. At the end of this first class, we had our first objective: finger spinner. And our list of materials and tools: - Scissors - Cardboard (from packagings that could be found at the school) - Colored pencils / Markers - Small wooden sticks - Glue

Day 2:
When I arrived the students were thrilled to have the class. They had already arrange some cardboard packagings and some sticks. So I asked them, what was our first step and a student answered me: we need to draw the spinner on the cardboard. Some of them started free drawing and a student asked me help because he was having trouble drawing circles to create the spinner shape. I asked him to look around and see if there was something that could help him create this circles and he saw a lid. He used the lid and told other students that using the lid was easier to draw. After that, they started cutting the shape and a student put a stick in the middle of the spinner and started spinning with his hand. Another student told him that was wrong, that he needed to cut a small piece of the stick and glue another cardboard circle at the top of if to make it better. So the entire class followed his steps and gaddly accomplished the objective. At the end of this class we did a votation to decide what was going to be the next toy and decided to create some robots. I asked them to think which materials and tools they were going to need and to try to bring it next class.

Day 3:
At the beginning of this class, a student told be that he showed his younger sister how to make a finger spinner and that they did many and painted in many different colors to sell in their street to have money to buy cookies. That's entrepreneurship! I didn't think of this aspect of the project at first. Students brought cans, bottles and packagings to create their robots. I told them to start and to help each other giving ideas. Some students used lids to create the eyes. Some of them used bottles and cans together. The robots were looking good and they asked me to invite their homeroom teacher to see. When she arrived, she asked me if it was okay to read them a story. The story was called "Scrap Man". After reading the story she asked the students to think about the story of the scrap man that they created.

3. CONCLUSION

What I've learned doing this project is that bringing design to school can transform the way kids see themselves, can empower them and make them independent. In our reality here in Brazil this is crucial. We are talking about schools without tables, chairs and basic resources. Motivating kids to go for what they want, to fight for what they believe is something huge here. Right now I'm trying to find funding for this project and writing a plan to teach teachers that already work in public schools design's methodology so they can use it on their classes too.

Results and Broader Value

When we teach kids since young ages that they can find solutions to any problem and that they can actively work towards the solution, we form a group of kids that will not stand with crossed arms in front a unsatisfying situation. We form a group that work as authors of their own ideas, that don't just wait for the solution to come, but that work for it. I strongly believe that learning is more effective when there is collaboration and interchange, making possible that students interact with each others using their mental structures to relate, compare and classify to lead them in a direction of effective actions and that develop themselves.

4. BIOS (please leave this section empty until after your submission has been accepted)

Include short bios of the educator(s) here. Indicate which educator will be a member of the panel (only one person per submission can participate on the panel).

5. REFERENCES

FREIRE, Paulo. Pedagogia da autonomia: saberes necessários à prática educativa. São Paulo: Paz e Terra, 1996.

FREIRE, Paulo. Pedagogia do oprimido. 50. ed. São Paulo: Paz e Terra, 2011.

BANKS LEITE, L. As interações sociais na perspectiva piagetiana. Série Idéias, n.20, São Paulo: FDE, 1993,

DEWEY, J. Experiência e educação. São Paulo, Nacional, 1997.

LIBÂNEO, J.C. Democratização da Escola Pública.São Paulo:Ed.Loyola, 2005.