16

P
AD

Towards
a New Agenda
for Design
in the
Mediterranean
Region

002

PAD #16
Towards a New Agenda for Design in the Mediterranean Region

003

O

EDITORIAL
#16

Mondiale!
Open-ended Game-tools to Stimulate Possibility Thinking for the Intercultural Education

Valentina Frosini
Università di Firenze

Keywords

intercultural education, interdisciplinary approach, design-intensive innovation, open-ended game-tools, Reggio-Emilia approach

Abstract

This paper presents a practice-oriented research on intercultural education, based on an interdisciplinary process shared with design, anthropology and pedagogy. On the basis of an exploratory case study, the aim of the research was to investigate whether and how design could contribute to the theme of intercultural education in terms of innovation in kindergarten (3-6 years), thanks to the design-driven method, which has been used in a more inclusive and extended version, the *design-intensive innovation*.

The output of the research is a series of *open-ended game-tools*, designed to be part of the educational programs in schools and oriented to stimulate creative learning in terms of *possibility thinking*. The field research was conducted within the *Scuola per l'Infanzia I Gelsi* di Scandiano: in terms of methodology, the Reggio Emilia approach has been used to verify the learning effects of the proposals. Conclusions report strengths and weaknesses of the project practice.

1. Foreword

Interculture means conceiving cultures as relatively homogeneous entities, capable of creating shared areas, where socialization can arise: it means perceiving cultures not as absolute and closed, but permeable and open, where identities are the result of memory and oblivion, in a constant becoming process (Appadurai, 2001; Aime, 2006; Todorov, 2009). According to Aime "interculture is already alive in the culture itself" (2004, p. 63) and Italy as a "weak nation" (Glick Schiller & Çağlar, 2011, pp. 125, 126) is a special case, being historically and culturally characterized by differences. Because of its geographical position in the middle of the Mediterranean sea, Italy is "the country in the middle of the middle-sea" (Lotti, 2015, p.16), a crossroads of migrations of various and many people: as such, it is desirable that Italy regains an active role in the Mediterranean chessboard, "a role of proactive mediation in terms of creation of cultural synergies among the countries on the Mediterranean and one of activation of collaborations of knowledge and skills" (Lotti, 2015, p. 39). Because of this specificities, Italy represents a favorite field of high potential experimentation on intercultural education (a relevant European and global issue). In order to achieve this goal an "accelerator of change" is required (Germak, 2008, p. 67) which would enable researchers and professionals to overcome the disciplinary boundaries and create visions before actions: design is one of the most effective agents of change in the intercultural domain, as a "socially and politically aware choice of field" (Lotti, 2015, p. 43) able to catalyze the main factors to activate solid choices. This paper is an experimentation based on how project culture can intervene

in the intercultural issue starting from the most relevant tool: education.

2. Intercultural education: a paradigm shift

Intercultural education is a global issue that represents a main topic: both European recommendations[1] and national ministerial recommendations[2] strongly suggest to work on structured and documentable teaching proposals which allow transferability to other classes and capitalization in subsequent years in order to avoid the fragmentation of single curriculum projects. It is necessary to create initiatives beyond the urgency level, operating in the medium-long term and encouraging a radical change in the education field. Inclusion can only start from a basic assumption: it is normal to be different (Eco, 2013). Social change in Europe is giving rise to increasingly multi-ethnic societies, often incapable of confronting each other, since most of our cultural institutions still have a traditional character which represents national culture, "based on a premise of cohesion and homogeneity rather than diversity and convergence" (Federici & Reggiani, 2006, p. 3). A paradigm shift is therefore necessary, which will allow us to move from the principles of universality and homologation to those of diversity and convergence. Cultural diversity could be seen from an autonomous perspective, not necessarily related to ours, but equally meaningful (Sclavi, 2003).

---

1.   European Parliament and EU Council's Recommendations of 18 December 2006.

2.   Ministry of Education, University and Research, Department for Education and Training System Directorate-General for Education and the Evaluation of the National Education System (2017). National Indications and new scenarios, available at http://www.miur.gov.it/documents/20182/0/Indicazioni+nazionali+e+nuovi+scenari/3234ab16-1f1d-4f34-99a3-319d892a40f2.

3. *Mondiale!* Research: the main goal

The research main goal was to answer the general question "can design contribute to intercultural education in terms of innovation?" through a set of answers generated by the results of the field tests. At the same time, two other questions were specifically related to my research:

does it make sense to talk about interculture in kindergartens? Is it possible to create a methodological path, based on previous studies?

In order to answer these questions, it was created an exploratory case study, which has been used at the *Scuola dell'infanzia I Gelsi* di Scandiano, in Reggio Emilia.

3.1. Specific goals

The research process was shared with the other two main disciplines: pedagogy and anthropology. If the main goal was to answer the initial question, the specific goals were:

- Designing innovative play tools for intercultural education;
- Making tools which can be replicated;
- Making teachers independent from the presence of the designer (transmissibility);
- Making the methodological path explicit and repeatable;
- Making the practice of interdisciplinarity explicit.

4. The methodology

Despite the interdisciplinary nature of this research, the purpose was to understand how design acts in the anthropological and pedagogical fields in terms of methodology and how it borrows methods and tools, modifying them for design purposes.

The methodological approach was reflective-interpretative and practice-oriented (Rizzo, 2009), balancing design practice and scientific approach (Figure 1).
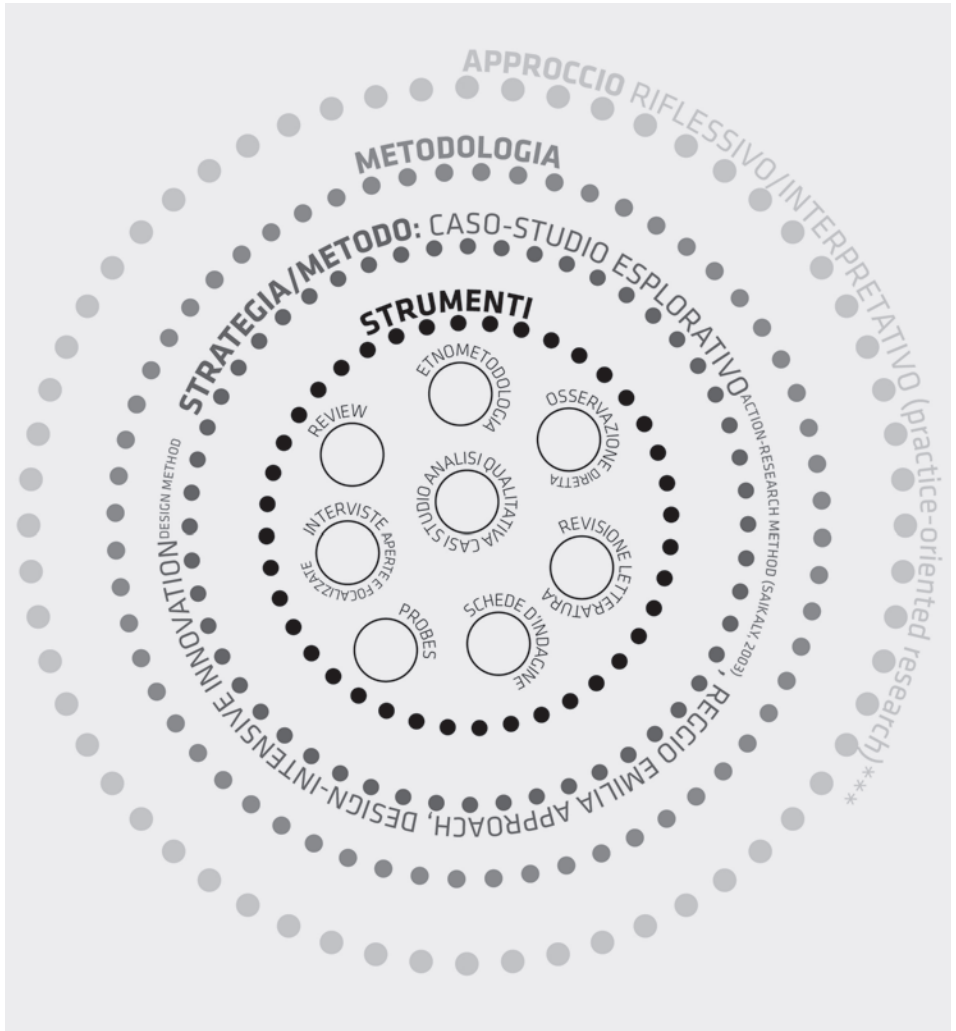
Figure 1. Valentina Frosini, *Mondiale!* methodology: from the approach to the instruments. Credits Valentina Frosini.

4.1. The exploratory case study

Gerring defines the case study as "an ideal-type research strategy", rather than a method with strict rules: it is a particular kind of investigation that, through a deep study of a certain situation, allows us to deal with it in its complexity" (Gerring, 2004). Yin classifies the case studies into three different typologies: exploratory, descriptive and explanatory (Yin, 1981). Exploratory case studies are carried out to identify hypotheses and questions that "may be the subject of subsequent research or to establish the feasibility of the research. They are therefore a prelude to other research projects" (Yin, 1989). The exploratory case-study was therefore particularly effective because of the nature of my research, especially for its holistic nature since it has offered a plurality of points of view which allowed to understand the phenomena in their multiple facets. Anthropology and its relationship with design (Gunn, Otto & Smith, 2013) was involved especially at the beginning of the proposal; pedagogy was particularly involved in the proposal check (before and after the field test).

4.2. Design-intensive innovation

The research was conducted through a design-driven method. According to Verganti (2008), design-driven method is defined as a radical innovation of meaning, capable of influencing and changing socio-cultural contexts. In particular, Verganti points out that the design-driven method is never user-centred: it is the result of the intuitions of the expert designer, who suggests proposals instead of answers, thanks to his/her visionary capabilities. In my opinion Verganti's description does not care about the profound social changes ongoing, particularly

in the last decade. Manzini (2018) defines this social changes a transformative social innovation: "a composite and dynamic social landscape, in which there are other ways of thinking and doing" (Manzini, 2018, p. 8). It represents a subset of social innovation, which changes reality towards sustainability. In my opinion, Verganti's idea of the user does not take these profound changes into account. Therefore, I suggest to open the focus from the design discourse (which stimulates the designer's visionary skills thanks to the key interpreters) to the design community (Figure 2).
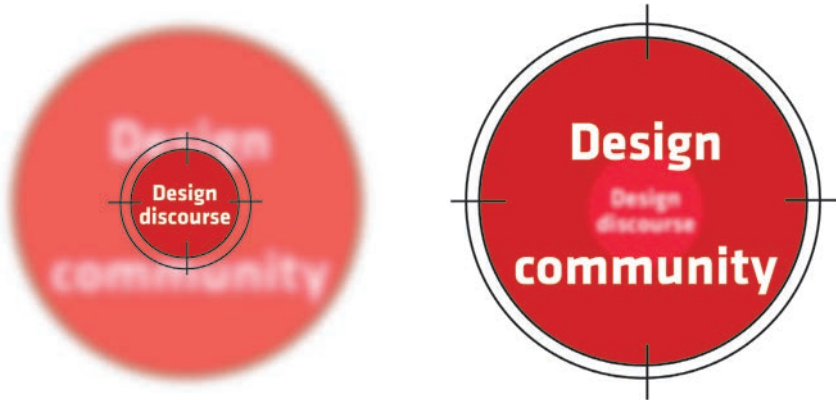
Figure 2. Valentina Frosini, *Mondiale!* focus opening: from the design discourse to the design community. Credits Valentina Frosini.

I think that every expert designer has to consider this paradigm shift, which will affect his/her proposals. In order to include this profound social changes, a broader and more inclusive definition is required. I suggest to refer to the design council's definition[3] who talks about *design-intensive innovation*, related to the intensity with which design is applied

---

3.   https://www.designcouncil.org.uk/resources/report/understanding-design-intensive-innovation.

during the innovation process (at any stage of it), rather than Verganti's definition.

4.3. The Reggio Emilia approach

The Reggio Emilia approach is the method applied to check the learning activities designed on the basis of the interdisciplinary design process. This approach was fundamental in order to check the proposal's learning effectiveness. It is based on the constructivism and social constructivism approach, and related to the 100 languages of children (every child learns in different ways) and the whole approach is based on the observation, through documentation and conversation between children and teachers (Giudici, Krechevsky & Rinaldi, 2009; Nuzzaci, 2011). Making learning visible is one of the cornerstones of the model and it was fundamental, in the field check phase, to allow me and the teacher to understand how children responded to my proposal: the analysis of the many facets, typical of the exploratory case study, expressed itself in this phase in all its potential (Gerring, 2004). According to Vygotskij's theory (1930, 1934) about the mediated and situated nature of learning, it is necessary to act on artifacts (material and immaterial) in order to improve children's education and designer can therefore act as *catalyst-agent* to gain social change (Bennett, Cassim & Van der Merwe, 2017).

4.4. DNE: design process within education process

The methodology which has been used conceives *Mondiale!* at the centre of a chain made of two processes (Figure 3): the project process driven by *design-intensive innovation* and the educational one driven by the Reggio Emilia approach.

Mondiale! is in the middle and it represents the output which allows the designer to understand the effectiveness of his/her proposal in order to stimulate learning in intercultural terms. It also allows not to miss potential elements of surprise.
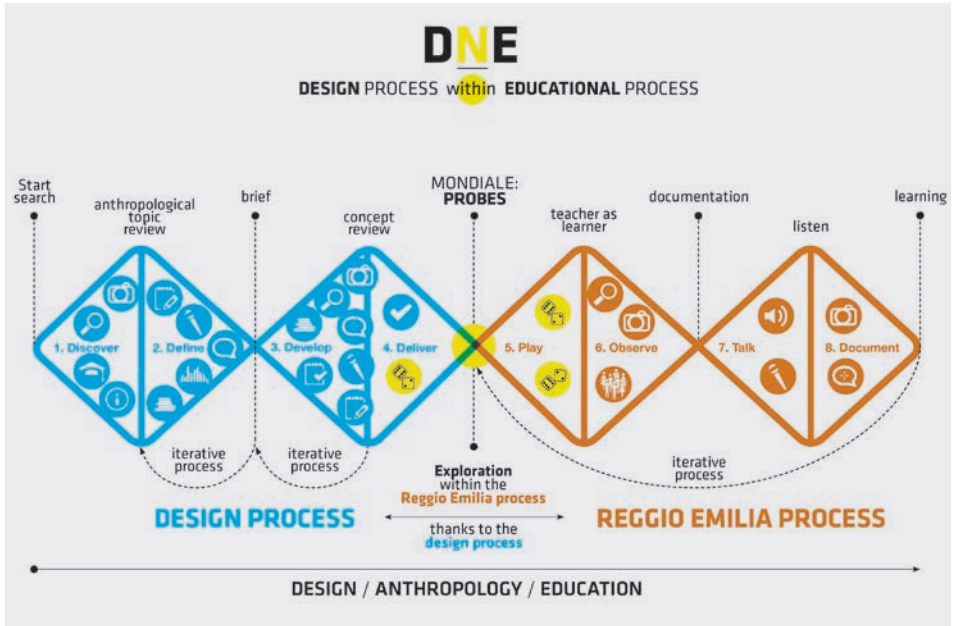
Figure 3. Valentina Frosini, *Mondiale!* Dne: design process within educational process. Credits Valentina Frosini.

We can define *Mondiale!* games as probes (Mattelmäki, 2006) oriented to an exploratory and not-intrusive research. Probes belong to the expert-mindset (Figure 4) and they are coherent with my design-driven research (Sanders, 2008). Final users (children) use probes and take part to a learning process by an innovative gaming activity (Iversen & Nielsen, 2003). Therefore, *Mondiale!* is the link of an information chain that recalls the dna double helix structure.
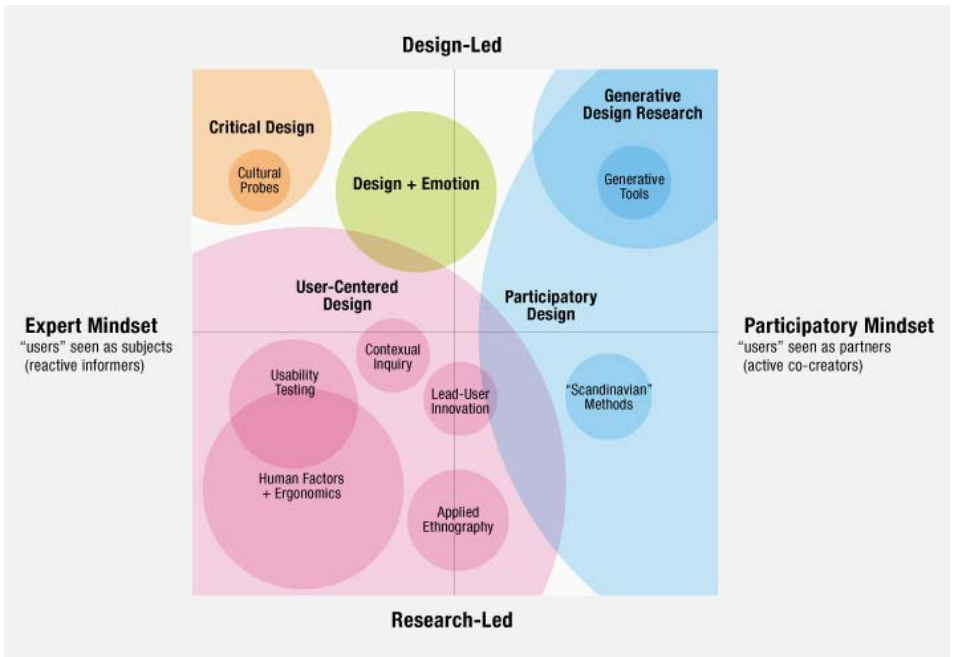
Figure 4. Liz Sanders, map of design research - research types. Credits Liz Sanders, *ACM – Interactions, XV/6*, November/December 2008 on Modeling Forum.

5. *Mondiale!* The project

The name calls to mind both the sense of global belonging (seeing oneself as world citizen) and the figurative sense (an exclamation for an extraordinary event). Games are *open-ended*, in other words they leave freedom in terms of learning (Figure 5).

Figure 5. Valentina Frosini, *Mondiale!* open-ended process: design process oriented to learning, overcoming the result to focus on the process. Credits Valentina Frosini.

The idea of *open-ended* is common to all the instruments of *Mondiale!*, as a matter of fact every activity provides for many possible combinations instead of only one (possibility thinking). They are designed to cover the entire educational offer of the kindergarten (3-6 years) so that they can become part of it (as per national indications).

At the same time teachers can gradually become familiar with the activities.

5.1. the three activity levels
Every activity is three levels-shaped:

1. The over-structure: this is the theoretical level, related to the anthropological, pedagogical and epistemological principles. This level does not directly concern children or the games, but it is the fundamental theory that produces the games;
2. The game itself, provided with rules/not rules, since, as already described, it is always a matter of open-ended games, without constricting boundaries;
3. The third level can be defined by teachers. Mondiale! is a kind of module: teachers can attach videos, stories or any kind of connection that is related to the preliminary over-structure of the game. The game can therefore be introduced by teachers: they can customize the game and feel part of it.

5.2. activities
Every activity starts from tool-games that are designed and dedicated to specific objectives. The project output mainly tries to innovate the game (new concept, with no specific rules) to the benefit of the freedom for learning.

The graphic language is uniform and basically consists with the idea of re-designing the world: every activity refers to an imaginary map (Figure 6) and it is linked to the concept of re-designing geography from scratch thanks to the stimulation of *possibility-thinking* in children (Camuffo, 2017).
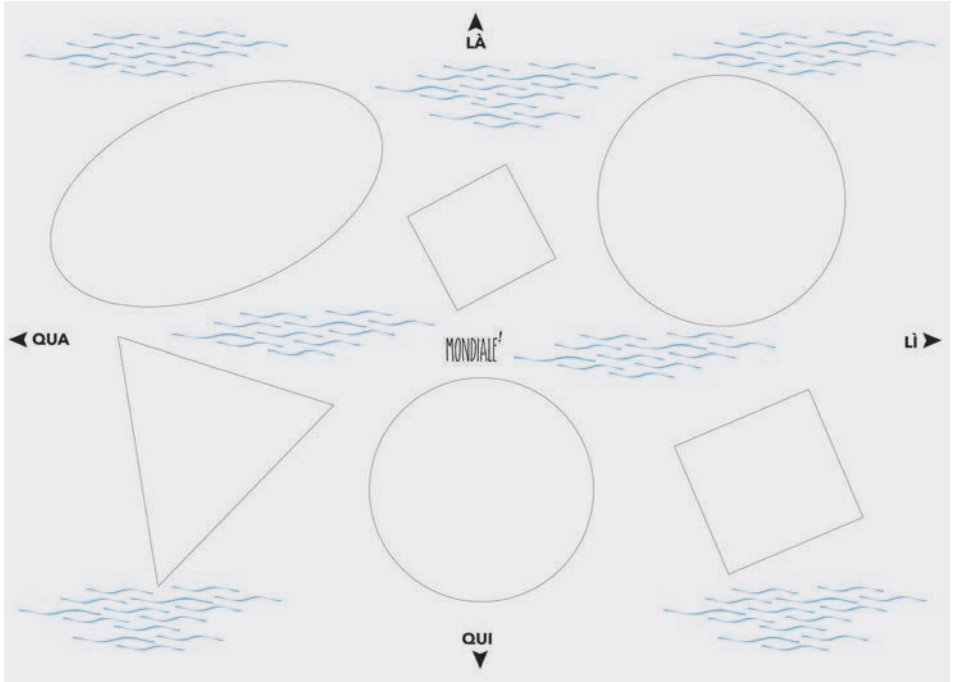
Figure 6. Valentina Frosini, *Mondiale!* The ideal map to re-design the world. Credits Valentina Frosini.

5.3. *Giragiramondo* (3-4 years-old)

It can be played with a globe, a series of figures and a board/world. The game is based on the attempt to find a balance between pluralism of cultures and universalism of values shared by all humanity. *Giragiramondo* is a cube (Figure 7) that represents a special globe: each of its faces refers to a country of an ideal map and the countries are shaped as basic colored forms.

Figure 7. Valentina Frosini, *Mondiale! Giragiramondo* the special globe. Credits Valentina Frosini.

Each face has a cut that allows the player to access the inside of the cube/globe: inside of it children can find the necessary shapes to complete the board/world. The idea behind the game refers to the universalism of shared values: whatever country you belong to, you have access to the same values shared by all humanity. Transposed into the game: from whatever side of the cube you enter, you have access to the same figures contained within the globe. The shapes are numerous and the combinations of colors that the players can create to complete the board (the world) are always different.

5.4. *Quale verso? Uguale o diverso?* (4-5, 5-6 years-old)
It can be played with 36 cards (Figure 8), representing 36 primitive shapes, which refer to the six shapes of the ideal

map: six shapes in six different colors. The activity makes us think about the dichotomy between equality and diversity: does integration take place because we accept the diversity or because we recognize in others traits common to ours? As a result, the game tries to make children reflect: there is never a univocal and right choice, and even when we have to choose which figures are alike or different, the criteria are related to the subjective and cultural domain.
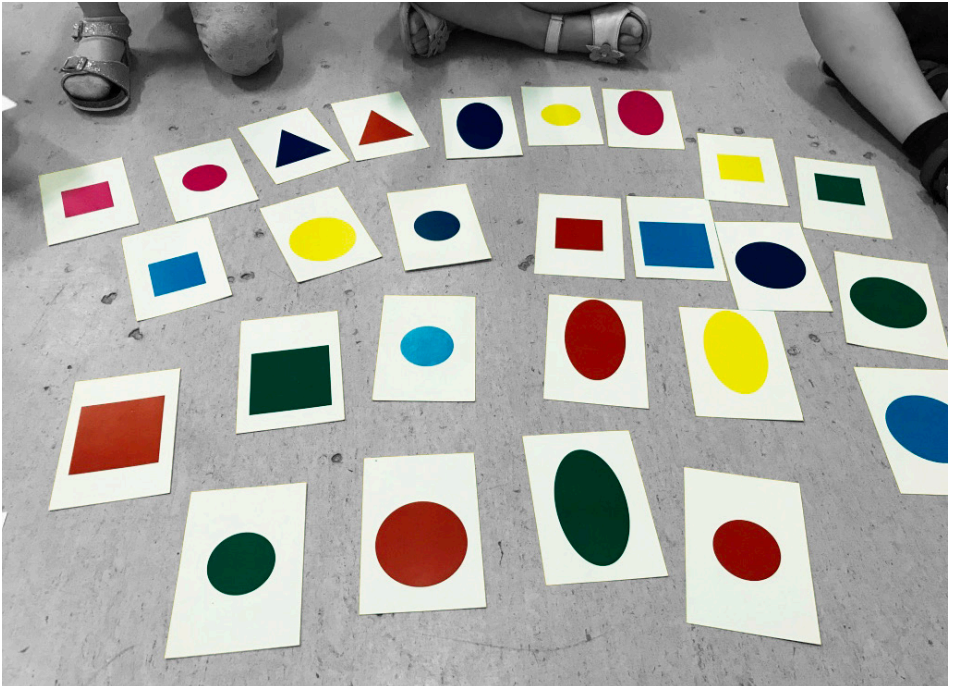

Figure 8. Valentina Frosini, *Mondiale! Quale verso? Uguale o diverso?* the cards. Credits Valentina Frosini.

The game begins by arranging all the cards face up, so that they are all visible at the same time. Each child is asked to choose, according to his/her own criteria, two pairs of cards: one pair of identical cards and one pair of different cards.

The child must then argue why the two cards are alike or different: the criterion is based on shapes or colors and is highly subjective. As a matter of fact, a card can be alike to another card in color, but different in shape and so on: it is up to the child to choose which of the two features is predominant in the selection made. The criteria are obviously interchangeable: at a turn the child can see two cards as alike to each other, and then he/she can change his/her mind at the next turn and judge them as different. The game never concludes with a solution and stimulates the child to reflect on the fact that the point of view can change completely the perception of what we observe.

5.5. *Il mondo in classe* (4-5, 5-6 years-old)

It can be played with an a5 note-pad, some shapes for drawing (triangles, squares and circles) and a rubber-stamp (Figure 9). The note-pad is made up of 500 sheets: on each sheet a random name is printed: Italian, English, Chinese, Arab and French names. Each sheet shows one of the names along with two eyes and a heart that, together with the hand-shaped rubber-stamp, represent the common traits of all children: all the rest is the result of the imagination of the child, who draws the figure through the shapes (which call to mind the basic shapes of the ideal map). The activity plays with random factors such as the name written on the sheet and the actual child drawing on the sheet: two children, probably of different nationalities, meet virtually. One of them draws the other, without prejudices or stereotypes. The basic idea is giving to children the power to redesign the world, starting with the people who inhabit it, helping them to overcome the prejudices. Moreover, at the end of the school year, children will have

many sheets with faces from all over the world: the world diversity will have overcome the classroom boundaries.
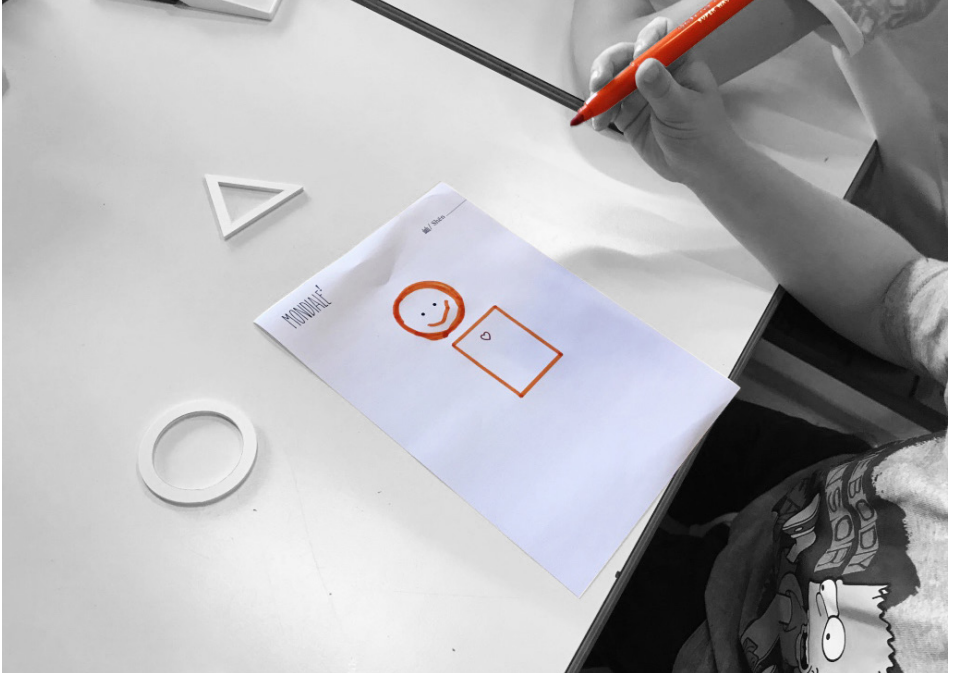
Figure 9. Valentina Frosini, *Mondiale! Il mondo in classe* the note-pad and the shapes for drawing. Credits Valentina Frosini.

5.6. *Pontifichiamo!* (5-6 years-old)

It can be played with a pvc carpet/map, a cube with colored faces, a cube of directions/non-directions (*qui, lì, qua, là*), pawns, 30 bridge tablets, a nut (Figure 10). The ideal map is inspired by real continents but it reinterprets them; the shapes are basic because children have to re-design the world! Directions are non-directions (*qui ,lì, là, qua*) and everyone can decide to move in total freedom. The map is designed to become a large carpet on which children can start planning a new world.

Figure 10. Valentina Frosini, *Mondiale! Pontifichiamo!* the re-design of the world. Credits Valentina Frosini.

At the base of the map is the idea that the world, as it has been given to us, needs to be rethought, redrawn: children, more than anyone else, are the architects of change. Playing to draw and change the world is a way to train them to the idea that rethinking things can and must be done, to stimulate them to think different possibilities, in other words, to train them to the possibility-thinking.

At a first attempt the map was with colors, but in a second time they were removed in order to generate the fundamental dynamics of learning and allow children to re-design (with colors) the world. The next step is moving on the map using

ideal directions (*qui, lì, qua, là*) in order to build bridges between countries, and at the end, all countries are connected to each other. The final part is moving on the map thanks to the bridges: each child moves freely around the world, crossing all countries and plays to become a citizen of the world.

6. Results

The field test involved 6 classes, 39 children and 16 teachers, all within the *Scuola dell'infanzia I Gelsi*, Scandiano (RE) and was carried out through direct observation (by me and the teachers), photographic and audio documentation, conversation with children, focused interviews (with the teachers), daily reports. Since my research was an exploratory case-study, some of the results were expected, but others were absolutely unexpected (Rizzo, 2009).

6.1. Expected

The aim of the research was to answer the initial questions through a set of answers:

- *Can design contribute to intercultural education in terms of innovation?*
  Research has shown how design can effectively contribute to intercultural education in innovative terms. *Mondiale!* is one of the ways in which design can contribute, but any contribution to intercultural education requires *open-ended* activities, i.e. without a given delivery or prescriptive tasks. The intercultural issue requires a dialogic approach (Sennet, 2012) that does not allow proposals to be inscribed within rigid frames;

- *Does it make sense to talk about interculture in kindergarten?*
  It is a domain to explore and contribute to. In particular, the need for innovation is growing along with the need to overcome the dominant paradigm of equality and homologation and the risk of ethnicization (Aime, 2004);
- *Is it possible to explain a methodological framework?*
  DNE is one of the possible methods to produce innovation by a design process. The Reggio Emilia approach was also fundamental, to make learning visible.

6.2. Unexpected

The field test revealed a set of unexpected data:

- *The presence of prejudices*: during the conversation (driven by teacher, to understand the child's way of learning) of *Quale verso?* (4-5 years-old), prejudices rooted in the paradigm of similarity emerged. Actually, from the interview it emerges how similarity is perceived as a positive value and how, on the contrary, diversity is experienced and described as wrong (a position shared by all the children of the group subject to verification);
- *The value of collaboration and language*: in *Pontifichiamo!* Activity, the large surfaces, the need to color them, allows us to meet the other, to help each other (if at the beginning each child had chosen a shape to color, the large surfaces have forced them to work together).
  Language (bridges, diversity, alike, different, redrawing, places, far away, near), transversal to all activities, trains children to develop a sense of alternative to the dominant thought they inherit;

- *The value of randomness*: drawing possible geographies and encounters in an unconventional way (i.e. *Il mondo in classe*), makes it visible how cultures can and should meet in an unconscious way, in a balance between memory and oblivion.

7. Conclusions

The domain of education compels the designer to overcome the urgency of results in favor of the process: *open-ended* approach is necessary to stimulate free learning frameworks. At the same time, we have to pay attention to time management: it is necessary to find a balance between learning times (lenses) and the design synthesis, to avoid not understanding the effectiveness or our purpose. Furthermore, it is fundamental to consider the educational training of the designer who aims to operate in the intercultural field.

The designer must necessarily:

- overcome the frames of belonging and cultural diversity (Sclavi, 2003);
- build the reciprocity of the look and work on the overcoming of ethnocentrism (Aime, 2004);
- overcome the urgency of classification and project synthesis;
- build the dialogic ability, or rather overcome one's own vision in favor of newly acquired perspectives (a direction/non-direction), also from the point of view of the management of the iterative process, which an interdisciplinary path necessarily requires.

Finally, teachers' fragile and diversified intercultural competences, together with a widespread resistance to innovation, call for future participatory design research projects aimed to teacher training.

References

Aime, M. (2004). *Eccessi di culture*. Torino: Einaudi.

Aime, M. (2006). *Gli specchi di Gulliver*. Torino: Bollati Boringhieri Editore.

Appadurai, A. (2001). *Modernità in polvere*. Roma: Meltemi Editore.

Bennett, A. G., Cassim, F., & Van der Merwe M. (2017). How design education can use generative play to innovate for social change: a case study on the design of south African children's health education toolkits. *International Journal of Design*, 11(2), pp. 57-72.

Bodei, R. (2016). *Limite*. Bologna: Il Mulino.

Camuffo, G. & Dalla Mura, M. (2017). *Design e apprendimento creativo. Questioni ed esperienze*. Milano: Guerini e Associati.

Eco U. (2013). *Conflitto o integrazione*. In Smaghi, L., Dalla Zuanna, G., Eco, U., Riccardi, A., Impagliazzo, M. (eds.). *Integrazione. Il modello Italia*, p.71. Milano: Guerini e Associati.

Federici, S. & Reggiani, A. (2006). Introduzione al progetto interculture map. *Africa e Mediterraneo*, 2-3/06 (56-57), pp. 2-5.

Germak, C. (2008). *Uomo al centro del progetto. Design per un nuovo umanesimo*. Torino: Umberto Allemandi & C.

Gerring J. (2004). What is a case study and what is it good for? *American Political Science Review*, 98(02), 341-354. In Berni, M. (2014). *L'approccio del caso-studio nell'estimo e nella valutazione: aspetti metodologici. Siev*, 12, pp. 81-84.

Giudici, C., Krechevsky, M. & Rinaldi, C. (2009). *Rendere visibile l'apprendimento. Bambini che apprendono individualmente e in gruppo*. Reggio Emilia: Reggio Children Editore.

Glick Schiller, N. & Çağlar, A. (2011). *Locating migration: Rescaling Cities and Migrants*. London: Cornell University Press.

Gunn, W., Otto, T. & Smith, R.C. (2013). *Design anthropology. Theory and practice*. New York: Bloomsbury Publishing plc.

Iversen, O., & Nielsen, C. (2003). Using digital cultural probes in design with children. In *Proceedings IDC 2003*, Preston, UK, p. 154. ACM Press.

Lotti, G. (2015). *Design interculturale. Progetti dal mare di mezzo*. Firenze: Didapress.

Manzini, E. (2018). *Politiche del quotidiano*. Roma: Edizioni di Comunità.

Mattelmäki, T. (2006). *Design probes*. University of Art and Design, Helsinki (PhD Dissertation).

Nuzzaci, A. (2011). Pratiche riflessive, riflessività e insegnamento. *Studium Educationis*, vol. XII, 3, pp. 9-27.

Rizzo, F. (2009). *Strategie di co-design. Teorie, metodi e strumenti per progettare con gli utenti*, Milano: Franco Angeli.

Sanders, E. (2008). An evolving map of design practices and design research. *Interactions - experiences, people, technology*, XV/6, pp. 13-17.

Sclavi, M. (2003). *Arte di ascoltare e mondi possibili. Come si esce dalle cornici di cui siamo parte*. Milano: Bruno Mondadori.

Sennet, R. (2012). *Insieme*. Milano: Feltrinelli.

Todorov, T. (2009). *La paura dei barbari. Oltre lo scontro delle civiltà*. Milano: Garzanti.

Vygotsky, L. S. (1990). *Storia dello sviluppo delle funzioni psichiche superiori. E altri scritti*. (1930). Firenze: Giunti-Barbèra.

Vygotsky, L. S. (1992). *Pensiero e linguaggio*. (1934). Bari: Laterza.

Verganti, R. (2008). Design, Meanings, and Radical Innovation: A Meta-model and a Research Agenda. *The journal of product innovation management*, 25/5, pp. 436-456.

Yin R. K. (1981). The case study crisis: Some answers. *Administrative Science Quarterly*, 26(1), 58-65. In Berni, M. (2014). *L'approccio del caso-studio nell'estimo e nella valutazione: aspetti metodologici. Siev*, 12, p. 59.

Yin R. K. (1989). *Case study research: Design and methods*. Beverly Hills, CA: Sage. In Berni, M. (2014). *L'approccio del caso-studio nell'estimo e nella valutazione: aspetti metodologici. Siev*, 12, p. 85.

057

P
AD

AIAP
associazione italiana design
della comunicazione visiva