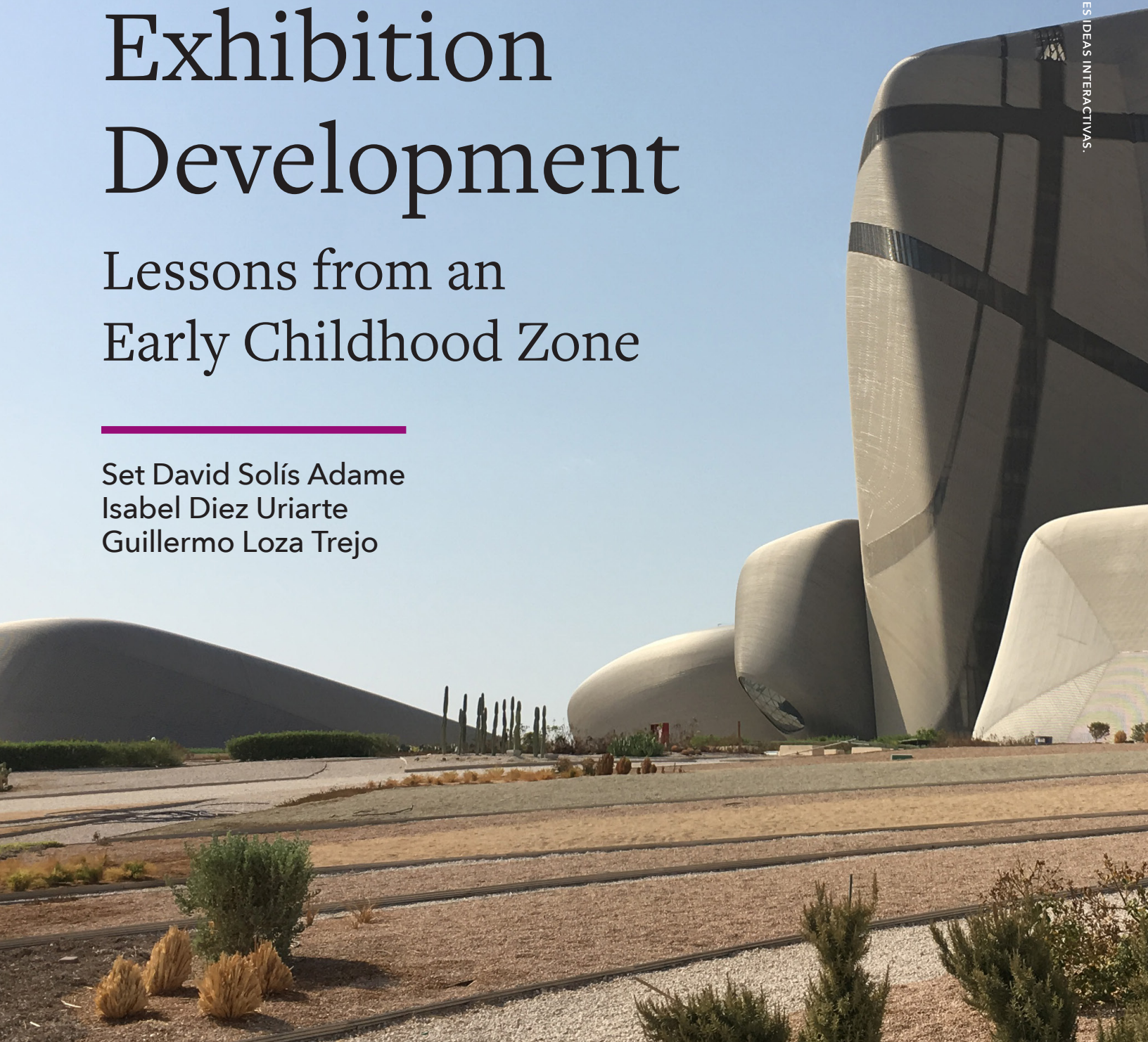


Cross-cultural Exhibition Development

Lessons from an
Early Childhood Zone

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King Abdulaziz Center for
World Culture (or Ithra) in
Dhahran, Saudi Arabia.

In 2016, Sietecolores – an exhibition design and fabrication firm based in Mexico City – was chosen from five companies to design, build, and install a 4,420-square-foot children’s zone for the King Abdulaziz Center for World Culture (also known as Ithra) in Dhahran, Saudi Arabia.¹ While our team had more than 20 years of experience creating public spaces for recreation and learning, it was the first time we would be working for a Middle East client – a job that would take us to the other side of the world.

As with any project – but especially with this one, between West and East – we were faced with the great challenge and responsibility of designing with a suitable, respectful, and ethical approach, mapping experiences that would not fall into stereotypes or clichés, and creating quality exhibits that would live up to the standards and culture of the community. During the process, we learned many lessons about exhibition development – above all, that as foreigners, your comprehension of another culture will always be limited. Therefore, it is especially essential to treat your clients as co-creators and allies, to have completely honest communication with them, and to find common ground between both contexts in order to achieve a truly user-centered design.

¹ Ithra is a cultural initiative by Saudi Aramco (the Saudi Arabian national petroleum and gas company) focused on “encouraging creativity, inspiring minds, and empowering talent” throughout its different areas and experiences. See: www.ithra.com/en/.

Laying the Groundwork

The first challenge we faced was a cultural one: how would we go about designing a project set in a country that was not our own? As a firm, we had experience designing for different communities in Mexico, where geographic and cultural diversity are vast. For instance, besides Spanish, people across the country speak more than 60 indigenous tongues. Our approach as a team has always been to gain a deep cultural understanding of the communities we design for – so that is where we started.

We did extensive literature reviews and consulted education experts working both in Mexico and Saudi Arabia to learn more about the Saudi context and culture.² Specifically, we focused on those who would be the key users of this space: children 12 months to five years old. As a result, we found several similarities between both our contexts – the familiar in the unfamiliar – which served as a solid start for our design process. One of the things we learned, for instance, was that in Saudi Arabia, for this age group, education is not differentiated between boys and girls, unlike the rest of the grade levels. This would be key for graphic design decisions and for content selection.

In addition, we found out that the Saudi preschool curriculum is mainly focused on the cognitive, motor, and socio-emotional development of the child. It is influenced by Eastern scholars, but also takes from Western theorists and researchers on human development (such as Maria Montessori, Jean Piaget, Lev Vygotsky, and John Dewey),³ all of whom have been key to our work in

2 The Saudi Arabia team was part of Ithra and was composed of local and international experts.

3 Haifa H. Aljabreen and Martha J. Lash, “Preschool Education in Saudi Arabia: Past, Present and Future,” *Childhood Education* 92, no. 4 (2016): 311–319.

Mexico. As a consequence, we chose to focus on the natural curiosity, imagination, and creativity of children by creating experiences where they could build their own knowledge and develop basic skills through play, the way Saudi and Mexican children – or any other, really – learn at home and at preschool. This also became important since, as a “Center for World Culture,” Ithra would host visitors from around the world.

Our Approach to Design

These findings set the tone for the process to come. After deep reflection, we came up with concepts and solutions that were simple, user-centered, and high quality.

Simple

“Going back to the basics” became key for both content and design. It was in the basics, after all, that we found common ground and a certain universality around which we could design. Vivid colors, organic shapes, and basic skills were crucial components of the final concept, which we based upon the idea of a cocoon:⁴ the area would be divided into five zones fit for nourishment and growth, each of them designed with organic shapes in mind, resembling the curves of a cocoon. The organic elements, besides being universally present in nature, were also a direct reference to Islamic art’s emblematic geometric and synthetic patterns. In addition, they were aligned to the shape and design of the center’s architecture (figs. 1 & 2).

Each zone or “cocoon” was designed so children would explore specific skills through intuitive experimentation and play:

4 Cocoons are natural layers that several insects construct for protection during their growth stage. Cocoons, like cells or wombs, are structures that protect inner dynamics and that perfectly fit the idea of a zone created for early childhood.

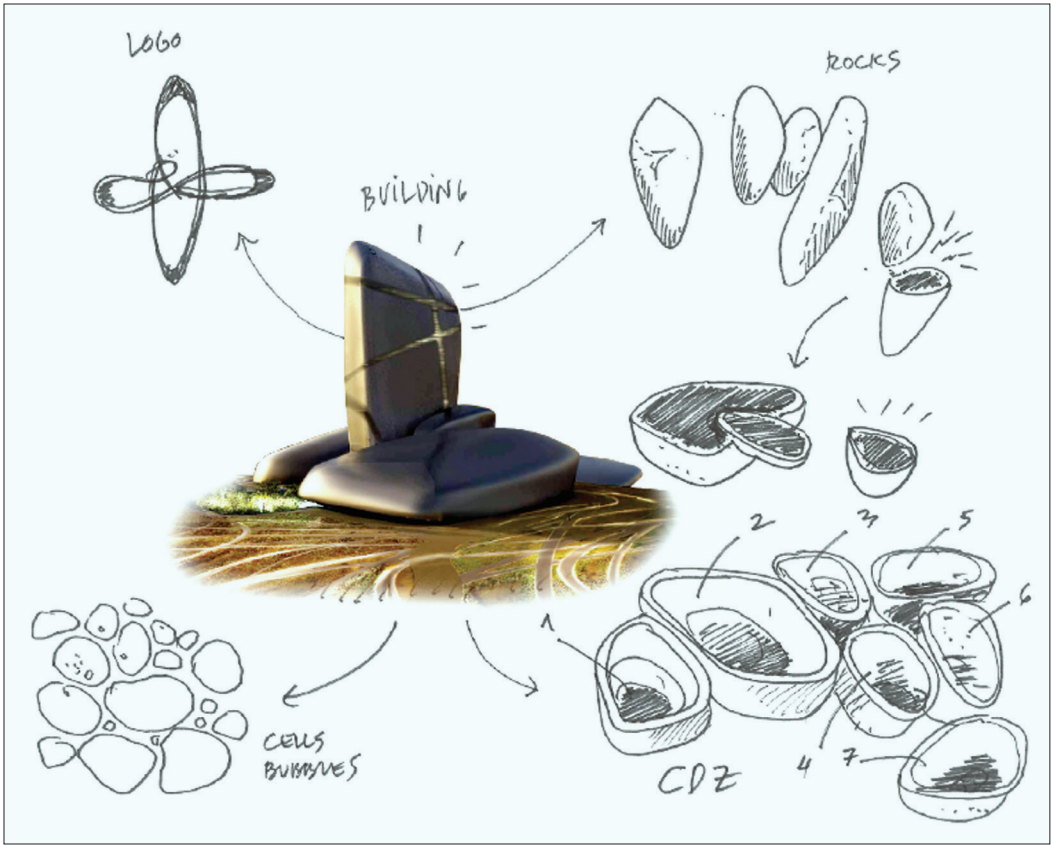


fig. 1. Initial conceptual sketches of the Early Childhood Zone, inspired by the design of the building and the idea of a cocoon.

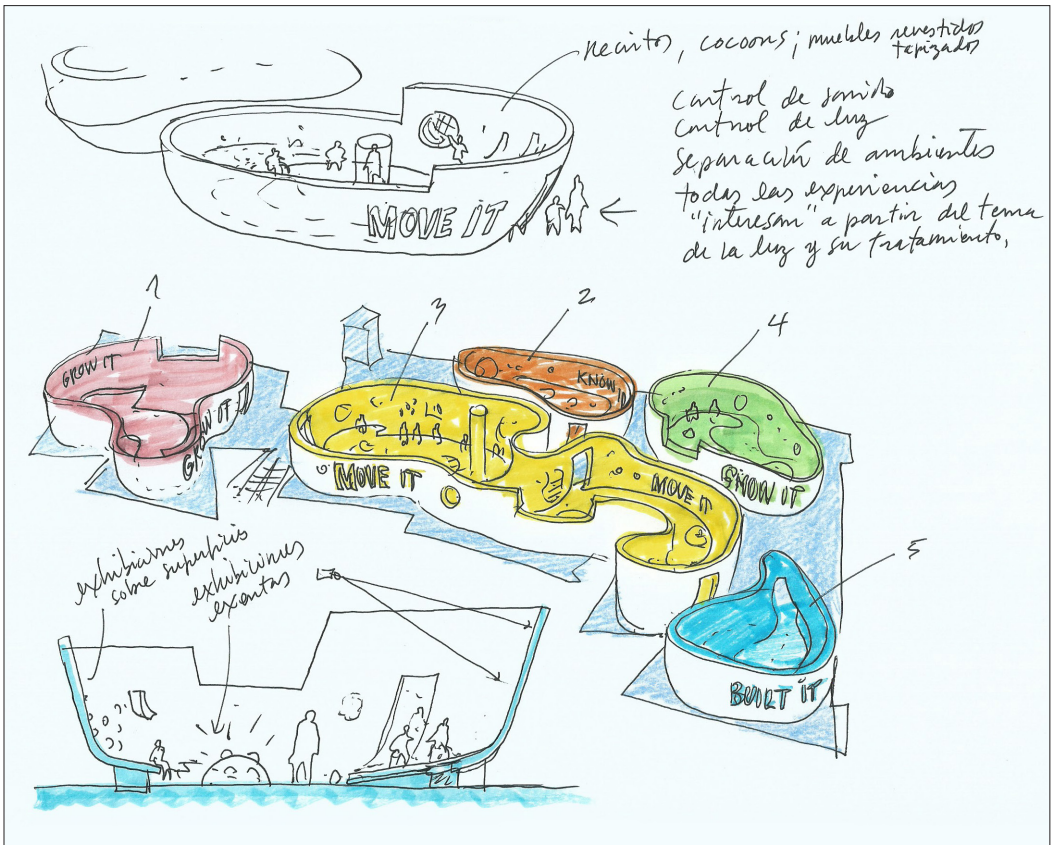


fig. 2. First drafts of the Early Childhood Zone.

- **Move it:** Focus on fine and gross motor skills.
- **Know it:** Focus on basic scientific thinking.
- **Show it:** Focus on art expression.
- **Build it:** Focus on collaborative play and communication.
- **Grow it:** Focus on the development of basics skills for the youngest visitors.

User-centered

At Sietecolores, we value user-centered design,⁵ which demands that we start with the users in mind, and that we come to know these users in deep and profound ways. When it comes to designing internationally, though, it is often not possible to make enough trips to the actual site to achieve the level of visitor understanding you need for a truly user-centered design. In addition, the fact that the main users were children and in Saudi Arabia added a new level of complexity. This is why we had to figure out another approach.

One of our biggest keys to success was having a fellow designer as the main point of contact with the client, someone with whom we shared a common vocabulary, and who was familiar with the design process of an exhibition. He helped us identify a few key people at Ithra whose work involved contact with Saudi children and who were completely familiar with the culture. While our native languages were different, we were both fluent in English, so chose it for communicating with each other. With just a couple of trips from us to Saudi Arabia, a couple from the Ithra team to Mexico,

5 User-centered design refers to Donald Norman’s concept where, through an iterative process, design is based on understanding the user experience. We apply this concept for exhibition design (form, color, and usability), so through this process we can evaluate situations and translate them into design solutions.

hundreds of emails, and dozens of video calls with clear set goals, we were able to establish an effective feedback system for our process. Clear communication helped us, for example, to make adjustments on several design elements – color, music, animal and human shapes – which had different symbolisms in Saudi culture than the ones with which we were familiar.

In addition, the exhibition was bilingual: it included both Arabic and English labels. We found Arabic writing to be a challenge on its own. We tested different translators for client approval. Still, the process required going back and forth with them several times to get it completely right linguistically and graphically. For production and later on installation, we had to be very careful to place every dot correctly, because even the slightest displacement could change the meaning of a whole word or sentence.

High Quality

We also had to figure out the technical solutions for fabricating something viable, practical, and lasting, since it would have to endure a long journey before reaching its destination. From the very beginning, the exhibition space was designed under the highest standards of the field, including the ADA Standards for Accessible Design,⁶ the American Alliance of Museums’ “Standards for Museum Exhibitions and Indicators of Excellence,”⁷ and the Public Playground Safety Handbook.⁸

6 United States Department of Justice, *ADA Standards for Accessible Design* (2010). See: www.ada.gov.

7 Professional Networks Council of the American Alliance of Museums, *Standards for Museum Exhibitions and Indicators of Excellence* (August 2012). See: www.name-aam.org/resources/.

8 U.S. Consumer Product Safety Commission, *Public Playground Safety Handbook* (December 2015). See: www.cpsc.gov/s3fs-public/325.pdf.

fig. 3. Cocoon composition. The 105-piece cocoons were created by using only 20 different molds.

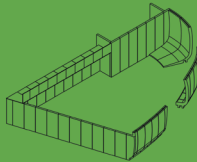

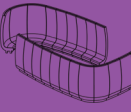

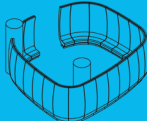
In addition, we had to abide by the strict standards of an oil processing facility, near where Ithra is located. One such requirement was the certification of all materials, even consumables, under International Building Code norms.⁹ This was something we had never done as exhibition designers, because the array of potential materials for a project of this kind is extremely varied. However, not doing so could have jeopardized our participation in the project. That is why we took the time to study the handbook carefully and start a vast search to find acceptable substitutes for several materials, still meeting quality standards and keeping the project on budget. A side benefit was that in the end, the search helped us broaden our supplier pool nationally and internationally for future projects.

Our Approach to Execution

Since we were fabricating in Mexico and shipping to Saudi Arabia, where we did not know local suppliers and could not make sure we could replicate any missing or broken pieces, our planning and prototyping had to be extraordinarily precise.

Precision and Prototyping

Every piece had to fit perfectly and every detail had to be considered because the space for the Early Childhood Zone at Ithra was very confined and our design was custom made for it. Tolerance for mistakes had to be minimal. This is why our team made two trips to Saudi Arabia at different stages of the process to verify details. During the first visit, in August 2016, we took complete site measurements. With these in hand, back home we drew the space layout in a 1:1 scale in our own workshop, marking entrance

Zone	Fiberglass Modules	Molds	Total
Grow it		2	Total 13
Move it		5	Total 27
Know it		5	Total 21
Show it		4	Total 20
Build it		4	Total 24

doors, ceiling height, lamps, columns, etc. On the second trip, in January 2017, we took along real-size templates of the five cocoons and 49 exhibits to make sure they all fit, so that we could make any needed adjustments before fabrication.

We standardized exhibit parts in a way that they could be easily assembled in Saudi Arabia. We prototyped six versions of the cocoon using different materials and construction methods. The one we finally chose was a set of molded structures that fit together like puzzle pieces. Even though every cocoon was a different shape, by standardizing the geometry of the design, we were able to use a single mold to produce the pieces for several cocoons without compromising the original design. In the end, the whole composition of 105 pieces took 20 molds to build (fig. 3).

⁹ International Code Council, *International Building Code* (2009). See: codes.iccsafe.org/content/IBC2018.

As for fabrication materials, we chose fiberglass because it is lightweight and resistant to the high temperatures that shipping containers reach during transport from Mexico to Saudi Arabia.¹⁰

Getting Ready for Shipment and Installation

During the final phase of fabrication, in August 2017, we installed the entire exhibition in our Mexico City warehouse (fig. 4), which served us well in different ways:

1. **Inspection.** Our clients came to Mexico City at this point to make the final inspection of the fabrication process. They were able to physically see what the exhibition would look like and how it would work beforehand. We received useful feedback for final adjustments.
2. **Rehearsal of the installation process.** By rehearsing, the team ensured that every piece of the big puzzle – cocoons and exhibits – fit, and gained a proper sense of the time it took to set everything up. This exercise was key to understanding that if one piece was missing, we would not be able to assemble the cocoons, the biggest element. To ensure proper assembly in Saudi Arabia, we carefully determined the optimal order of installation and created a packaging system, so pieces would later be found easily.
3. **Final testing with users.** Once the installation was set up in our warehouse, we tested it. Children between the ages of one and six, who

¹⁰ Temperatures of the pieces during shipping could reach up to 110° F (43° C).

As for fabrication materials, we chose fiberglass because it is lightweight and resistant to the high temperatures that shipping containers reach during transport from Mexico to Saudi Arabia.

included a diverse group of relatives, friends, and students from local preschools, came on two occasions with their caregivers (fig. 5). These sessions were crucial, as they helped us to: a) detect several details that had to be corrected;¹¹ b) redistribute a couple of exhibits for operational purposes;¹² and c) learn that overall, the experience was, in fact, intuitive and considered by children and caregivers as “fun,” “entertaining,” and “educational.”¹³

The Moment of Truth

It took 70 days for all the packages to make the 15,746-mile journey by boat from Mexico to Saudi Arabia. In December 2017, nine members of our team traveled to Dhahran to install the entire exhibition, which took 69 days in total.

In June 2018, the *Early Childhood Zone* (fig. 6) opened its doors with 49 exhibits and a

¹¹ Such as adjusting an exhibit that was not working properly or exchanging several consumables for safer materials.

¹² For instance, we identified a bottleneck in front of a very popular exhibit; this meant it required more space, so we moved it to another location within the cocoon.

¹³ As an example, we did not install labels throughout the whole exhibit, since they were in Arabic and English and only a sample of the graphic was required for inspection. Despite that, children and caregivers in Mexico were able to play with all the exhibits with little or no additional instruction from our team.



fig. 4. View of the full-size mock-up in Sietecolores' Mexico City warehouse before shipping the exhibition to Saudi Arabia.



fig. 5. A child plays at an exhibit about construction and composition during testing in Mexico.

fig. 6. A view into one of the cocoons as installed in the Early Childhood Zone at Ithra.





Probably the most important lesson of all was this: never attempt to impose your ideas, style, cultural traits, or the way you do things.

capacity of 120 users. The average dwell time, which we obtained by timing the stay of a sample of visitors during the two weeks of the soft opening, was 110 minutes. Now, after months of being open, the area has become a favorite at the center. Exhibits have proven to be intuitive and fun, as we could see for ourselves from on-site observations. And, facilitators around the zone,¹⁴ whom we trained beforehand, have played a central role in promoting child/caregiver interaction – which, as we could observe, was not given naturally – through a set of parent/child tips that they promote, thus enhancing the learning experience for both.

Looking Back

Upon reflection, certain elements were crucial to our success as we ventured into international territory:

Planning and precision. We invested a great deal of effort in making sure everything was just right. Recreating the whole exhibit in Mexico City beforehand might seem, at first glance, to be a superfluous effort, but after starting installation in Saudi Arabia,

¹⁴ Per our education model, we always include facilitators in children's exhibits, who serve as mediators between the child and the experience. Even if exhibits themselves are intuitive, we have found that facilitators help adapt content to specific audiences through the numerous possibilities that the exhibits present, enriching the interaction greatly. We train our client's staff so they are able to understand the whole model of the exhibition, adapt their mediation to the local needs, and create programs and activities around it.

the payoff was clear. This step prevented unnecessary additional costs and made time more efficient because most risks had already been contained. It, in fact, helped us achieve the highest production standards within budget.

Humility and respect. Building a strong and honest relation with the client with clear communication channels was particularly important for designing long distance. Even if we were the experts in exhibition design, the job could not have been done without listening and acknowledging their ideas, processes, and insights. Another important part is recognizing you may need help from other experts, consultants, and users to strengthen the design process and achieve the desired goal. As a result, our design process was highly iterative, but focused.

A no-transgression practice. Probably the most important lesson of all was this: never attempt to impose your ideas, style, cultural traits, or the way you do things. Having empathy and a positive attitude towards the client's feedback – and actually listening – are essential. After all, they are the ones in contact with the main users and have valuable stories to tell. When preconceived ideas, which are often misconceptions, are left aside, common ground can be found, just as we did by appealing to universal concepts like learning and play.

Creating the Early Childhood Zone at Ithra has been one of our most challenging projects to date, since it not only required designing for another country, but also for users with a culture radically different

from our own. It was precisely an open exchange between both our teams that allowed for the project to be successful, and for us to learn many lessons not just about another culture but about our own design process.

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