

Children pass through a multicolored tunnel to enter Wokivia, a family entertainment center in Guadalajara, Mexico.



Museums and Fun

Insights from Children’s Museums and Edutainment

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Museums and fun: many people would not mix those two words in the same sentence, believing that fun is more suited for the entertainment sector. Some museum professionals believe that making an exhibit fun takes the rigor out of it or “dumbs down” the content, and that “fun” components should be relegated to spaces outside main galleries or dedicated exclusively to children. At the same time, many of the things that museums do best – such as conveying messages, promoting reflection, and building knowledge – may seem forced in an entertainment setting, where learning is often avoided entirely or treated as merely incidental: something that visitors will not even know is happening because they will be having fun.

Our experiences as exhibit and museum developers make us question these assumptions. Can’t museums be fun while maintaining their rigor? Is fun only for children? Is learning boring? We strongly believe museums can bring fun experiences to visitors of all ages while delivering rich content.

Our team at Sietecolores, an exhibition design and fabrication firm based in Mexico City, began its trajectory by developing

children’s museums and science centers, where play is at the center of learning. Children and adults engage better with the content when they have fun. It is precisely this recreational aspect that makes the learning experience more meaningful. This became key when we started developing projects for more traditional spaces (ones less typically associated with play), such as natural history museums, site museums, and art museums. (fig. 1, p. 70)

We have also explored spaces where entertainment is emphasized. We recently created a family entertainment center called Wokivia,¹ a commercial space that seeks the recreation of children and their families by engaging them in activities that develop their imagination through play, alongside a main character, Woki, who guides them through their journey. In entertainment, there is a sector invested in learning called edutainment,² which refers to programs, sites, resources, and attractions that prioritize promoting fun for visitors, as well as their development. The format (entertainment) is as important as the content (education).³ Coming from the museum world, we wanted to create a space that added educational value and showed that learning can be fun.

Fig. 1.

Exploring different ways in which people of all ages have fun helps the Sietecolores team create engaging experiences for them.



What Does Fun Look Like?

Fun is “something that provides amusement or enjoyment; playful action or speech.”⁴ In a 2019 report, Harvard University researchers explained three indicators of playful learning – which is also what fun looks like:⁵

1. **Choice:** autonomy, empowerment, intrinsic motivation. Learners set goals and make rules and decisions about their learning.
2. **Wonder:** curiosity, novelty, surprise, fascination. Learners pay attention, explore, try things out, and ask questions.
3. **Delight:** excitement, enjoyment, satisfaction. Learners smile, laugh, joke, and celebrate.

We have seen these indicators in both museums and entertainment centers. Take, for example, a common exhibit in children’s museums that we have adapted for edutainment: a set of twisting tubes through which air currents run. Visitors insert a lightweight object at the bottom of their selected tube, then try to figure out its trajectory and where it will emerge (fig. 2). Visitors show surprise when they see the objects they inserted fly out. As they try to catch them and experiment with different tubes, they laugh, demonstrate curiosity, and celebrate. This exhibit also has high dwell time: on average, visitors interact for four to eight minutes.⁶

Although in both settings the interaction is the same, the lens for conceptualizing and the intention for including it vary. In a museum, the exhibit teaches physics concepts like trajectory and cause-effect.

Fig. 2.

Wind tube exhibit used by children during testing for a children's museum.

All elements, from the labels to the interaction motivated by docents, lead the visitor to reflect upon them. Content takes the lead and recreation is used as a medium for conveying it.

In contrast, in entertainment, the experience prioritizes play and is typically part of a narrative: at Wokivia, for example, the twisting-tube exhibit is a machine for making ideas fly. There is no mention of physics. However, learning is not hindered. Visitors still experiment, make hypotheses, collaborate, and plan. The experience itself has added value.

Insights on Making it Fun

The following are insights on creating fun experiences that are also rich in content and learning.

1 Design the “how” with the “what” in mind. Form always follows function, not the other way around. Imagine a speaker who starts her conference with a magic trick. She gets your attention. Then, she starts the lecture, which, you begin to notice, has nothing to do with her opening act. Two days later, you remember the trick, but have trouble recalling the content of her speech. This happens when we add features that are fun, but do not reinforce the big idea. A different scenario would play out if the trick had served as an example about the point she was trying to make. When we add elements unrelated to the content, the experience is unintegrated.



A proven way to add fun to an experience is by testing people’s abilities and pushing them out of their comfort zones.

For an exhibit we created about climate change, we needed to present complex content. We created animated videos about professions related to the environment, but in order to make it fun, the team decided visitors would randomly activate them by interacting with a rolling-ball machine. However fun, it had no connection to the content whatsoever. Visitors were more invested in observing the balls move than in watching the videos, resulting in a very distracting feature (fig. 3).

Something radically different happened when we designed an experience for toddlers at Wokivia. We wanted to add a climbing structure for developing children’s gross motor skills, which needed: a) to be integrated into the space’s narrative and b) to move away from typical climbing structures

or walls that children can find in most parks and public spaces. Taking the theme of an “imaginary land,” one of our designers came up with the idea of creating a small volcano-like structure around which we placed climbing holds. The slope of the structure helps toddlers climb the sides of the volcano naturally and safely. To make it more fun, we surrounded the climber with a small ball pit. Children carry or throw the balls to the top of the volcano, which periodically spills the balls, adding an element of surprise. The result is a very popular experience where children have loads of fun.

2 Introduce a challenge. A proven way to add fun to an experience is by testing people’s abilities and pushing them out of their comfort zones. Challenges are perfect for this.⁷ They are playful, inviting,

Fig. 3.

Climate change exhibit with screen for animations and rolling ball machine.

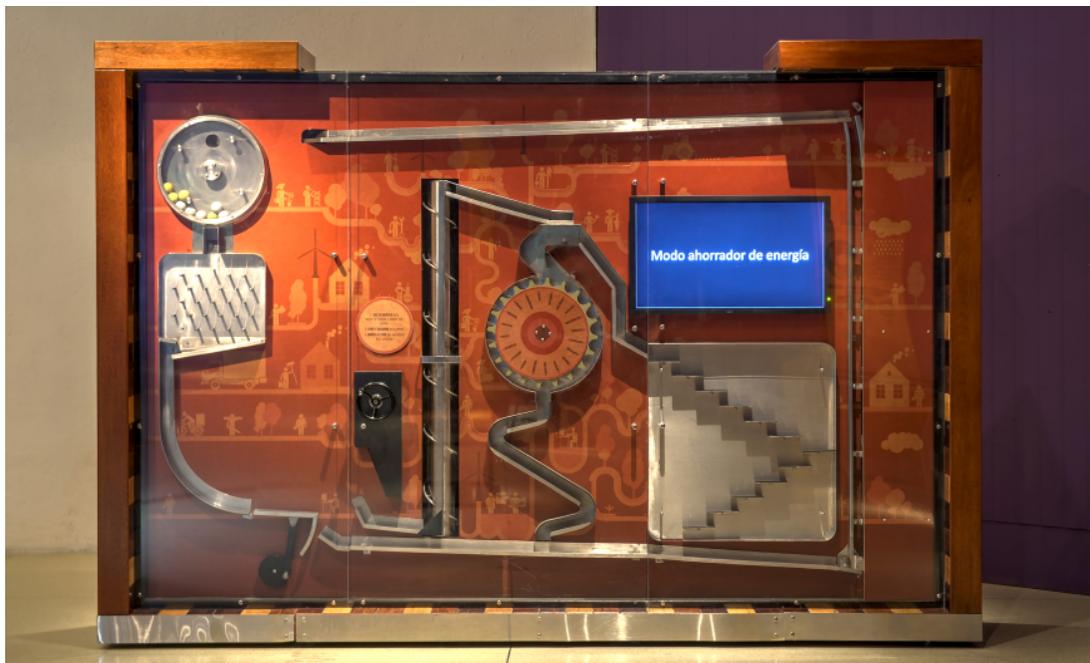


Fig. 4.

A girl crosses an obstacle course at Wokivia.



and thrilling. For a challenge to work, there needs to be a clear goal and immediate feedback that indicates whether you are close to achieving it.

At Wokivia, visitors are challenged to go through a hallway filled with laser-like string obstacles, in a *Mission Impossible*-style game. As they put to test their motor skills, they sense a thrill trying not to touch the obstacles. When they have made it safely through the hallway, they can continue with the challenge by trying to improve their time (fig. 4). Interestingly, we have found that even in our technology-focused era, visitors are usually more invested in physical challenges than digital ones.

3 Nail the level of complexity. A challenge will only work, however, if you know your visitor well enough to nail the level of complexity. There is a fine line between flow (an ideal state for fun), anxiety, and boredom.⁸

Remember an impossible challenge. Your level of skill was most likely below its complexity, so you felt overwhelmed and quit the task. The same is true for the way we understand content: when it is presented very complexly, we become frustrated and may even feel unwelcome.

For a collaborative exhibit we designed, four users explored water conservation scenarios. They each made interconnected decisions considering the opinion of multiple advisors and resulting in different consequences. The exhibit turned out to be too complex because visitors had to connect too many variables.

They often left it unfinished.

There is another possibility, though. Remember a boring challenge. Most likely, its level of complexity was below your level of skill. This happens to content when we simplify it too much: visitors go through it quickly, dismiss it, or even feel you don't believe in their capacity.

Due to security precautions, we once oversimplified a construction exhibit where children interacted with a crane. We automated features to the point where visitors only had to push a button and observe the crane work. It turned out to be very dull.

Finding the sweet spot between the difficulty of the content and the level of skill of the user is a balancing act that is key to a successful experience.⁹

4 Tell a story. One of the main goals of museums is to successfully convey information. Stories are great at that. A good story not only communicates information but triggers emotions. It hooks our imaginations and has the power to impact our behaviors.

Fig. 5.

Paleontology exhibit at La Rodadora in Ciudad Juárez, Mexico.



ALBERTO RODRIGUEZ

Museums can go beyond traditional explanations and use vibrant storytelling in videos, labels, and tours. Our team is currently developing a museum based on a private collection of Mexican textiles. Instead of focusing the labels on technical explanations, we have decided to highlight artisans' stories (which also happen to fuel the collector's passion for the topic). We have yet to test the labels, but are confident this approach will allow visitors to connect emotionally with the pieces, a difficult thing to achieve when only presented with information such as the materials and techniques of elaboration. We will also add reflective questions along the way for visitors to explore their own relation and stories with clothes and textiles, making the experience more relevant and memorable.

Museums can go even further when they present exhibits that allow visitors to become part of the story, where their actions matter, such as in role play. At La Rodadora Espacio Interactivo, a children's museum in Ciudad Juárez, Mexico, we created a paleontology exhibit (fig. 5) where children learn not only through videos and docents, but also by becoming paleontologists themselves. They

dig in the sand, uncover fossils, and study them under a microscope. They even get their own excavation gear!

At Wokivia, we went a step further by turning the whole experience into a big story centered around imagination. Graphics, colors, and furnishings were designed so visitors felt they were entering a special world. Our team conceptualized the space based on the "Hero's Journey," a story structure described by author Joseph Campbell in *The Hero with a Thousand Faces*, published in 1949. The structure begins with a call to adventure that helps the hero depart to the special world, continues with its exploration aided by a helper, and ends with the return to the familiar world with the elixir (something gained or learned) after passing the ordeal (the maximum test). Visitors to Wokivia receive a call to adventure before entering the family entertainment center to later cross a tunnel that introduces them to the imagination of Woki, the main character, where they will face challenges and make discoveries about their own imaginations. In the end, visitors return to the familiar world by crossing back through the same tunnel that brought them to Wokivia.

Museums can go beyond traditional explanations and use vibrant storytelling in videos, labels, and tours.

5 Involve emotions. Emotions can provoke action (e.g., acting out of boredom) or be the result of an experience (e.g., feeling happy by doing something that amuses us). In a museum, the success of an exhibition lies not only in what we learn from it but also in the meaning it has for us and how it makes us feel. Creating emotional bonds influences our reflections and makes content memorable. These associations become more important than the experience itself. Positive emotions (like having fun) can result in confidence and the desire to continue exploring, while negative ones (like frustration), in opposite behaviors.

In an exhibit at Papalote Museo del Niño,¹⁰ a children’s museum located in Mexico City, visitors experienced nervousness, anticipation, and finally relief and amazement (shown in bursts of laughter and joy) when facing the challenge of lying on a bed of nails. Once they realized they were safe, the guides explained the science – how they were unharmed because their weight was distributed evenly over the nails. Connection made.

At Wokivia, facilitators called “okis” are not only guides that help visitors navigate the space. They are also actual characters inside Woki’s imagination who are in charge of encouraging participation, animating exploration through play, and creating an environment where people feel safe to try new things. As Woki’s friends, they tell jokes, share anecdotes about him, and create playful moments through improv that contribute to the narrative of the space.

6 Offer opportunities for collaboration. Either in a joint effort, a competition, or simply through shared play, fun multiplies when experienced in collaboration with someone else. Fun can be contagious. Watching someone laugh will most likely result in finding yourself laughing too.

Both deliberately or spontaneously, museums can offer various opportunities for fun collaborations:

- **Shared challenge.** The goal is only achievable when multiple visitors participate. At Papalote, an exhibit asked visitors to close a circuit by holding hands, activating a fountain that played an instrument when the water rose. Visitors were amused as they explored the possibilities this offered.
- **Competition.** Here, fun only happens when you deal with one or more opponents. At Wokivia, visitors test their speed competing with others to be the first to press buttons that are lit randomly over a period of time. The desire to defeat an opponent and become the winner is a great motivator for visitor participation (fig. 6, p. 76).
- **Spontaneous collaborations.** One of the most intriguing examples of collaboration are those that happen when it is not deliberately proposed as part of the exhibit. One example is a construction space at Wokivia where children use

Fig. 6.

Two children compete to be the winner at an experience in Wokivia.



bricks, wheelbarrows, pulleys, and other devices to build a house. Oftentimes, children from different families help each other perform tasks better through spontaneous play.

7 Allow for multiple results. We have seen this more often in museums than entertainment. It means adding a certain degree of autonomy to the interaction by providing multiple ways for exploring, interpreting, or representing, and allowing multiple results instead of making visitors follow clear-cut instructions or telling them what they should think.¹¹

Art museums provide contextual information for visitors to observe better and make their own interpretations of the pieces. Science centers allow people to tweak variables in an experiment and test multiple hypotheses.

At Wokivia, children make their own creations out of construction blocks, interpreting the topic of the week. In another experience, they set multiple pathways for a ball to drop vertically and experiment how they can make it move faster or slower.

Some Final Words

In order to convey content or create the conditions for someone to learn, you need to grab their attention and attract their interest. While it is not the only way to achieve this, fun has been proven very effective when integrated correctly.

Museums have in fun a great ally to engage their visitors in a deep level when they present integrated exhibits that elevate the content, making it meaningful and memorable. This is happening more and more often in traditional museums. Entertainment, on the other hand, can add value to already fun experiences by treating learning as important and not incidental, taking the experiences to a whole new level.

We have to acknowledge, however, that there are still challenges yet to be addressed. For example: how can museums develop exhibits that are not only fun but also respond to different levels of knowledge and skill? Maybe we could look into how video games in the entertainment sector have succeeded at this in their own field. Or, we could explore approaches like Universal

Design for Learning inside museums, which takes into consideration different types of learners by including in exhibits multiple means of engagement, representation, and expression.¹² Another question that needs to be explored is: how can institutions begin to change visitors' preconceived notions on how to behave at a museum when integrating fun (e.g., it is okay to laugh inside a museum)? Maybe museums have to start breaking these barriers by treating visitors differently (e.g., by learning from theatrical or comedy-based experiences); or they could explore different approaches to the use of their spaces by turning them into something more than simply exhibit halls (e.g., a concert hall, a sleepover site, or the grounds for a scavenger hunt).

When developing exhibits, we must always stop and analyze what we want visitors to get out of them. Fun, even though a great tool, may not always be the best choice. For some cases the opposite could be just as powerful if not even more, depending on the content. It all comes down to knowing your audiences and establishing the best ways to connect with them.

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1 According to the International Association of Amusement Parks and Attractions (IAAPA), a Family Entertainment Center or FEC is a space often located within a commercial, tourist, or entertainment complex such as a shopping mall, that offers a

combination of at least three participatory attractions, among which can be found games and activities for the entire family, as well as different services ("IAAPA FEC Benchmark Report 2017–2018," IAAPA, www.iaapa.org/iaapa-fec-benchmark-report-2017-2018). Wokivia, a family entertainment center located in Guadalajara, Mexico, is conceptualized around the imagination of Woki, our main character, who is an imaginary friend for visitors (www.wokivia.com).

2 Edutainment is the combination of two words: education and entertainment.

3 Randy White et al., Edutainment: The Next Big Thing, presentation at IAAPA Conference, 2004; Nalan Aksakal, "Theoretical view to the approach of edutainment," *The Procedia—Social and Behavioral Sciences*, no. 186 (2014), 1232.

4 "Fun," *Merriman-Webster Dictionary*, www.merriam-webster.com/dictionary/fun.

5 Harvard Graduate School of Education & International School of Billund, *Indicators of Playful Learning*; International School of Billund (Cambridge: Project Zero, 2019). See: www.pz.harvard.edu/resources/indicators-of-playful-learning-international-school-of-billund.

6 This dwell time is based on staff observations made both in children's museums and our edutainment center, Wokivia.

7 A challenge, write psychologist Mihaly Csikszentmihalyi and educator Kim Hermanson, is "an opportunity for action in various dimensions of involvement at gradually increasing levels of difficulty." See Mihaly Csikszentmihalyi & Kim Hermanson, "Intrinsic Motivation in Museums: Why Does One Want to Learn?" in Eileen Hooper-Greenhill, ed., *The Educational Role of the Museum* (New York: Routledge, 2004), 72.

8 Flow refers to a state in which the person experiences a loss of the sense of time, being completely involved in what they are doing, a sense of ecstasy, great inner clarity, knowing that the activity is doable, a sense of serenity, and intrinsic motivation. See Mihaly Csikszentmihalyi, *Applications of Flow in Human Development and Education: The Collected works of Mihaly Csikszentmihalyi* (New York: Springer, 2014), 133. See also "Flow, the secret to happiness," *TED*, 2004, www.ted.com/talks/mihaly_csikszentmihalyi_on_flow.

9 Insights from learning theorist Seymour Papert are helpful in this respect, too. He argued that experiences need to provide "low floors" and "high ceilings," that is, easy ways for getting started if something is new to you, but ways to make it increasingly complicated as you get better. See Mitchel Resnick, *Lifelong Kindergarten: Cultivating Creativity through Projects, Passion, Peers, and Play* (Cambridge: MIT Press, 2017), 64. If you think it through, that is what video games do.

10 Papolote Museo del Niño was the first Children's Museum in Mexico. It was created in 1993 by businesswoman and philanthropist Marinela Servitje, now chairwoman of Sietecolores.

11 This actually reinforces one of the indicators of playful learning explained above: choice.

12 See "About Universal Design for Learning," CAST, www.cast.org/our-work/about-udl.html.