

The Futures of the Metaverse and the Creative Industries in Latin America: A Workshop Experience at CENTRO, Mexico

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The following paper describes the achievements of a foresight workshop designed to better understand the possible long-term intersections between the metaverse and the creative industries in Latin America. The educational experience was created by the Futures Studies department with the collaboration of the STEAM Lab teaching team. The working model recovers elements from Voros's (2003) foresight approach, Candy and Dunagan's (2016) experiential futures model, Kjaer's (2014) macro trends model, and the Houston School's (Bishop & Hines, 2012) framework for teaching foresight. The experience was carried out with students from all the undergraduate programs at CENTRO conducted between March and June 2022. Futures scenarios are elaborated and modeled by students using Extended Reality (ER) languages.

The goal of this learning experience was:

To expand participants' knowledge of the metaverse and ER technologies, identifying their possible implications for the creative industries in Latin America based on a Futures Studies framework.

Principal conclusions:

- Participants were familiar with the metaverse concept, but they expanded their knowledge about those technologies involved in its creation and speculated about the futures of the creative industries and their relationship to the metaverse.
- Participants recognized that creativity is crucial as a skill to take advantage of the metaverse and identified possible fields of application for their professions, including story development, design of digital objects, creation of environments, and game development, among other possibilities.
- Participants showed interest at different levels during the change signal research phase. However, they faced structural challenges related to the ability to search for information, distinguish reliable from unreliable information, correlate dissociated facts, distinguish causal relationships from correlations, and achieve prolonged and full attention immersions in the analysis processes, among others.
- In addition to being a helpful tool for understanding participants' expectations (both desires and fears) about the future, the analysis of the context and the subsequent ideation of future scenarios, whether optimistic or pessimistic, proved to be an excellent stimulus for imagination and speculation about the future.
- Participants could devise alternative futures about the metaverse, but the pessimistic or collapse scenarios were most provocative or suggestive for modeling by ER or staging.

Methodology

The future scenarios workshop was created to improve participants' systems thinking skills and future skills crucial for decision-making in the present. In 2022, supported by Meta, CENTRO implemented eight hours of workshop experience focused on the futures of the metaverse in Latin America; the theme of this workshop is included in a transversal program for developing soft skills (STEAM-Lab). The program is modified

annually according to present circumstances, but it always focuses on contemporary challenges to encourage students to be critical and committed to their time.

The following research questions were considered to develop the syllabus:

1. What is the metaverse, origin, constituent components, key players, and scope for the creative industries in Mexico and Latin America?
2. What alternative futures can be envisioned for Mexico and Latam's metaverse and creative industries system?
3. What strategic decisions should undergraduate students consider to prepare them for these possible futures for Latam's metaverse and creative industries?
4. What ER technologies can we use to communicate the scenarios devised during the foresight process?

Based on the above, the team developed the following conceptual framework for the workshop:

1. Immersion in the metaverse. Background, a conceptual framework, scope.
2. Immersion in futures studies, its origin, utility, scope
3. Joseph Voros's Generic Foresight Process Framework
 - 3.1. Inputs. Look and see what is happening. Horizon Scanning with the four dimensions of the Kjaer macro-trends framework: social, emotional, scientific, and spiritual. Fieldwork and experiencing ER technologies.
 - 3.2. Foresight. What Might Happen? Optimistic, pessimistic, and continuation scenarios at least ten years ahead with the Experiential futures model.
 - 3.3. Outputs. Which are the possible futures? What is our desired future?
 - 3.4. Roadmap. What might we need to do to move forward to the desired future?
4. Communicating the results with staging and/or ER.

To carry out this last step, the participants who developed virtual reality models worked with Photoshop, Rhino, Twinmotion, and Meta Quest 2 headsets.

For the workshop, the following was taken as the definition of metaverse: "A massively scaled and interoperable network of real-time rendered 3D virtual worlds that can be experienced synchronously and persistently by an effectively unlimited number of users with an individual sense of presence, and with continuity of data, such as identity, history, entitlements, objects, communications, and payments" (Ball, 2022, p. 19) This concept distinguishes the entire metaverse (as the territory where different technological solutions converge) from virtual worlds, where Horizons Worlds, Roblox, Decentraland, Second Life, etc. are platforms in a broader territory under development.

¹The method used involves the elaboration of different scenarios by contrast (pessimistic or optimistic); the resulting narratives are oriented more in one direction or the other but include components of both.

Results

The students elaborated on eight future scenarios inspired by previous system analysis. The work teams selected a set of facts that they considered signals (facts that work as change indicators). Based on these variables, they created long-term narratives represented with 3D virtual environments developed with XR technologies.

According to Bishop and Hines (2012, p. 189), facts considered signals must be credible, novel, likely, impactful, and relevant. With these criteria in mind, students conducted documentary research in primary and secondary sources (books, journals, blogs, conferences, reports, statistics, databases) and participant observation to compile significant findings that functioned as nails around which threads were tightened toward possible futures.

What do the scenarios tell? The participants elaborated on three scenarios (optimistic, pessimistic, and continuation), from which they chose the one they found most provocative or disturbing to be presented using ER technology or staging. The selected scenarios are presented below.

Scenario 1 (Fig. 1). Surviving the Radioactive Winter

In 2040 the world is suffering a nuclear winter caused by an escalation of the Ukraine-Russia conflict. Following the onset of the nuclear catastrophe, the governments of the United States, China, and European countries are leaving the planet around 2035. Meanwhile, in Latin America, local fiefdoms began to be created in specific areas trying to take control within the political vacuum left by the failed governments. Ordinary life for the remaining population exists below the surface, in massive tunnels acting like bunkers to defend themselves from the toxic air of the nuclear winter and the animals affected by the nuclear contamination. An explorer of the nuclear desert tries to smuggle food from one side of the city to the other, wearing an anti-radiation suit and gas mask to prevent radioactive contamination.



FIGURE 1
Surviving the Radioactive Winter

Scenario 2 (Fig. 2). A Continuous Display for a Full Cinema Experience

In 2032, in Mexico, movie theaters have almost disappeared. People prefer to stay at home and carry out ordinary activities such as going to the supermarket or the movies through immersive platforms. In this same scenario, the use of domestic robots is part of the ordinary reality. The continuous screen occupies all the house's walls and allows for an immersive cinematic experience. In the future, the Twilight movie saga will be considered a classic. Fans gather to watch it repeatedly, reciting all the speeches by heart, like a ritual, and enjoying it with the highest quality picture and sound for an immersive experience. We all run into the forest, surrounded by vampires and werewolves!



FIGURE 2
A Continuous Display for a Full Cinema Experience

Scenario 3 (Fig. 3). Meta-Mark

As a result of COVID-19, the metaverse arose in 2020, and marketers began to use it, significantly impacting companies with their initial tests. The most prominent brands in the world, including Google, Apple, Tesla, Disney, and Nike, have joined forces: a single brand controls the market. By 2032, the use of the metaverse in marketing had skyrocketed, and the golden age of marketing had returned, along with the participation of governments and organizations. The alienation nightmare materializes.



FIGURE 3
Meta-Mark

Scenario 4 (Fig. 4). Rate Me

Being one of the most polluting industries, by 2032, the fast fashion model will stop and re-direct to the digital world. Physical clothing becomes a “canvas” for digital clothing at the forefront. The fashion industry transforms itself in environmental terms, becoming exemplary. In Mexico, the handmade production of analog pieces is a niche practice reserved for a few connoisseurs.



FIGURE 4
Rate Me

Scenario 5 (Fig. 5). Our Idols

People are protesting to save virtual singers, who are currently the only ones left in Latin America's music industry (2052). Unless we take action, music will vanish from our lives. Our request is to convene a panel of representatives and senators to vote on whether or not to prohibit virtual singers from being reactionary and threatening the status quo. Because we have the right to free expression as citizens, we want to be heard before making a decision that could later become law. Musical industry insiders and environmental and energy experts will share critical takeaways. This panel will meet on May 9, 2052, although the location will only be provided one day earlier due to security concerns.



FIGURE 5

Scenario 6 (Fig. 6). Pessimistic. Minelife: Real Estate in the Metaverse

In 2052, the continental divide has disappeared as we know it; Asian culture dominates the entire globe. The Jongput (resulting from the merger of powers between Putin and Jong-Un) government has decided to take action by joining forces with Metalud, a company founded by Pfizer and Minecraft, which created Minelife. Raw materials and necessities are scarce. In this virtual world, people can have a prosperous and happy life, in contrast to their miserable life in the material environment. An army concentrates people in a ghetto and attaches visors to them to isolate them from material reality. Minecraft has a vast empire. It has the most critical virtual architecture on the planet. Former players cannot believe that it is currently a weapon of political control.



FIGURE 6
Minelife

Scenario 7 (Fig. 7). Circular Architecture

Constructions will be environmentally friendly in the future, and all the materials we use are recyclable and biodegradable. However, there are still some vestiges of how things used to be done. Ecological and sustainable architecture uses the metaverse to design and prototype, saving resources and guaranteeing the integral character of each new initiative.

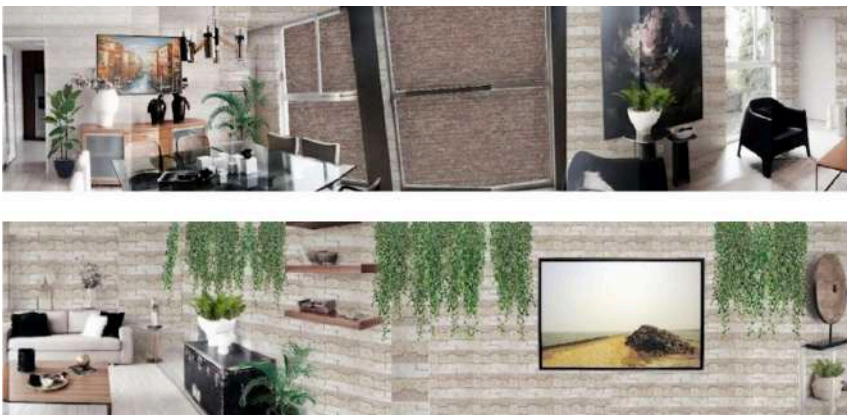


FIGURE 7
Circular Architecture

Scenario 8 (Fig. 8). New Pandemics Besiege Humans

A zeppelin flies over a polluted Mexico City, announcing a permanent vaccination campaign against a new variant of HIV, whose pandemic has left so many dead that cemeteries have grown to such an extent that there are very few parks left. The pollution is such that the city is practically deserted.



FIGURE 8
Vaccination Campaign

Conclusion

Students already had basic knowledge about the metaverse due to their previous experience in virtual worlds for video games and socialization (Roblox, Decentraland, IMVU, The Sandbox, Minecraft, among others). However, they did not necessarily associate this experience with the metaverse, a conceptual link that managed to strengthen and complement other concepts, such as the virtual world, the internet of things, and blockchain, among others.

Participants considered it essential to improve their skills in handling hardware and software for extended reality. They also identified opportunities of interest in producing virtual objects and environments and creating stories for video games and immersive cinema. They also identified opportunities of interest in parametric, speculative, and immersive architecture.

The students considered it crucial to increase their digital literacy and, in the case of those who experimented with XR technologies, interest was identified in continuing with training in the use of this tool.

As the central area of opportunity for future iterations, the team of teachers identified the need to collaborate more closely with the team in charge of ER training to facilitate the development of scenarios with virtual reality languages. Opportunities were also identified to systematize student-generated data into a single database that could be automated and further fed into future iterations.

References

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