

Exploring the Educational Future

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Abstract Futures studies uses scenarios—stories of the future—to explore how trends and events shaping our world may play out in future decades. This article features a short scenario set in California in 2037, depicting twelve-year-old Moya and her brother Inart, whose “fenced community” has opted for a system of self-directed, online learning to educate its children. This scenario, and the accompanying discussion questions, can be used to guide a conversation about how museums could fit into the future landscape of learning.

The role of futures studies is to help us notice the trends and events that may disrupt our expected path into the future and imagine the variety of potential futures that we face. Forecasting suggests we are on the cusp of transformative change in America’s educational system: Indicators include rising levels of dissatisfaction with traditional schools and increasing experimentation with alternative systems (e.g., home schooling and charter schools). There is a growing consensus that traditional classrooms may not be the best environment to foster key 21st-century skills such as collaboration, creativity and critical thinking. The Internet has opened up a wealth of new resources to learners, while schools embrace online learning as a cost-saving measure. Students entering higher education today struggle to calculate the economic value of a degree with the cost (and debt) that entails, which in turn creates a market for alternate forms of credentialing.

These educational forces play out in a century shaped by larger demographic, economic, political and social forces. We are nurturing the first generation of “digital natives,” children as comfortable navigating the online realm as the streets of their neighborhood. We are increasingly concerned about the consequences of the rapid increase in the huge divide between wealthy and average

Americans. The obesity crisis is making alarming strides — one third of children born in 2000 or later are projected to develop diabetes in their lifetime. Rising fuel prices will at some point radically increase the cost of travel and shipping, driving localization of manufacturing, agriculture and a reduction in commuting. States are already scrambling to cut budgets in the wake of the mortgage loan crisis, including deep cuts to basic public goods — education, police, sanitation — raising the possibility that we might reach a tipping point where these services are privatized altogether.

If forecasting is the science of spotting and cataloging these trends, scenario creation is the art of bringing them to life. Scenarios are little “stories of the future” that help us imagine the world we might live in twenty-five, fifty or one hundred years from now. We can, for example, look at the trends summarized above and ask, what might education look like in the U.S. in a quarter century? What role might museums play in that educational future? In that spirit, I offer one such story as food for thought:

A Learning Day 2037

Moya sighed in frustration, tearing off her auggles and rubbing her temples, which ached from the ill-fitting headset. When working properly, the frames projected digital data onto her cornea, seamlessly overlaying digital images from the Museo’s archive with the community timeline she was creating. This set, though, was a hand-me-down from her cousin, and when Renata was Moya’s age, she was a lot smaller, with the delicate bones and fine facial structure shared by her mother and Moya’s mom. Moya was acutely aware she had inherited the broad cheeks and wide temples of her father’s Meximericano family.

The auggles were inferior to implants, but no one was going to waste community funds on bioaugments for a twelve year old, however bright and talented. Moya knew she should be grateful for any integrated AR access — she’d earned this privilege by having her exhibit design chosen by community consensus for installation in Museo, the community museum. Now she was counting on the project to earn enough credits in research, history and fabrication to qualify her for a digital apprenticeship at one of the “real” museums on the outside. With the imprint of the Oakland Museum of California the Tech Museum of Innovation, or maybe even the SI on her digital badge resumé, she’d be well on her way to professional track training.

Any child with sense, growing up in Oyamina, aimed for professional or paraprofessional training. Working in remote medical monitoring or prototype

fabrication, or as a virtual health/wellness coach, beat the heck out of toiling in the Community Farm, even though the Farm was the foundation of the Community's stability and independence. Bill Allen had demonstrated, back in the '10s, that three acres could feed 10,000 people. With only three thousand-some residents inside its fortified fence, Oyamina raised enough extra food — fruit and vegetables, fish, rabbits, chickens and eggs — to trade for hard cash Outside. The digital currency generated by the professional track workers was fine for some things, but it took hard cash to pay the spiraling water fees (legal and under the table) that made Oyamina possible.

Young women, of course, had the option of becoming Wombs, but even though Renata bragged on the perks of that job — the first-rate health care, access to ample food even in hard times, no field work — Moya had no intention of renting her body out that way.

In her secret heart of hearts, she aimed high. She wanted to be chosen as an Innovator — one of the select talents who trawled the cloud looking for challenges to answer. There was, of course, the prospect of huge payoffs for Innovators who won one of the competitions posted by the major corporations. But more than that, Moya coveted the access Innovators had to the Community's best technology and support. When cousin Mano teased her about her cheekbones, straggly hair or awkward height, she comforted herself by imagining the pimply young technologist being assigned to prototype one of her creations. *That* would put him in his place.

"Come back here, you little demon!" Shrieks from outside disrupted Moya's daydreams a few seconds before Inart came tearing into the room, clutching a ripe peach. "Hide me!" he panted, throwing himself under the desk. Moya ran to the window in time to see their father striding past on the sidewalk. Rand was a big man, and with his belt already coiled around his hand he was a fearsome sight, indeed.

Moya spared a moment of sympathy for Inart, even if he was an idiot to think that Rand, in his role as Farm Manager, could afford to look the other way when Inart and his crew of nine-year-old hellions stole from the fields. That kind of "foraging" was one of the few crimes that could get an adult thrown out of the Community, and once outside Oyamina's fortifications, the options were pretty grim. Moya had seen the vids of gangs roaming the streets of unfenced cities and towns. With no private security forces or maintenance staff, these "Open Street" neighborhoods were dirty, dangerous and almost impossible to work your way out of. Moya worried that this was exactly where Inart was going to end up. Sure, there were plenty of academically lazy kids who, as they grew older, dropped out of the

Community's self-directed learning program. Rand depended on it—he was happy to scoop them up, at fifteen or sixteen, and apprentice them to the orchards or the fish tanks. But Inart didn't even have the discipline for that—Moya worried he was going to jump the fence one day and end up as unskilled labor conscripted into a company town (at best), or recruited into a gang that might in the short run be exciting and lucrative—but that was liable to be a very short run indeed.

"Inart!" She made her voice sharp, even as she laughed inside at the sight of peach juice dripping down his face. "You're crazy, boy! You think Poppa won't catch up to you at dinner? You think he'll forget by then?! He's gonna be waiting inside the dining hall door with his belt ready." Inart rolled out from underneath the desk, dusting himself off and reaching into his shirt to present Moya with a second, perfectly ripe peach, slightly bruised from his flight. "Yah, but Imma will be there; she won't let him wale on me too hard." He bit into his peach, the juice rolling down his chin. "It was worth it—all this fruit and what do we get at dinner? Rice! And catfish. I'm sick of catfish. I'm sick of rice, too. What's the good of Poppa being Farm Manager if he can't get us some of the good stuff?"

Moya contemplated the peach for a moment before shrugging and taking a bite. Pragmatically, someone had to destroy the evidence, and Inart would eat it if she didn't. She found it a point of pride that their poppa was so straight up that he wouldn't cheat, wouldn't take the bribes that outsiders regularly offered to bypass the Community's formal distribution contracts. But she did share Inart's regret about the peaches.

She wasn't about to let her brother off the hook, though. "Why aren't you working on your math? You're way behind on that, I know." Inart hadn't even passed the third level, when most of the kids he hung with, even some littler ones, were on to the fourth or fifth level in math. Inart rolled his eyes. "It's boooooooring," he lamented, throwing out his arms, collapsing over Moya's desk and snoring loudly to dramatize just how soporific he found numbers. "Tough. You can use the work station over there to access Khan Plus—or bring up one of the games programs—you choose! But you're going level up at least once by the end of the afternoon, or I won't help you out with Poppa tonight," Moya retorted.

Inart stopped snoring and lay still for a minute, considering his options. The online tutorials weren't too bad—at least they didn't make him feel dumb (only frustrated), and some of the games were cool. His favorite let you cut deals for water rights and trade commodities (legal or not) to maximize your profit. Even at nine, Inart was all about profit, if only he didn't have to work too hard for it. He flipped over and shoved himself off the desk into Moya's chair, rolling across the room to the monitor. "Okay, deal. I level up one and you plead my case with

Pops.” He scanned in, accessed the MarketForce program, and soon was totally engrossed in calculating how much fish feed to buy, and at what price, to maximize a catfish crop from the animated aquiculture tanks.

Moya sighed and hooked a stool over to the desk, flipping the auggles back in place and flicking her eyes to resume the project. The most frustrating thing was, Inart wasn’t dumb. He was just never going to study if no one sat him down and forced him. Some other fenced communities had opted for old-fashioned schools with grades, real, in-person teachers and mandatory testing. She was a little hazy on what they did, exactly, with kids who failed the tests, but at least they provided some structure. Oyamina, for better or worse, had opted for self-directed learning. Mind you, the Community devoted considerable resources to the system — high-speed data connections, ample cloud storage, subscriptions to high-quality online programs, even fees for individual virtual tutors for the kids who needed extra help (and were willing to work) or had maxed out the potential of the other resources.

Moya was one of the latter. She’d blazed through the Khan Plus programs in math, history and economics by the time she was Inart’s age. Her Personal Learning Mentor had smiled and pointed her to more advanced material, even quietly unlocking some of the proscribed sites that weren’t on the list of Community-approved resources. That’s when she began secretly visiting art museums — great digital repositories of stuff like she’d never seen before. Math, economics, engineering, biology, agriculture — these were practical subjects, training learners to staff the Community’s core tracks. Art was frivolous, a waste of time and resources. Moya didn’t even tell her imma she’d been wandering through the virtual galleries of the Met, the Hermitage, the Uffizi. Leiya loved her daughter and indulged her to a certain extent, but she was also ruthlessly practical. She’d worked hard to qualify as virtual health coach, and she wanted Moya to do better for herself. Studying art wasn’t going to boost her into a higher track in the Community.

So Moya usually channeled her creative energy into fabrication, booking time on the second-rank 3-D digital printers in the maker lab, occasionally coaxing Mano into giving her access to one of the first-rank machines when she had a particularly precise design to prototype. That’s why the Museo project was so exciting — winning the design competition meant she had access to the museum’s digital collections, even its archive of rare physical documents. She’d spent one long afternoon engrossed in reading actual postcards (with stamps!) from Oyamina’s founder to his wife-to-be. There were even photographic prints of the community before it was fenced — shots from the twentieth century

showing clapboard houses, winding streets, people driving cars (!) through what was now a mixture of vertical farms, office buildings, dormitories, solar arrays and water storage towers linked by pedestrian and bike trails, with occasional access roads for delivery vehicles.

Moya was inventorying and geomapping elements — single family homes, businesses, even a few trees — that predated Oyamina’s fence, and creating an AR app that would let people stroll through the Community, seeing it as it had been twenty, thirty or fifty years ago. In a small exhibit hall in the Museo itself she was staging a display of physical artifacts culled from the collections and borrowed from friends and neighbors that illustrated the Community’s history: a shovel aunt Tami had inherited from her grandpa Luke, the Farm’s first manager and Rand’s mentor; a ceremonial copy of the “Articles of Incorporation” that had been filed with the State of California, on thick, cotton-rag paper with an impressive seal and ribbon; a partially burnt book (a physical one, with a hard cover and paper pages, still smelling of smoke) salvaged from the Great Raid of 2028 — the first time the Community had to beat back an organized group of pillagers.

“Done!” Inart kicked back from his workstation, spinning the chair across the room to bump against Moya’s stool. “Leveled up! I rock too hard for words.” He sprang up and did a victory dance, aping some of the moves from the latest sports vids. He looked ridiculous, but cute. “Come on! Turn that dang thing off and come shoot hoops with me before dinner. You need to log some PE time anyway or Imma’s going to be on your tail while Pops goes for mine.” It was true — Leiya took her role as health coach very seriously. Oyamina couldn’t afford the health care costs for diabetes, heart disease, neuropathy and asthma that came with the high obesity rate plaguing many other communities. Not to mention the lost value of labor, when people were unable to work. So in addition to her virtual clients, Moya’s mother supervised the health, fitness and nutrition program for the Community’s kids.

“In a minute,” Moya said, conceding his logic. “You go find a ball, and I’ll be down soon. I got one more thing to do.” As Inart clattered down the stairs, she flicked her eyes again, bringing up her digital resumé and her half-completed application for the museum apprenticeship. She scanned the documents, noting the prerequisites she hadn’t yet filled in, mentally plotting what assignments she could choose to bridge the gap. “I’m gonna make it,” she muttered. “I’m gonna level my way up and then . . . watch out.” With a sharp nod she saved and closed the files, shut down the system and carefully nested the annoying auggles into their case before trailing after her brother into the warm California dusk.

Exploring Implications

Moya's world isn't the most likely future for the U.S., but it is one of many entirely plausible futures. Exploring these possible futures helps us prepare for circumstances museums will contend with in coming decades. By challenging assumptions about education (universal; free; public; taking place in schools; directed by teachers), it makes us realize how very different things could be. This, in turn, can shape our thinking about how we recruit and train museum educators and plan for our museums.

I encourage you to use this scenario as a jumping-off point to explore the implications of these trends for your own organization and for the field. Points for discussion include:

- What do you see happening in the world around you that might point in the direction of this future or one like it?
- Do you see this as a preferred future, or one to be avoided? If the latter, what steps do you think society could take now to head it off?
- What is the educational landscape of your community (in school and out)? What are the needs, the gaps and the challenges, and what is the most important role your museum can fill in this environment?
- How will your museum find and serve learners who could benefit most from your resources?
- In a world of limited resources, will your museum focus on providing virtual or in-person learning experiences?
- How might your museum contribute to a system of credentialing (e.g., digital badges) for learners of any age, including those who have opted out of the traditional system?

Using A Learning Day 2037 to catalyze discussion around these and other questions in your own institution can expand your thinking about the future you may face, what educational future you want for the U.S. and how your museum can help guide us to that future, one step at a time.

Suggested Reading

American Association of Museums. 2012. *Trends Watch 2012: Museums and the Pulse of the Future*. This report profiles several trends relevant to the scenario presented above, including the influence of augmented reality

and Internet-connected devices on museums, as well as making the case that we may face transformative changes in the U.S. educational system in the near future. Download from www.futureofmuseums.org.

American Association of Museums and the California Association of Museums. 2010. *Tomorrow in the Golden State: Museums and the Future of California*. This report features a scenario depicting the spread of gated communities and hyper-local community museums. Download from www.futureofmuseums.org.

Butler, Octavia. 1993. *Parable of the Sower*. New York: Four Walls Eight Windows. Dystopian futurist novel depicting California in 2025. Many of the background elements in *A Learning Day 2037* are adapted from this novel.

KnowledgeWorks Foundation and the Institute for the Future. 2008. *2020 Forecast: Creating the Future of Learning*. Download from www.kwfdn.org.

Other Resources

Archived interviews with practitioners from many fields on the future of education at www.futureofeducation.com.

Videos (assorted) depicting scenarios from the future of education, on the Future of Education channel on YouTube at www.youtube.com/user/futureofed.

About the Author

Elizabeth Merritt is the Founding Director, Center for the Future of Museums at the American Association of Museums. Her books include *National Standards and Best Practices for U.S. Museums* and the *AAM Guide to Collections Planning*. She blogs for CFM at futureofmuseums.blogspot.com and tweets as @futureofmuseums.