The Metaverse and Executive Education: Horseless Carriage or Automobile?

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UNICON sponsored this research initiative that was conducted by Mukul Pandya and Gregory Shea to help UNICON members learn more about 'metaverse' technologies and ways in which they already being used in executive education. It draws extensively on conversations with executive education leaders who have been thought about and used advanced technologies to order to address the question of where business schools may seek and deliver value "in the metaverse."

The interpretations and perspectives expressed in this report are those of the researchers, who bring considerable experience in business and executive education. Mukul Pandya was the founding editor of Knowledge@Wharton and Gregory Shea is an Adjunct Professor at Wharton and the co-author of **Leading Successful Change** (with Cassie A. Solomon).

The Metaverse and Executive Education-Where to Begin?

In his book titled *The Metaverse and How It Will Revolutionize Everything*, Matthew Ball, CEO of the early stage fund Epyllion, describes the Metaverse as "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 a continuity of data, such as identity, history, entitlements, objects, communications, and payments."

The Metaverse has yet to arrive, as judged by that working definition, despite literally billions spent on its creation. Consequently, now seems a good time to pause and consider the relevance of the metaverse to business education or, as the British might say, to stop and "have a think."

After all, a spike in interest and in hype led to a spike in investment in the metaverse writ large, investment that still awaits reassuring ROI or even market interest (e.g., Meta). "[1] Additionally, seemingly long ago attempts to create virtual meeting worlds went nowhere and have not seen a resurgence of interest even given COVID. As with most bright new shiny objects there is the soon and likely possible and there is the hype. That said, few doubt that there's a 'there there'. The Economist, in a report titled, "How Will Businesses Use the Metaverse," says it offers "multi-trillion dollar opportunities." [2] The World Economic Forum notes that, "Over the next few years, the metaverse is expected to manifest itself primarily through virtual reality – an alternative, digital world that can be used for a variety of personal and enterprise purposes."[3]

Clarifying a few terms would likely aid in exploring what is and what might soon be 'there' in terms of a connection of the metaverse and business education.

First, in an experiential sense, to understand the possible and even the potentially possible, observe a young, perhaps 4- or 5-year-old child play 'make believe'. The child creates, populates, and resides in a largely separate reality, interacting with characters, sharing their existence through scripted and evolving story lines. The child thus both authors this world and learns from it, both practicing and discovering. Quite remarkable. A privilege to observe.

The child utilizes experience and imagination to create a world that draws on not just vision and sound but also touch and even smell and taste. 'Immersion' may not adequately describe the child's relationship with this created world, perhaps 'engagement' to the point of being 'engrossed' more accurately captures the child's experience. Children can literally live in the world of their creation. To dispel any doubt about the strength or draw of this imaginary world simply interrupt (at your peril) the child or, restated, disrupt the child's

[1] "Meta suffered a nearly $4 billion loss from its metaverse unit with Reality Labs in what was otherwise a solid first quarter for the Mark Zuckerberg-led social media empire, which posted a final profit of $5.7 billion. While the $4 billion loss follows a $14 billion loss in 2022, Zuckerberg explained in the earnings report that Reality Labs will likely suffer more losses in the remainder of 2023." Cointelegraph, April 27, 2023.

[2] https://www.economist.com/films/2022/11/24/how-will-businesses-use-the-metaverse?

[3] https://www.weforum.org/agenda/2022/02/future-of-the-metaverse-vr-ar-and-brain-computer/

connection to this imaginary world. Observe the child's face and especially eyes as the child quickly but noticeably travels back from someplace else to the world shared with you.

The metaverse cannot duplicate the range and depth of a child's 'make believe' world. Not yet anyway. It cannot even duplicate the sensate experience. However, it can engage and even engross, as any serious gamer can testify. The question before us reduces to how best to employ engagement to the point of being engrossed.

Second, currently at least, the metaverse, as bright and shiny as it is, resembles, arguably mainly automates, long-standing teaching techniques such as role play, tabletop exercises (e.g., the Beer Game), behavioral and computer simulation. These well-tested pedagogical 'technologies' can inform immediate and middle term use of the metaverse in business education. After all, we began our use and exploration of truly reality altering technological changes such as creating fire on demand, the wheel, industrial revolution, the steam engine, steel, electricity, oil, or computers by adapting the new to the existing and not by employing the technologies untethered from current practice. We have needed time to develop our understanding of the technology and its application. The first automobiles after all were not automobiles; they were horseless carriages.

{as a reference to this line of thinking across 5 technological revolutions, Carlota Perez, Technological Revolutions and Financial Capital: The Dynamics of Bubbles and Golden Ages, Edward Elgar Publishing, 2002.}

Executive Education Challenges, Horseless Carriages, and the Current Search for Automobiles

The following comments concern courses utilizing the metaverse (or meta spaces) to deliver executive education course content. Traditionally, all education, including executive education, faces a challenge captured in Kurt Lewin's quote: 'nothing is as practical as a good theory'. Researchers aim to produce, i.e., generate and test, good theory and practitioners seek its practical application. Executive education, at its best, represents an attempt to connect the two.

Thereby, executive education takes on the following challenges

1) Clear presentation of the theory and its basis or 'what is it that I should believe and why should I believe it'?
2) Given that a program participant becomes at least open to believing, then how might the theory work in practice and to what benefit or 'so what?'
3) Given a program participant's belief in the value of a theory applied, then how to develop their skill in its application or 'how do I get good at using this?'

Potentially, a created world would address all of these questions, just as, at our best, we do in our physical world. Technologically, the metaverse can't yet replicate that physical world; it can only produce a facsimile of the physical world. Current technology can enhance both the variety and level of engagement and the verisimilitude of a simulated reality. Restated,

it can help us to build a horseless carriage, perhaps in anticipation of building an automobile.

The Metaverse and Executive Education: Perspectives from Leaders

Given the interest that companies have shown in the metaverse, it is an important area for business schools and their executive education divisions to experiment with and explore. They should do this on their own, as well as on behalf of their clients. Some have already begun to look for ways to generate value in the metaverse. Paul McDonagh-Smith, senior lecturer for IT and executive education at the MIT Sloan School of Management, notes, “The potentialities are real. The pathways are real. But the journey from cost saving to value creation in the metaverse is by no means complete or even fully defined.”

McDonagh-Smith believes that “to understand where the beachheads might be for the Metaverse and related technologies and products, we have to look at the characteristics of the technology stack itself.” This will require schools to bring together “the bits and the bytes of digital realities with the atoms and the molecules of physical realities.”

While the future potential is immense, educational institutions have barely begun the journey. “The potentialities of the Metaverse sit on the 80th floor of the skyscraper. [But] today, the user experience and application of those technologies is still on floor 12 or 15,” he notes. McDonagh-Smith believes that schools will require to exercise much creativity to rise to the top of the skyscraper. “This is a rising tide that will lift all boats,” he says.

Where should business schools seek value in the metaverse? Patti Williams, vice dean of executive education at the University of Pennsylvania's Wharton School, notes: “What the pandemic has shown is that in business schools, there is an increasing appetite and comfort level for learning that happens in a virtual environment. But one of the downsides we see in virtual classrooms is that while there can be interactivity, it's not the same as face-to-face interactivity.” Williams notes that one challenge in an online classroom is that you “cannot have a side conversation with the person next to you. But the Metaverse offers an opportunity for virtual programming that feels more like face-to-face programming,” she says.

Wharton has launched an online program about the metaverse. This permits the school to conduct experiments with the technology, such as the use of headsets that enable learners to experience virtual reality. “The dilemma seems to be how long people are willing to sit with those devices,” says Williams. “Teenagers can do it for a long time if the experience is gamified. But I’m not sure that most of us in education are ready yet for that kind of gamification.”

The MIT Sloan Office of Executive Education was an early pioneer of the use of virtual worlds and has (without break) been offering programs designed and delivered in virtual worlds since 2012, according to McDonagh-Smith. In addition, the school has a program focusing on Extended Reality that is delivered in a variety of metaverse type persistent, immersive environments.[4] This program also includes applications such as AR/VR/ Digital Twins, 360 Video, telepresence robotics and digital twins to provide a broader sense of the place of ´metaverse´type technologies within the family of XR.

Mike Malefakis, president of university partnerships for Emeritus, an India-based edtech firm, works with executive education programs at several top-tier universities. He notes that the metaverse has significant implications for executive education in part because of its pedagogical implications. “Pedagogical styles work better or worse for each learner,” he notes. “Some are visual learners; others are conceptual learners. All of us have different learning styles. The huge promise of the metaverse is that it will contribute to adaptive learning. Learners could take slightly different learning journeys in the metaverse while studying the same subject allowing for more individually engaging learning experience than typical classroom-based learning.”

Malefakis notes that business schools could create digital replicas of their campuses as a way to make them accessible online to students around the world. Some 15 years ago, Linden Labs, which set up an early version of an immersive online world called Second Life, had encouraged universities to set up digital campuses. Some universities did just that, and some even tried to hold virtual classes. By 2015, however, most of those digital experiments had been abandoned, and a report noted that they had become little more than “ghost towns.” Perhaps that was an idea ahead of its time.

Eric Hamberger, managing director of Wharton Online, notes that the metaverse offers learners who may never set foot on the school’s campus the ability to attend virtual classes. “In the not-too-distant future, I can foresee that when people enroll in our programs, they may have avatars and feel like they are in Huntsman Hall or in the quadrangle, having a happy hour,” he says. His view, shared by others interviewed for this report, is that while the idea of a virtual campus may have been premature in the past, today VR and AR technology have advanced to a point where virtual campuses may be viable in the metaverse.

Some business schools are already experimenting with virtual campuses where participants engage as avatars. According to a report in Inside Higher Ed, Stanford University’s Graduate School of Business worked with the virtual reality company Virbela on its online LEAD program, in which all participants meet virtually. The report quotes Marineh Lalkian,

[4] https://executive.mit.edu/course/business-implications-of-extended-reality-xr/a054v00000rHDUAAA4.html

director of the program, who notes: “It’s really important to us that not only do our participants get the content from our faculty, but also develop a sense of community with their peers and maintain that high-touch relationship building and connections with other people they would otherwise benefit from if they were here on campus.” Virbela’s website points out that other schools using virtual campuses and avatars include MIT Sloan and UC San Diego.

Sarah Toms, who was one of the co-founders of Wharton Interactive and is now the chief learning innovation officer at IMD in Switzerland, notes: “Business schools are actually pioneering a lot of very interesting things. I would say at this stage, a lot of it is very experimental. We're not yet fully fledged in the metaverse. We're more in VR spaces here at IMD. Since lockdown, a number of our leadership development programs are using VR simulations where we have team-based experiences that are teaching a lot of critical leadership and teamwork and communication skills.

“And what's really wonderful about VR immersion is you get to actually really practice these skills by putting learners into completely novel environments, like on a space mission, where they have to lean on these skills to succeed.. At IMD, we use a VR experience called *Apollo, and its magic comes from being team-based with multiple roles, and can be played multiple times.* So it's really, really cool.

“Another great example is Temple University, they shifted during lockdown, and have developed a fully VR offering in their online space, which is also very good. IE has their liquid learning strategy and VR is integral to that. INSEAD is another great example as well and of course, at the Wharton School, we were using lots of VR experiences to teach so it is about that immersion. It's about bringing simulations into more of a realistic three dimensional space. And that's been very successful.

“Another area that we're looking at here at IMD is how we teach about Web3. You know, if we're going to be teaching about the future of blockchain and supply chain, wouldn't it be better to actually be standing in a warehouse and be able to see the implications of your decision making and to see the pipelines and, and to really bring more spatial, three dimensional learning into into the space so that's something that we're starting to build now at IMD is you know, teaching about Web3 in the metaverse in the metaverse, which is very exciting as well.”

For institutions that want to experiment with building digital replicas of physical campuses, a recent report offers some advice. In January 2023 *Ed Tec*h magazine published a report titled, “What is a Metaversity, and Should You Create One on Your Campus?” The report quotes Maya Georgieva, senior director of the innovation center at the New School, who says, ““Most universities trying to create a metaverse environment see it as a single,

overarching environment that would incorporate a large range of experiences. But today, most of the metaversities are still rather primitive, and they often re-create what we know rather than what's possible in the metaverse."

Don Huesman, the former managing director of Wharton Online -- who was Hamberger's predecessor before his retirement in early 2023 -- also recommends cautiously exploring the metaverse. In part, this is because capital is no longer chasing metaverse-related projects as furiously as it was a year or two ago. "A flood of capital investment generated activity in [the metaverse] space in 2021 and in early 2022," he says, "That dried up last year. If anything, I have seen contraction in metaverse activity. It depends on the definition. If by the term metaverse, we mean an AR/VR digital environment that is fully immersive, which you navigate using an avatar, I don't see widespread adoption; I see individual success stories. Alternately, if we define the metaverse broadly as the internet of the future -- that includes AI, chatbot programs such as ChatGPT and voice programs such as Google Assistant, Siri or Cortana, there is a lot of growth. The integration of chatbots like ChatGPT with intelligent assistants will make it a significant technology."

Levent Yarar, senior director of strategic partnerships at Wharton Interactive also advocates caution because the use cases of success for the metaverse so far have been few. He notes: "The most important one, the one that I really saw, was INSEAD using VR to solve cases, but those are not metaverse. These are cases where you have interactivity using VR equipment. So I haven't seen any Metaverse applications.

The only other place I saw a Metaverse application was in Infosys, and that's in a lab environment. They were even trying to figure out how they would do because accessibility is going to be an issue. If you want to wear an Australian Open T shirt or shorts, in the Infosys metaverse you need to have goggles. Who will have the goggles and who will do this? Where is it going to happen? So let me tell you, I'm having a problem. People have been talking about people in the business schools, especially known names, but in certain countries, they think that digitalization means taking your own in-person classes and putting them on online as is, and they call that digitalization. So now think about this: we're going to ask them not only to take classes, put it in a metaverse, and have other tools to learn. I think we're very behind. I don't think that business schools are ready as far as I know. But there's applications for different VR/AR users, which is helpful. You can solve cases, you can be a nurse. You can do other things, but I haven't seen this in business school applicants. I've seen holographic applications. I mean, Wharton has one, but I don't know if that would be considered metaverse. I doubt it."

Some schools have successfully embraced online instruction in immersive environments. For example, many surgeons are now trained in virtual operating theaters until their skills have advanced to a point where they can operate upon patients. But these, says Huesman,

“are niche applications. They are not widespread.” He argues that while the metaverse is a promising area for b-schools to explore, it is still a niche. “There are opportunities for professional development applications but these are more for engineering schools than for business schools,” he says.

MIT’s McDonagh-Smith recommends that if business schools decide to dip their toes into the metaverse, they should do so without being dazzled by the technology. “It is not technology for technology's sake,” he notes. “The question is, what problems are we trying to solve? What are we trying to fix? He offers the analogy of a Pointillist painting, where if you get too close to the image, you see only the dots; you have to step a few steps back to see the picture clearly. If schools can focus on the metaverse in the right way, “We have technology that will allow each of us to be incredibly creative,” he says.

Designing Effective Learning Solutions for the Metaverse

As the metaverse continues to evolve, business schools could try a few different ways to design effective learning solutions for executive education:

- **Collaborate with industry partners:** By collaborating with industry partners that are experienced in the metaverse to design effective learning solutions, business schools will be able to gain insights into cutting edge trends, tools and technologies that are being used in the metaverse.

- **Incorporate experiential learning:** The metaverse is an immersive environment, and effective learning solutions can be designed to take advantage of this immersive nature. Business schools can design learning opportunities that allow executives to learn by doing rather than just listening.

  Wharton’s Williams suggests one possibility. Michael Useem, the emeritus faculty director of the school’s Center for Leadership and Change Management, often leads teams of executives on mountain treks to teach lessons about teamwork and leadership. In the past, some executives have been unable to endure the physical rigors of such hikes, though they are well suited to benefit from other aspects of such experiential programs. If these mountain treks were to take place in the metaverse, the lack of physical ability would no longer be a handicap. “What a gift that would be,” she says.

  Gregory P. Shea, who co-authored this report, is a Wharton Adjunct Professor of Management and Senior Fellow at its Center for Leadership and Change Management. He often teaches in Wharton Executive Education. He told Mukul Pandya in an interview about another possible use case. He and Useem often take

executives to the battlefield at Gettysburg for a ‘staff ride’ in order to teach lessons about leadership under complex and stressful conditions. Such learning experiences might benefit if the participants were to be transported back to the Civil War era to drive home the lessons. Shea warns, however, that the point of such exercises should be to help learners make decisions as a situation evolves. Further, he adds that any technology should complement visits to the actual battlefield because being there in person “remains the ultimate immersive experience.”

- **Use augmented and virtual reality:** Business schools can use augmented and virtual reality to design immersive experiences for learners, as in the examples of the mountain hikes or battlefield visits mentioned above. In addition, though, they can also design more imaginative experiences that go beyond the kind of simulations that have often been used in the past.

  For example, they can create simulations of digital boardrooms, allowing executives to practice their decision making skills in a virtual setting. Or they can place executives in the role of an embattled CEO at a press conference, being peppered with questions from aggressive journalists following an environmental disaster. Such learning experiences do happen today, but they might be more vivid and foster deeper learning in the metaverse.

- **Offer flexible learning options:** Business schools could offer flexible learning options that accommodate the busy schedules of executives. This could include asynchronous learning modules that take place in the metaverse, allowing the learners to complete the programs at their own pace.

  “Business schools could offer flexible learning options in collaboration with medical schools and engineering schools to maximize the impact of their programs,” Huesman suggests. He adds that the metaverse may also make it possible to offer flexible learning options to learners who are handicapped because of their age or physical disabilities. “We could reach students whose health conditions force them to stay home,” he says.

    - **Foster collaboration and networking:** The metaverse is a social environment and business schools can design learning solutions that allow executives from different regions to collaborate and network with one another. For example, a global product launch could involve teams of executives from different parts of the world sitting in a virtual conference room in the metaverse to discuss the product launch in their respective regions. In the past, technology platforms such as Telepresence have been used to simulate the blending of remote conference rooms with physical ones, but the

metaverse can make such exercises even more immersive and add to their verisimilitude.

- **Focus on real-world applications:** Business schools are starting to design learning solutions that focus on the real-world applications of metaverse technologies. These can help executives to understand how these technologies can be used in their own industries and organizations. For example, if an energy company wants to build a new plant, it could test various scenarios and their implications in the metaverse before investing millions of dollars in building the physical plant.

  By designing such learning solutions for the metaverse, business schools prepare executives for the metaverse and stay ahead of the curve. “At this point, we are just scratching the surface,” says Emeritus’s Malefakis. “In the first 10 or 20 years after they were invented, films were just like radio plays. It was only after directors such as Eisenstein in Russia discovered innovative film-making techniques that cinema developed as a visual medium.” The design of learning solutions for the metaverse will probably undergo a similar process, he notes.

Short-term Opportunities for Open Enrollment and Custom Programs

Business schools have several short-term opportunities for open enrollment as well as custom programs that executive education divisions can deploy to help individuals and organizations navigate the metaverse. Here are a few examples of “low-hanging fruit” opportunities:

- **Metaverse 101:** One of the most obvious opportunities for executive education programs in the metaverse is to offer introductory courses about what the metaverse is and how it works, and how it might work. Depending upon the school and its customers, these programs might cover topics such as the history and evolution of the metaverse, key players and platforms, and the potential impact of the metaverse of industries such as manufacturing, retail, media and entertainment, gaming, and so on. Some of these could be offered online, some offline, and some in hybrid formats. According to MIT’s McDonagh Smith, once business schools have programmed to create a virtual environment, they can deliver several open enrollment programs within the metaverse.” He adds that “at MIT Sloan Office of Executive Education we have designed and delivered a large number of Open Enrolment courses (synchronous and asynchronous) on a broad range of topics, as well as Custom Client experiences in a range of virtual worlds over the last 12 years.

- Williams notes that Wharton could launch its course about the metaverse ”because of the school's bench of scholars in legal studies, management and marketing.” On the custom side, she adds, “a company may start with a program for their top 50 executives to get up to speed [about the metaverse]. Then gradually, they may roll it out across the organization in a customized format as well as something that is more off the shelf.”

  According to Malefakis, business schools are starting to pay attention to demographics in different parts of the world. “China is in demographic decline,” he notes. “In contrast, in India almost 50% of the population is aged less than 25. They will adapt rapidly to these new formats for learning such as the metaverse. I speculate that countries with young populations that are digitally connected are where the metaverse will grow the fastest..”

  Several companies around the world have been investing heavily in the metaverse. That does not mean that their employees who are responsible for either executing these programs or marketing them to potential clients are necessarily well versed in the vocabulary of the metaverse or have a deep understanding of its concepts. Addressing the needs of such companies has created several immediate opportunities for both open enrollment and custom programs. As Wharton’s Williams says, “There is definitely interest from organizations for keeping up with trends in their industry.”

- **Virtual collaboration and communication:** As more and more organizations (such as Accenture) turn to the metaverse for bringing new employees on board and using the metaverse as a means of collaboration and communication, executive education programs can offer courses on best practices for collaborating in virtual environments. This could include topics such as how to improve the effectiveness of virtual meetings, virtual team-building exercises, and cross-cultural communication in the metaverse.

- **Building and designing in the metaverse:** As more organizations explore the creation of so-called digital twins of plants or even office campuses to evaluate and choose among different options, there is growing demand for case studies about how these exercises work in practice. This offers faculty at business schools opportunities to study how companies are using the metaverse for such exercises. This, however, can be a double-edged sword. According to Wharton’s Hamberger, “this is not an evergreen area, and it is evolving at a very rapid pace.” In such an environment, sharing outdated case studies with old information may provoke a backlash. “For open enrollment programs, there will be a separation in the

marketplace between institutions that have the bandwidth to continually refresh their programs with new cases and content and those that do not."

- **Digital marketing in the metaverse:** With the rise of virtual commerce -- as noted in the case of retailers such as Nike above -- executive education programs could offer courses on how to effectively market and sell products in the metaverse. The retail sector is an obvious potential consumer of such programs in the short run, but as the metaverse continues to evolve, every company that has an e-commerce operation should be interested in such programs and find them useful for their executives and employees. According to Huesman, "retail firms are increasingly becoming aware that they will have to have multichannel and omnichannel strategies to survive in the business." The metaverse can offer a testing ground for creating and refining such strategies before they are launched in the physical world.

- **Ethics and governance in the metaverse:** As the metaverse evolves, organizations will need to develop ethical and governance frameworks to ensure that virtual environments are safe and inclusive for all users. Courses could be offered on topics such as the ethics of digital environments, virtual governance, and how to create inclusive virtual communities that are free of abuse or toxic, polarized communications. Such programs are likely to be of great interest to companies in general, but particularly consulting firms and law firms. "One short-term opportunity could be to reach out to all the scared consulting companies," says Huesman. "A business development person could go to them and ask, 'Have you seen what your competitors are doing in this space? A lot of these technologies keep consulting firm executives up at night because their clients expect them to be on the cutting edge." The same might well apply to Boards of Directors.

  By focusing on the low-hanging fruit, executive education programs can establish themselves as leaders in the emerging field of the metaverse.

Long-term Opportunities:

Executive education programs have several long-term opportunities in the metaverse. These include:

- **Access to a global audience:** Once business schools have invested in creating virtual environments (which include the technical platforms as well as a body of case studies that are regularly refreshed to tack the evolution of the metaverse), they may find that reaching a global audience within the metaverse is faster than trying to reach it in the physical world. Such programs should be able to attract a diverse set

of participants all over the world, and they should be relatively straight-forward to scale -- especially if these are offered in collaboration with global companies. These virtual environments may sometimes take the form of creating a digital twin of a physical campus, but some schools -- having been disappointed in the past by their Second Life experience -- may also experiment with other formats.

- **Enhanced learning experience:** The metaverse offers business schools the opportunity to create immersive and highly interactive learning environments that can enhance the learning experience. For example, participants can take part in exercises that go far beyond the limits of current simulations and involve role-playing exercises that allow them to apply what they have learned in a realistic way. “In the field of health education and healthcare itself, I believe the metaverse will eventually be like telemedicine on steroids,” says Wharton’s Shea.

  Shea hopes that the immersive nature of the metaverse will make it conducive to discussions that are sometimes overlooked. “It would be good if the metaverse could contribute to helping Americans get better at talking about race or gender, for example” he says. “Can we use the metaverse to help people communicate, and get [white people] to experience more vividly what it might be like to be Native American, or black, or even a different gender? If we could do anything with the metaverse, I hope it would be to get people to practice in a complicated, textured and layered alternate reality.” MIT’s McDonagh-Smith asks: “We have an opportunity to reflect, and act upon, the patterns of success and failure we’ve seen in previous generations of virtual world technologies, products and applications. For instance, in order to mitigate risks of amplifying biases (such as cognitive and cultural) let’s design for diversity, equity and inclusion in the metaverse.”

- **Cost effectiveness:** Executive education programs can potentially reduce costs associated with physical classrooms, travel, and accommodations, as their operations in the metaverse start gaining traction and begin to scale.

- **Innovation:** The metaverse can provide a platform for executive education programs to help their clients perform experiments and innovate. This may be particularly valuable in fields such as marketing, where companies may be able to test the effectiveness of different marketing campaigns, including some innovative practices that may have not been attempted before.

Measures of Success

Executive education programs can measure the success of their efforts in a variety of ways.

These include yardsticks such as engagement metrics, learning outcomes, business impact, as well as surveys and other forms of feedback. The challenge, however, is that the way executive education programs are set up, success in the metaverse is often difficult to measure. “The problem is that we do not measure the right things, and we haven’t thought enough about what we should be measuring,” says MIT’s McDonagh Smith.

- **Engagement metrics:** McDonagh Smith narrates an example to explain -- an occasion when his team built a digital lounge for a computer company. “It was a virtual showroom where they could display their products, including laptop computers,” he notes. “At the time, and this was back in 2009, with traditional internet marketing experiences we saw online visitors stay (on average) for 3 or 4 clicks over the space of 60-90 seconds and then log off, often leaving an empty shopping cart,” he says. “In this virtual world showroom the average duration of the immersive visit was 22 minutes….”

  Based on this experience, McDonagh Smith asks, “What should be the metric to measure value? Is it the number of laptops sold, or the increase in engagement from 90 seconds to 22 minutes? I would say, we should be measuring customer engagement. Our mindset needs to shift.” He argues that if customer engagement increases, over time it will lead to revenue growth -- although this might take time. “Moving forward, this consideration needs to be embedded in the way that business schools evaluate and measure investments in technology such as the metaverse.”

  Executive education programs that want to track engagement metrics can measure the number of users, the amount of time that users spend in the metaverse, and the number of interactions or transactions in the metaverse.

- **Learning outcomes:** Another way to measure the success of a metaverse initiative is by tracking the learning outcomes of participants. These can include assessing their understanding of the subject, their ability to apply the knowledge they gained in the metaverse, and their overall satisfaction with the experience. “We should start the way we start any learning engagement,” says Wharton’s Williams. “Do people feel that they have learned something that they can go out and do something meaningful in the world? That is what a lot of executive education course participants come for -- to prepare for their next challenges and to gain the skills they need for their next position. If the metaverse can help them upskill in areas they think they lack, it can have an impact.”

  Williams notes that in order to track learning outcomes, participants could answer questions such as: “Was I able to learn new skills? Was I able to form a personal connection with other learners? Was I able to build a network? The success of

executive education programs in the metaverse will depend on whether they can impact these outcomes."

Malefakis emphasizes that executive education programs offer "the benefit of being able to stress-test learning and action plans developed in a class by implementing them in the Metaverse. From there, [participants can] do after-action reviews of what happened in the Metaverse to improve the plan before executing in the 'real world'."

- **Business impact:** Executive education programs can also measure the success of their metaverse initiatives by assessing their impact on a company's business. This might be easier for custom programs than open enrollment programs. These metrics can include measuring the initiative's ROI, tracking changes in the key performance indicators (KPIs) such as sales, customer satisfaction or employee engagement and evaluating the long-term impact on the organization.

  Wharton's Hamberger notes that measuring success is crucial. "For some of the companies we have spoken to about custom programs, it feels similar to the conversations we were having about blockchain some years ago. We need to make sure that learners have the vocabulary they need so that when they speak with potential clients, they understand what is happening in this space. Right now, a lot of it is level setting for table stakes." If learners are able to deliver better on their KPIs thanks to what they have learned in the metaverse, that could help validate the technology's value.

- **Feedback and surveys:** Gathering data from surveys and participant feedback is another helpful way to measure the success of a metaverse initiative. Executive education programs can collect feedback from participants such as the quality of the content, the user experience, and the overall value of the metaverse program.

  If executive education programs can evaluate the effectiveness of their metaverse offerings, they will be able to make better data-driven decisions to improve their courses in the future.

Risks in the Metaverse

While the metaverse offers business schools several opportunities for creating impactful executive education programs, they also present some risks. Business school leaders should consider these carefully so that they can make thoughtful decisions.

- **Security risks:** The metaverse is a virtual space that depends heavily on technology. This means it is vulnerable to cyber threats such as hacking, phishing and other kinds of cyber-attacks. These can put sensitive information at risk, cause financial losses and potentially also cause reputational damage.

- **Reputational risks:** According to Wharton's Williams, these risks stem from the fact that content for executive education programs about the metaverse is highly dynamic but it is also expensive to produce. "You don't want to be speaking about the metaverse nine months from now about things that happened nine months ago. If participants believe a course offers outdated content, it may have to be withdrawn and that could hurt the school's reputation." Another risk, she adds, is that at the moment, the metaverse is closely associated with Meta, the company, whose reputation -- and market capitalization -- has taken several hits recently. "The association with Meta has some upsides but also some downsides," she adds.

- **Technical risks:** The metaverse is a virtual environment that relies on technologies such as AR and VR, headsets, complex software and high-speed internet connectivity. This makes it vulnerable to problems such as server outages, hardware malfunctions and software bugs -- and these can disrupt courses or cause downtime in courses held in digital classrooms. Building redundancy to mitigate such risks may be expensive. According to Huesman, "The metaverse is an easy way to lose a lot of money, as Mark Zuckerberg has discovered. Meta lost ⅔ of its value in calendar year 2022. The stock has rebounded recently but remains more than 25% below its valuation prior to the renaming of the company and change in strategy in October of 2021. "

- **Strategic risks:** Huesman notes that executive programs also face "the risk that they could miss the boat." By that he means the possibility that while university administrations are trying to weigh the risks and work out what to do, a nimble consulting firm might move rapidly to take advantage of the opportunities. "Someone will figure out what multichannel professional development means, and it need not be a business school," he says.

Strategies to find value in the metaverse

Based on the questions addressed in this report, the executive education divisions of business schools have many strategies to generate value in the metaverse -- both for the benefit of their students and to stay at the forefront of knowledge dissemination. "We see the metaverse as a source of competitive advantage for our school in the short run," says Wharton's Williams. "We are lucky to have opinion leaders and fast followers in this space."

Emeritus's Malefakis recommends that business schools should create "small coalitions of the willing and the excited" among the faculty to put together courses in and about the metaverse. In addition, he suggests, schools should find "a few key alumni who are bullish about the metaverse" and get them involved in developing some experiments. "If they are willing to finance some experiments, that might help reduce the financial risk."

Huesman has several suggestions for executive education programs that want to make an impact with their metaverse initiatives over the long term. "The long term is just a series of short terms," he says. "So, get to the market as soon as you can. Fail fast -- and learn from your experiences. The willingness of your clients to spend dollars is the clearest indication of their satisfaction with the value you provide. It is much clearer than net present value (NPV) scores, which are fraught with the risk of misinterpretation."

Huesman also recommends relentless experimentation. "The market can serve you well when you try lots of experiments," he says. "Expect 90% of them to fail. Find the 10% that succeed and double down on them." His advice is for executive education programs to build "a collection of engagements with industry partners. No university is in a position to be truly innovative or have global impact without a strong partner," he says.

While strategy is generally about gaining sustainable competitive advantage, MIT's McDonagh Smith notes that in the case of metaverse initiatives, it may help business schools to rethink their mental models. "Competitive advantage needs to be replaced by creative advantage," he says.

Closing Points for Consideration

a) Delivery of a complete metaverse probably will not serve education as well as will simplified versions of reality. As we stated at the beginning of this report, there exists a clear difference between what young children can perceive and what is technically possible. Over a decade ago skilled builders of business simulations would ask how close to reality, say of a market, an instructor might want a simulation. The point being that a perfect replication of reality would prove too complex to debrief and why bother? Just consult the existing reality.
Hiving off a piece of our physical reality upon which to focus facilitates deep dives into those pieces, e.g., negotiation, supply chain perturbations, and even organizational dynamics.

b) Humans are not just 3-D. They are physical and organic. We experience ourselves and others just so. Avatars can replicate aspects of us but only aspects—as might a dating app. Our reference point before and after a trip to the metaverse, however engrossing, just like the child mentioned above, remains our physical reality with five senses and likely other as yet unappreciated awareness. Hence, executive education teachers should concentrate on meta-spaces or pieces of potentially much

grander creations and use them as potential additions (complements and supplements) to a portfolio of application and practice pedagogies.

c) Look to differentiate the opportunity for private and public practice, both virtually and physically. Practicing one's ground stroke as a technique differs substantially from integrating it into a game, as does analyzing game film differ from reconstructing one's movements. Good practice does, nonetheless, improve one's game.

d) Beware of inappropriate transfer from physical to virtual domains. Practicing solving problem sets, even evolving customized problem sets, is not the same as practicing conversation, let alone equate to personalized coaching or therapy. Kasparov observed that Deep Blue didn't learn to play world class chess—rather it in combination with its human handlers learned how to beat him at chess.[5] That's what human beings do—they learn to use tools to compete with and to defeat their opponents. Oddly, that's what a more primitive version of Deep Blue did. There's extremely valuable guidance, perhaps even wisdom, there, however accidental.

e) Remember that virtual practice can help to develop skills that physical reality then tests. Virtual practice in medical diagnosis and surgical intervention can help to develop useful cognitive and even physical skills. Physical practice further aids development. Yet, see one, do one, teach one still applies—in the physical and in the virtual world just as a flight simulator helps prepare a pilot for flight, a 3D organic physical entity knows the internal and the external difference, i.e., the viscera knows. The next surgeon who passes out during their first trip into the OR will not be the first.

Next Steps

1) Use this moment to clarify definitions, including of the nature and purpose of executive education
2) Think big and start small

3) Build horseless carriages as technology and purpose clarifies what constitutes automobiles

4) Develop internal capabilities, e.g., to develop, to evaluate, and to oversee metaverse technology.

5) Network. In particular, look for thoughtful use partners.

6) Combine with other pedagogies, remembering that the metaverse is a technology, a tool to employ in the service of pedagogical aims and not the endpoint of either a course or of pedagogy.

7) Consider regular development of and experimentation with customized meta-space cases for ongoing executive 'support' groups.

[5] https://www.chess.com/blog/clizaw/did-ibm-cheat-kasparov

8) Do not be discouraged by the fact that companies like Meta have made losses and other organizations such as Disney that had announced investments in the metaverse have pulled back. (The WSJ published an article stating that the metaverse is quickly turning into the meh-taverse.[6]) Even as the buzz and public conversation has moved past the metaverse into the shiny object du jour, generative AI[7], executive education programs might still find value if they concentrate on sharing best practices in the metaverse in less glamorous but still crucial areas in the B2B space such as designing virtual manufacturing plants as digital twins.

Summary

The Metaverse has not arrived, probably not overall and certainly not in executive education. In fact, the Metaverse likely will not arrive anytime soon. Still, it is coming. Therefore, executive education leaders might consider thinking great thoughts as they conduct relatively modest experiments in areas such as building meta-spaces, pockets of enhanced and more simulation and arenas for thought and skill practice. The experiments, in turn, likely best reflect organizational interests, resources, and competencies combined with institutional learning agendas. Similarly, developing and maintaining relationships with other organizations as they work through the challenges and potential of the metaverse may well serve to guide the allocation of organizational resources and discovery of opportunities for collaboration. Additionally, different schools may use experiments and networking to refine their thinking about which (if any) competencies and skill sets warrant development in anticipation of future expansion of the metaverse as an element in executive education programming. Finally, the fit of the metaverse with existing pedagogies such as simulation lies open for discovery.

[6] https://www.wsj.com/articles/the-metaverse-is-quickly-turning-into-the-meh-taverse-1a8dc3d0 (subscription needed)
[7] https://www.axios.com/pro/media-deals/2023/03/16/metaverse-funding-plummets-as-investors-favor-generative-ai