

## **DRAFT**

### **FIU Miami Beach Urban Studios: Proof-of-Concept for the Future of Higher Education in America.**

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#### **Summary**

Building upon research collected over the past three decades, we propose that the FIU College of Communication, Architecture + The Arts Miami Beach Urban Studios (MBUS) may be understood to serve as a proof of concept of the future of higher Education in America. FIU's facility at MBUS has been in the enviable position to test not one, but several new directions in higher education and is uniquely situated to explore these transformations and trends by developing them into six structural footings:

- defined pathways of wonder and promise that inspire students to strive for higher education
- enhanced experiences within degree program without adding time to degree
- increased empathy through interdisciplinary collisions
- improved proof of learning in product that is needed by industry or future research
- intensified connection to place as well as resiliency to change
- and established platforms for lifelong learning, retraining and creativity.

The underlying assumption follows two directions in higher education stated recently by Ryan Craig. One involves the need to create the “last mile” (a reference to a cable provider going from the street to a home) that brings students closer to the jobs they want in the real world (Craig, 2017). The other insists that colleges and universities need to break down institutional silos that inhibit student success (Craig, 2017). I argue that on a small scale MBUS does both. In so doing, it points to a new purpose and future for all higher educational activities in America, namely, to research and further our understanding of and enhance *what it means to be human* in an increasingly digital world. The location of MBUS within CARTA, a unique constellation of creative and professional departments, affords its research and teaching unique access to human needs, creative expression and the understanding of human sensations through both theory and craft. Moreover, experiences at MBUS attempt to prepare students to discover new pathways to address the urban complexities while providing the training to excel in the first great jobs that launch their careers or in future research.

#### **Context**

In 2010, MBUS was conceived by CARTA Dean Brian Schriener in collaboration with his staff at the urging of faculty members in the newly formed College of Architecture + The Arts as a venue for public exhibitions, concerts, lectures and classes reaching new audiences who might not visit MMC. The facility, located on Miami Beach near Art Basel Miami Beach and the New World Symphony, and quickly gained momentum. The idea of creating ancillary educational facilities branded by the university had already started to gain popularity in 2006. By 2009, there had been a 43% increase in these satellite sites. (Jaschick, 2009). Also by 2006, the exploration to reach new audiences through Massive Open Online Courses (MOOCs) had begun and increased in popularity by 2012 (Pappano, 2012).

#### **MBUS Structure: Phase One 2011–2013**

MBUS opened in September 2011. For the first two years, it was overseen by a full-time administrative assistant who coordinated three part-time staff members who insured that classes, exhibitions, and lectures could take place as the faculty members planned them. The 16,000sf space—an entire floor in the building owned by Ambassador Paul L. Cejas, a supporter of the FIU School of Architecture—was

organized around the two larger spaces: the 1620sf gallery/concert hall; and the approximately 2000sf “studio” space designed for the use of design students. Other amenities included a grand piano and a spinet piano in one of the practice rooms, offices which had been turned over to faculty members and students for art-making and informal gathering spaces.

### **Structure: Phase Two 2013–2015**

In 2013, there was a conceptual shift to focus the space to create an interdisciplinary community of students and researchers engaged in creativity and innovation focused around the issues of Miami Beach. The idea grew out of Ernst Boyer’s writings for the Carnegie Foundation for the Advancement of Teaching. In *Scholarship Reconsidered*, Boyer attempts to broaden the definition of the higher educational enterprise by stating that “teaching, integration, and application” must be placed on “equal footing” with more traditional forms of research based upon “discovery.” (Boyer, 1990, 75) Six years later in *Building Community: A New Future for Architectural Education and Practice*, Boyer (and Lee Mitgang) make a plea for “university administrators to honor the distinctive scholarly contributions of design education, aspect and preserve its diversity, and vigorously promote a campus wide climate of integration...” (Boyer Mitgang, 1996, 146). They conclude: “We are convinced, in fact, that architecture education, with its spirit of close engagement between students and teachers in design studio, could become a campus model in promoting greater community within higher education.” (Boyer Mitgang, 148). The fact that MBUS had been formed around an architectural studio environment, lent it to explorations in this direction.

In 2013, the unique combination of disciplines in CARTA included: design (architecture, landscape, interior architecture); arts (studios arts and curatorial practice); and performing arts (music, music composition, and theater). And the three programs that helped to shape the intellectual direction of the activities in the space were the MIT Media Lab, Cranbrook Academy, and the Wexner Center for the Arts at Ohio State University. Founded in 1985, the MIT Media Lab grew out of an Architecture Department and provided a model for interdisciplinary laboratory exploration tied closely to industry and innovation. Cranbrook, which was founded in 1935, emphasized deep dives into design and visual arts, emphasizing the power of independent exploration. The Wexner Center, which was founded in 1989 as a space for art, musical and theatrical performance, was designed as a space for engaged exchanges between the arts at Ohio State and the community in which the university is set. The second phase of MBUS was visualized as a unique combination of those three institutions: the strong connection to industry and innovation connected to deep dives into artistic production coordinated by a central engaged mission to reach local audiences.

### **Structure: Phase Three 2013–present**

By early 2015, design, art, and music faculty members were starting to build their practices and research around the Urban Studios. The event calendar included regularly scheduled art openings, lectures, and musical events. A group of MBUS Distinguished Affiliates had been established by Dean Schriener to bring individuals with outstanding resumes of achievement into the fold with the faculty members and students who were teaching, researching, and learning in the space. Richard Florida and the Creative Class Group had also joined the group. In addition to our two pianos, our equipment included three color plotters, one 3D printer and one laser cutter to support the work of the design and art students and faculty members. It was time to consider new technologies to enhance the experience of innovation.

Researchers L. Johnson, S. Adams Becker, V. Estrada, and A. Freeman noted in their *NMC Horizon Report: 2015 Higher Education Edition* (Johnson et al., 2015) that makerspaces were going to be a defining feature of the 2-3-year time-to-adoption horizon for institutions of higher education interested in integrating creativity with innovation and economic growth. The origins of this drive toward creativity and innovation was found in artists, designers, builder, and makers. Our faculty composition at MBUS, which included composers and performing musicians along with artists and designers would add an

unusual diversity to the project. In early 2015, we initiated a conversation with MakerBot, which had just introduced a new product for higher education called a MakerBot Innovation Lab. This concept provided a package of 30 3D printers, five scanners, a server, maintenance, service, and an instructional team visit to train staff and students in the technology all at the same time. Since none of us were “native” users of 3D printers who studied it in school, this package insured us that our students, faculty members, and industry partners would be able to use and benefit from the equipment immediately.

Our goal at MBUS was to engage the 3D printers to strengthen the university’s connection to creative industries. In our June 1, 2015 application to the Knight Foundation to support the purchase of a MakerBot Innovation Lab, we stated that we sought use the 3D printers to: "strengthen the creative economy of South Florida; to enhance the quality of opportunities for those who live and work in our community; to foster startups and patents; and to be a leader in innovative entrepreneurship.” Matt Haggman at The Knight Foundation supported the proposal and The CARTA Innovation Lab opened in September of 2015. By early 2016, scientists from FIU’s Sea Level Solution Center had established an office in the space in our facility. CARTA, however, was not finished morphing into its current configuration and by mid-2016 the college updated its name to reflect the creation of what is now the School of Communication + Journalism. This addition played into the possibilities of engaging MBUS. In fact, in the *NMC Horizon Report* it is noted that makerspaces are designed to accommodate "digital media and other storytelling activities" like those found in schools of journalism and communication (Johnson et al., 2015). The constellation of individuals involved with media, arts, science, urbanism, design, music, innovation and entrepreneurship was in place at MBUS to articulate a new vision for higher education in America.

### **The Exceptionalism of MBUS: Toward a Proof-of-Concept for the Future of Higher Education**

As outlined at the top of this paper, there are six structural footings that feed into the exceptionalism of MBUS and to the idea that it provides a proof-of-concept for new directions in American higher education. As a pathway of *wonder and promise*, for example, MBUS seeks to provide equalize the playing field and offer students with few resources in middle and high school, opportunities utilize hands-on contact with 3D printing technologies to ideate, visualize, and then create persuasive arguments for changes they wish to see in the world. The greatest examples of this have been in our partnership with Breakthrough Miami as we collaborate to inspire their high school students to study and achieve through their contact with 3D printing technologies. At the same time, we try to build their confidence in the promise of higher education and their pursuit of further learning.

For students who have come to FIU and are studying in CARTA, we offer opportunities to add technological understanding, particularly in 3D printing, to existing classes. Likewise, we offer the added benefits of exposure to projects and innovations initiated by faculty members and others, that students are invited to participate in on a paid basis. These include students who are working on developing a range of projects from the Tactile Neighborhood models being refined with Miami Lighthouse for the blind to projects exploring innovations in the fields of hospitality, music education, travel accessories, new musical instrument design, artwork and the potential of digital glitches, and e-commerce. Since 3D printing is a field that is advancing quickly, MBUS is positioned to accommodate a broad range of opportunities that cross many disciplines. For example, we were recently approached by the Florida Division of Vocational Rehabilitation to provide training in 3D printing as part of their vocational rehabilitation program. We were also asked to be part of a global research consortium (potentially including Harvard, Oxford, Carnegie Mellon, Yale, Princeton, Cornell and a handful of other schools) to explore ways in which this technology will transform higher education.

Interactions between disciplines is purposefully left undefined and not choreographed. It must be created naturally, through natural affinities for the research to work. So, at MBUS, disciplinary silos seem to disappear organically as students observe the exhibitions and performances and making all around

them. This organic quality of post-disciplinary “collisions” that occur point to the development of new research clusters. While these are just in the beginning stages, it seems that such post-disciplinary native-grown research clusters might provide an important counterbalance to the deeply disciplinary research clusters in areas of strategic preeminence that the university is trying to locate and hire. Likewise, the post-disciplinary interactions that students experience prepare them with empathy for students and faculty members in other areas of study. They practice talking about what they are studying with those in other disciplines, becoming more persuasive and more empathetic in the process. Building empathy for differences (in race, class, culture, political, sexual preferences, economic outlooks, etc.) is one of the most important lessons higher educational institutions can hope to achieve.

Finally, the fact that MBUS is embedded in the City of Miami Beach means that students break their usual academic routines at MMC or BBC to take their classes, work in the labs, seek out internships, and join the numerous activities during the academic year. As something of a domestic study abroad program with new challenges and opportunities for those utilizing the space, MBUS builds student confidence when facing change and builds personal resiliency when encountering new situations. The flip side of this coin is that the students are in a small program in the City of Miami Beach. They are introduced to the challenges in the city and return to their own neighborhoods with a new sense of what it means to be a community. Likewise, community come in to MBUS for events and other learning experiences. A series of lifelong learning experiences, particularly in areas of 3D printing technology, will certainly become an important part of MBUS and the future of higher education.

### **Scalability and the Future**

As a proof of concept of the future of higher education in America, MBUS is a very small scale proof. Each semester it has about 100 students taking classes and seven faculty with permanent offices at the site each semester. This begs the question of how to scale up. One scenario might be to multiply the number of MBUS-like sites. They could be franchises set within communities in and around South Florida or even scattered around the globe. Another could be to slightly morph existing sites to be more like MBUS. This might involve asking existing external locations (Kampong, I-75, The Wolfsonian-FIU, FIU/DC, Brickell, etc.) to engage technology, include classes, and be reconsidered within a conceptual framework that is more like MBUS. Perhaps the most effective way to scale MBUS is as an idea and aspiration instead of a actual facility. This could be accomplished through a reexamination of the institutional mission and vision statements. One possible updated institutional vision statement might be: To create pathways of wonder and promise by enhancing teaching, research and service through empathy, craft, creativity, and new technologies to uncover what it means to be human in a digital age.

### **Conclusion**

As the New Media Consortium and EDUCAUSE point out in their *New Horizon Report*, the 2015-2018 time-to-adoption horizon for technology in higher education includes maker spaces and wearable technologies. MBUS clearly falls within that adoption horizon. The next horizon (2019-2020) proposes the adoption of adaptive learning technologies and artificial intelligence (Johnson, L. et. al, 2015). This is a fast-moving train. On another related note, a recent McKinsey report found that companies are increasingly turning to design strategies to create consumer-centric environments and experiences (Breschi, R. et al., 2017). It will be difficult for any institution of higher education to keep up. It appears, however, that nearly all industries, from cruise ships to hotels, banking to real estate development, are seeking to create new experiences designed, curated and customized toward individual client desires. It will now become increasingly important to understand everything there may be to know about the human nature of any given client. AI may help with basic trends in human behavior, but future students will need to study what it means to be human and to customize products for humans to be adequately prepared for the workforce. Future innovators and their staff members will be called upon to have expertise in understanding what a client likes to hear and see, taste, smell, touch. Key knowledge areas will be centered around the intangible mysteries of human existence (those behind the customized experiences)

that are best, and sometimes only perceived through art, design, music, theater, film and other art forms. Nearly all else that is taught at the university, from mathematics and statistics to engineering, nursing, medicine, chemistry, biology, environmental sciences, and languages, may eventually be better handled in and out of the classroom by advanced artificial intelligence. Therefore, the efforts of those at MBUS, albeit small in scale and specific in scope—as they address k-12, the university and lifelong learning—seem to point to a possible direction that higher education may need to go to maintain relevance in this very dynamic world of ours.

## References

- Agarwal, R., Chandrasekaran, S., and Sridhar, M. (2016). Imagining Construction's Digital Future. [McKinsey.com](http://McKinsey.com) (June 2016).
- Angeles, S. (2013). 10 3D Printing Jobs on the Rise. *Business News Daily* (Sept. 18, 2013).
- Boyer, E. L. (1990). *Scholarship reconsidered: Priorities of the professoriate*. Princeton, NJ. Carnegie Foundation for the Advancement of Teaching.
- Boyer, E. L., & Mitgang, L. D. (1996). *Building community: A new future for architecture education and practice : a special report*. Princeton, NJ. Carnegie Foundation for the Advancement of Teaching.
- Breschi, R., Freunde, T., Orebäck, M., and Vollhardt, K. (2017). The Expanding Role of Design in Creating an End-to-End Customer Experience. [Mckinsey.com](http://Mckinsey.com). (June 2017).
- Bryant, J. and Sarakatsannis, J. (2016). Three More Reasons Why US Education is Ready for Investment. [McKinsey.com](http://McKinsey.com) (Nov. 2016).
- Cohen, D., George, K., and Shaw, C. (2015). Are You Ready for 3D Printing? *McKinsey Quarterly* (Feb. 2015).
- Cohen, D., Sergeant, M., and Somers, K. (2014). 3-D Printing Takes Shape. *McKinsey Quarterly* (Jan. 2014).
- Craig, R. (2017). College Silos Must Die for Students to Thrive. [Forbes.com](http://Forbes.com) (April 14, 2017).
- Craig, R. (2017). The “Last Mile” in Education and Training.” [Techcrunch.com](http://Techcrunch.com) (Jun. 25, 2017).
- Dotsenko, S. and Hwang, T. (2016). The Future of Educational Technology: How Edtech Is Still Ignoring Its Biggest Market. [Forbes.com](http://Forbes.com) (Aug. 23, 2016).
- Fishman, R. (2015). College Decisions Survey: Deciding to Go to College. *Newamerica.org*. (May 28, 2015).
- Haar, S. (2011). *The City as Campus. Urbanism and Higher Education in Chicago*. Minneapolis, MN. University of Minnesota Press.
- Hayhurst, C. (2017). In the Classroom and Beyond, Colleges Find Ample Uses for 3D Printing. *EdTech Magazine*, (May 3, 2017).
- Hidalgo, J. (2012). The Future of Higher Education: Reshaping Universities through 3D Printing. *Engadget.com*, (Oct. 19, 2012).

Huang, Y., Leu, M. C., Mazumder, J., Donmez, A. (2012). Additive Manufacturing: Current State, Future Potential, Gaps and Needs, and Recommendations. *Journal of Manufacturing Science and Engineering*, Vol. 137.

Jaishree, O. K. and Manicas, P. T. (2004). New Technologies and the Reconstruction of the University. *Globalization and Higher Education*. Honolulu, HI. University of Hawaii Press.

Jaschik, S. (2013). International Campuses on the Rise. *Inside Higher Ed*, (Sept. 3, 2009).

Johnson, L., Adams Becker, S., Estrada, V., and Freeman, A. (2015). NMC Horizon Report: 2015 Higher Education Edition. Austin, TX: The New Media Consortium.

Nadel, B. (2017). 3D Printer Capabilities form the Future of Higher Ed. *University Business*, (May 29, 2017).

Oberdick, J. (2016). How 3D Printing's Growing Presence is Enhancing Teaching and Learning in Higher Ed. *Penn State Teaching & Learning with Technology*, (Mar. 29, 2016).

Pappano, L. (2012). The Year of the MOOC. *The New York Times*, (Nov. 2, 2012).

Wildavsky, B. (2010). The Great Brain Race. *How Global Universities are Reshaping the World*. Princeton, NJ. Princeton University Press.