

Future-casting CU Boulder as the First Public University that Hacks the Academy Model

Academic Futures White Paper, December 2017

Submitted by CU Boulder Innovation & Entrepreneurship Initiative part of the Research & Innovation Office:

Sarabeth Berk, Ali LeBeau Greenstein, Nicholas Karas, and Allison Moran

“Oh, the places you’ll go” is a classic quote from Dr. Seuss, and his book of the same name encourages us to brave unpredictable futures and flow with life’s inevitable twists and turns. Yet, in that same book, Dr. Seuss also warns us about a useless place called the Waiting Place where “everyone is just waiting”, and somehow, he implores, we must manage to escape it.

Well, the time is now for CU Boulder to escape the Waiting Place, and that is why we wanted to submit our ideas to the Academic Futures process. We represent the Innovation & Entrepreneurship Initiative, and we are tasked with thinking about things differently, challenging the status quo, and taking action to help the University become a more innovative place. In our role, we straddle across staff, students, faculty, and community voices, analyzing and testing how to use innovation and entrepreneurship to serve the campus as a whole.

Before we start listing suggestions, we will first provide background on ideas and individuals who inform our thoughts. Afterwards, we will present a series of suggestions, some radical and some commonplace, of what CU Boulder might implement in order to shape its future.

BACKGROUND

If 13-year-old Logan LaPlante’s [TED Talk](#) from 2013 with over 9 million views is any indication of what’s to come, then the future of education will be a combination of hacking-- specifically life hacking, education hacking, degree hacking, and growth hacking. LaPlante’s vision is not outlandish and, in fact, is a recurrent theme in the work of other scholars and futurists. For instance, a few years prior to Logan’s talk, the book *Hanging Out, Messing Around, and Geeking Out: Kids Living and Learning with New Media* (Ito et al, 2009) signaled a new culture of learning formed at the intersections of digital media and youth interests. This book was the start of an educational trend around connected learning, which “advocates for broadened access to learning that is socially embedded, interest-driven, and oriented toward educational, economic, or political opportunity”. In sum, connected learning supports that learners should be in the driver’s seat, and optimal learning ecosystems will provide experiences that can occur at any time, any space, any path, and any pace. In many ways, connected learning is similar to the trend known as personalized learning, which is sweeping K-12 education. However, a key difference is that connected learning also takes into account out-of-school time learning as well as the role of local professionals, non-profits, libraries, and cultural institutions that act as critical components of the entire learning ecosystem.

Other scholars call for a future that is filled with independent thinkers who explore nontraditional learning experiences, hence the notion of “hacking”. Zhao’s book *World Class Learners* (2012) questions, “At a time when most of the careers for our children are yet to be invented, how could we [education] prepare them?” With the rise of the global economy, Zhao reflects that conventional curriculum and standardized measures of success are holding us back, and instead, the greatest lesson we can imbue is teaching all students how to be entrepreneurial problem solvers.

While researchers and practitioners are attempting educational shifts, thought leaders, politicians, and business owners are also scrutinizing it and pouring millions into establishing solutions that are more innovative, scalable, equitable, and effective. In the past few years, private foundations and entrepreneurs have sponsored major initiatives such as [XQ SuperSchools](#), [School in the Cloud](#), [MissionU](#), and [École 42](#). Each of these is intentionally disruptive with high publicity and designed to target core challenges such as access, equity, preparedness, and purpose to demonstrate all the flaws in the current system. Wagner, co-author of *Creating Innovators* (2012) and *Most Likely to Succeed* (2015), and a proponent of MissionU, writes, “the only way to ensure any kind of future security for our children is to totally upend the education system and rethink what school is for.” These extremists are important in the dialogue on school reform because they are stirring up new thinking and taking risks that older and larger institutions are unable to do at this current moment.

With the onset of Academic Futures, now is the time for CU Boulder to address critical questions that include: What is the purpose of higher education in the modern era? What kinds of credentials provide the most value and to whom? How do we prepare individuals for uncertain futures with rapidly changing markets? What types of academic outcomes might be acceptable to expand current definitions of competency? How do we create a more entrepreneurial environment and experience for all? And, how do we allow for more or different forms of autonomy, agency, flexibility, assessments, and “hacking” within existing structures?

Below, are ideas we propose that could propel the University not only forward but into the forefront of higher education and would establish it as a new, hybrid academy that thrives in the face of globalism, ambiguity, and acceleration, instead of being threatened by it or left behind. In reading these suggestions, we ask you adopt a “both/and” mentality—think of how the University might adapt each recommendation alongside or within established constructs.

SUGGESTIONS

Recruitment

Admit for creative and leadership potential rather than grades and test scores: In 2006, Tufts University undid the traditional application process and tried an experiment called the Rainbow Project, led by Robert Sternberg, where they looked at a diverse set of applicant abilities. They asked applicants to respond to videos, odd essay questions, and even complete creative exercises. The goal was to measure more than intellectual aptitude by looking for creative and leadership potential, which are indicators of college success and preparedness. While the results from initial pilots were varied, the data did show there was value in creating new kinds of college admission assessments.

It might be worth taking a page from how leading innovative companies assess top talent because they realized they can't rely on GPAs or test scores. Google, Apple, and others create custom methods, like behavioral interviews, to better predict performance and gauge variables beyond intelligence (Matyszczyk, 2013). One interesting example of changing hiring practices is Zoho, an enterprise tech company founded in India, where they created Zoho University to prepare incoming talent (Mannepalli, 2017). Zoho's theory was that “many underprivileged students in India, for example, don't have college degrees and are just as capable as more ‘proven’ talent.” So, they decided to pay and train students from the poorest villages. In a couple years, these students were able to function on par with employees who were college graduates. Now, 15% of Zoho's workforce comes from Zoho U, an unexpected talent pipeline that also impacts the lives of impoverished youth.

Be conscious that non-dominant youth are the majority: traditional college students are not immediate high school grads: With more and more high school students doing concurrent enrollment, taking gap years, transferring, or entering college later in life, the traditional college student is not the recent high school graduate. A study from 15 years ago, showed that only 40% of college enrolled students fit the “traditional” mold of a recent high school graduate with support from their parents (Choy, 2002).

Academics

Shift towards DIY U and choosing a mission not a major: Anya Kamenetz wrote DIY U (2010), a manual of sorts on the future of higher education and how to forge your own path. Some of her thinking is spot on and other aspects are less realistic, but overall the learner-driven focus feels timely. Similarly, a couple years ago Stanford proposed that college students should no longer choose a major but instead design a life mission. They call it [Purpose Learning](#), and students would be allowed to compose their academic studies into their own set of unique experiences and courses, completing a “degree” with the approval of their faculty advisor. Lastly, the media has been feasting on an announcement that [K-12 schools in Finland](#) are in the process of abolishing disciplines and moving towards a model they call phenomenon-based learning. They plan to teach through interdisciplinary units around big ideas and problems.

Make assessments portfolio-based and competency-based: Todd Rose author of the book End of Average (2016) and co-founder of The Center for Individual Opportunity at Harvard, argues that we need a competency-based approach because grades are too one-dimensional. Rose states, “When schools aren’t responsive to them as individuals, the students don’t know who they are and the teacher has the wrong lens to think about the kids and we’re all constrained by these narrow metrics of success”. Portfolios and competency-based assessments are the best way to show what each learner understands and is able to do as an individual. While this makes grading more time intensive, it also helps employers and others differentiate student talent.

Emphasize two core parts of learning- it’s social and relational: An overarching key to student success, no matter the grade level, is the relationship between the educator and the learner. Research shows that high achieving students are successful because they bond with at least one teacher. Furthermore, we create knowledge collectively, not independently. In 2013, Marina Gorbis coined the term “[socialstructing](#)” which refers to the way the economy and individuals are growing and creating the world together into a massive social network. The more we embrace socialstructing as part of our culture and curriculum, the more we can take advantage of the network effect and think beyond the borders of our campus.

Experiment with micro-credentials, micro-learning, even a micro-university: There’s a movement happening around “micro”-sizing everything from credentials to schools. [Open badges](#) are still a relatively new movement that are being adopted by some more than others as a way to recognize achievements and skills. Large school districts are allowing micro-schools to open within traditional schools. One of the latest private micro-schools to open is called [WeGrow](#), an outgrowth of WeWork, the coworking franchise. By embedding small schools as an amenity of being a member of these coworking spaces, WeGrow is raising young children within a culture of entrepreneurship.

Grow a highly open network: Many argue that the value of a university is not about the degree but about the power of the network it taps you into—who you know, not what you know. CU

Boulder has an incredible density of alumni in the Colorado region along with community partners, and a poor way of tracking and openly sharing our connections and relationships with each other. Imagine if we had a “LinkedIn” for campus to openly connect internal and external relations.

TIME

Reduce “seat-time” for more active learning/experiential learning time: We know that seat time and “sit and get” are not effective learning strategies (deNoyelles, Cobb, & Lowe, 2012) even though it’s mapped with credit hours. The value of learning at a university is to have experiences that cannot be replicated elsewhere, to work alongside the talent of an incredible professor who can demonstrate complex concepts and guide students to make their own meanings. Experiential learning is what will keep universities relevant in an age where more things are becoming accessible for free online. Unique, in person experiences are what attract people to go somewhere to participate.

The 24/7 university and the Open-Loop University: When will we move away from the agrarian calendar? Why is education still on a 9-month model or semester? The workforce isn’t, nor are family vacations or personal schedules. People learn or conduct research anytime and anyplace. The day and the time does not matter. As the world embraces digital nomads, the school year and school day need to be reconsidered. Secondly, why does a degree take four years? We’re moving into an era where K-12 will not be based on grade levels but by competency and mastery of specific knowledge. Degrees and certificates should also reframe the factor of time.

SYSTEMS

Create an innovation arm that can spin-off breakthrough ideas for CU Boulder: Fortune 500s who are powerhouses in innovation (3M and Apple come to mind), sink serious resources into innovation divisions to generate, test, and show the potential of new products to bring in new revenue streams. [Google X](#), the Moonshot Factory, is an R&D arm of Google. Its purpose is to take audacious goals, like self-driving cars, test them, and celebrate failures and successes since the culture is about pushing the envelope.

Best practice for large companies who are able to maintain a competitive edge is to dedicate 6-10% of their project portfolio to high-risk innovations (these are considered breakthrough innovations, not merely improvements or initiatives). The budget for such innovations is endowed or protected in such a way that it’s not susceptible to annual fluctuations or changes in leadership. The appointed team works iteratively and often independently from the typical organizational structure, enabling them to work at a faster rate and more autonomously. Once they have a new product, service, or process that has been validated thoroughly, it is brought into the parent company and integrated within its offerings. Much can be learned by adapting or studying the innovation structures of major companies.

CONCLUSION

It is exciting that CU Boulder is starting the Academic Futures conversation. While there are many steps in this process, it will be important to consider how we can commit resources, time, talent, and funding towards lean, short-cycle (one month to one academic year) testing of “low-resolution” concepts. User validation and human-centered design are tremendous tools for this kind of work, and hopefully a team who is well-versed in these methodologies can help design and run rapid prototypes in order to achieve maximum progress within university culture and timetables.

REFERENCES

- Choy, S. P. (2002). Access & Persistence: Findings from 10 Years of Longitudinal Research on Students. ERIC Digest.
- deNoyelles, A., Cobb, C., & Lowe, D. (2012). Influence of Reduced Seat Time on Satisfaction and Perception of Course Development Goals: A Case Study in Faculty Development. *Journal of Asynchronous Learning Networks*, 16(2), 85-98.
- Ito, M., Baumer, S., Bittanti, M., Cody, R., Stephenson, B. H., Horst, H. A., ... & Perkel, D. (2009). *Hanging out, messing around, and geeking out: Kids living and learning with new media*. MIT press.
- Ito, M., Gutierrez, K., Livingstone, S., Penuel, B., ... & Watkins, C. (2012). Connected Learning: An Agenda for Research and Design. Retrieved online <https://dmlhub.net/publications/connected-learning-agenda-for-research-and-design/>
- Kamenetz, A. (2010). *DIY U: Edupunks, edupreneurs, and the coming transformation of higher education*. Chelsea Green Publishing.
- LaPlante, L. (2013). Hackschooling makes me happy. Tedx University of Nevada. Retrieved online <https://youtu.be/h11u3vtcpaY>
- Mannepalli, A. (2017). The Founder Of Zoho Has A New Strategy To Hire Tech Talent. Forbes. Retrieved online <https://www.forbes.com/sites/forbestreptalks/2017/06/14/the-founder-of-zoho-has-a-new-strategy-to-hire-tech-talent/3/#7c31a53515ec>
- Matyszczyk, C. (2013). Google: GPAs are worthless. C.net. Retrieve online <https://www.cnet.com/news/google-gpas-are-worthless/>
- Miller, L. (2015). 'Most likely to succeed' by Tony Wagner and Ted Dintersmith. New York Times. Retrieved online <https://www.nytimes.com/2015/08/23/books/review/most-likely-to-succeed-by-tony-wagner-and-ted-dintersmith.html>
- Mitra, S. School in the cloud <https://www.theschoolinthecloud.org/>
- Rose, T. (2016). *The end of average: How to succeed in a world that values sameness*. Penguin UK.
- Sternberg, R. J. (2010). *College admissions for the 21st century*. Harvard University Press.
- Sternberg, R. J., & Collaborators, T. R. P. (2006). The Rainbow Project: Enhancing the SAT through assessments of analytical, practical, and creative skills. *Intelligence*, 34(4), 321-350.
- Wagner, T., & Compton, R. A. (2012). *Creating innovators: The making of young people who will change the world*. Simon and Schuster.
- Wagner, T., & Dintersmith, T. (2015). *Most likely to succeed: Preparing our kids for the innovation era*. Simon and Schuster.
- Zhao, Y. (2012). *World class learners: Educating creative and entrepreneurial students*. Corwin Press.

