The current research university system is not keeping up with society’s higher education needs. What we need, according to Michael M. Crow, is the next evolution of higher education—the fifth wave of university design.

By Michael M. Crow

Arizona State University’s President, Michael M. Crow, Shares Bold Ideas about Higher Education and Student Learning with Executive Editor, Frank Shushok, Jr.

Shushok: Thank you for taking time to visit with About Campus readers and me. As you know, our readers include faculty from across the disciplines, administrators, policy-makers, and other educators who serve every institutional type from community colleges, research universities, to large and small colleges across the United States and abroad. Of course, the collective interest of our readers is to advance student learning on the college campus. I very much enjoyed reading your new book, Designing the New American University, and knowing your ideas will provide the sort of disruption to our thinking that’s always helpful. I’d like to begin my time with you by asking you to share a little about your book and why you wrote it.
Of course, you’re at Virginia Tech, so you are at one of the most successful institutions to grow out of what is referred to in the literature as the third wave of institutional design in the United States, the land-grant university. Your institution also grew into the fourth wave, which were the research universities. No one could have imagined at the time of their conceptualization how land-grant universities would evolve in regards to research intensity and breadth. Land grants, therefore, emerged into these research universities and many thought, “Well, that’s it. That’s the end of the evolutionary process.”

If that’s true (the end of the evolutionary process), we are in for a lot of difficulty and enormous problems, because our society’s rate of change has accelerated, our complexity has accelerated, our economic challenges have accelerated, our diversity has accelerated, and we have also become increasingly urbanized in the last 100 years. All the talk about the emergence of a new kind of public university that was going on in the 1960s and 1970s to add to or to enhance the array of existing public universities didn’t really amount to much.

At Arizona State University, we sit out in a new-edge area of the United States, Arizona, in an emerging city of 4.1 million people that has grown up out of nowhere. When one thinks about whether or not we should take the old university design (public metropolitan university or a land-grant university model) and just implement it as-is, our answer is no. We had to find a way to take the spirit of, say, the University of California, with very broad levels of accessibility, matched with the lowest possible cost for educational outcomes, and apply that across a spectrum of society which is broader than any universities of the past have ever engaged.

The book is a historical, philosophical, and design-oriented attempt to make the argument for the emergence of a “fifth wave,” a new wave of university types. In higher education, the first wave, which are the Washington and Lee’s and the Bowdoin’s and other small liberal arts colleges, are not very big, not expanding in number, and are not scalable given the cost they demand. While they are still thriving, they aren’t designed to scale to deal with the size of our democracy.

New waves don’t replace the old waves; they augment them, and become representations of where we need to go. Your own school, Virginia Tech, emerged as a research university in the fourth wave, as did Columbia and Harvard, which were two of the original colonial colleges. Neither Harvard nor Columbia were research universities until around 1900, and they were both reacting and responding to an institutional design that sprung up in 1876; the idea that integrated British-German liberal education and scientifically intensive research institutions. What we are now arguing for is continued evolution, or the next wave; what I call the new American university. This new institutional type is scaled for diversity and accessibility, and the matching of accessibility and excellence in the same institution.

On my desk I have the University of California, Berkeley catalog from 1950. In that catalog, it says that the admission standards for the university were for students to take 15 particular courses, get at least a “B” in those courses, and have a “B” average overall. If you had those qualifications, you were admitted to
the University of California, Berkeley, and your cost of attendance was zero. UC Berkeley was already a world-class research university; UCLA was emerging at the time. Again, the cost of attendance was zero and you could be admitted with basically a 3.0 grade point average if you took the right courses. I think the average incoming grade point average at UC Berkeley right now is 4.2 weighed, and they are only admitting the upper 4 percent of the high school class. Their argument, I suppose, is that they can only deal with so many students.

The other thing that has happened (and this is not a criticism, just an artifact of the system) is that UC Berkeley now has become a predominantly White and Asian student body, in a state with very large number of Hispanic and African-American residents. What this means, I think, is that we need a different kind of institutional model; one that is scalable, one that is accessible, one that can control costs, but one that at the same time is not a “factory,” not a “knock-off,” and with no reduction in rigor. This requires a completely different conceptualization. The book is derivative of the need to continue to design new kinds of higher education institutions to be of greater service. One of the things that we don’t spend much time talking about in the book is the significant change we’ve made to our teaching pedagogy, to our academic calendar, to our academic clock, and to the integration of technology at Arizona State. These are examples of the kinds of things that require reconsideration.

**Shushok:** You’ve been described as the lead architect of the prototype for a new class of large-scale multidisciplinary and transdisciplinary institutions. Acknowledging the challenges of such an undertaking in the context of a large public university, you celebrate the ways in which these efforts have aided the reassessment of priorities. What’s happened, and in your opinion, what’s really at stake here?

**Crow:** You know, what we’ve really tried to do is to recapture the notion of “the academic leader as designer,” as opposed to “the academic leader as bureaucrat,” or as a person who just lives inside an inherited bureaucratic structure. Most academics don’t think of academic structure as bureaucratic, but it really is immensely, unbelievably, bureaucratic, even down into the level of the disciplines. We need to be positioned in a way where we can design our intellectual community and our teaching, learning, and discovery energy around those things that are not delimited by a historical structure.

For example, Arizona State still has a chemistry program, but it’s in our School of Molecular Sciences and connected to our brand new School of Sustainability, and our brand new School of Earth and Space Exploration. We also eliminated 80 academic units, including all our then existing Biology departments. We did away with Political Science and Anthropology as departments while maintaining those degrees in new transdisciplinary units. We moved away from the notion or the perception that disciplines and academic structures are the same things; they are not. Disciplines are social constructs where people get together to advance knowledge in an organized way, but that doesn’t mean that it is necessarily the way it should be structured in the institution unless you want to become fixed and rigid. We have gone back and empowered ourselves to focus on the notion of re-invigorating and re-empowering faculty members to actually design their own intellectual arenas. This is really at the root of what we have been doing.

All of this has led to new teaching methods, new collaborations, new ways to work together, unbelievable new research projects, and record levels of funding; we are the fastest growing research university in the United States. We don’t have a medical school or an agricultural school, yet our research funding this year is $450 million. That’s more nonmedical research than the University of Southern California, Harvard, Columbia, or Princeton. That is a fourfold increase since 2000. All of that comes from this new intellectual structure and this new way of looking at things.

**Shushok:** Early in your book, you argue “America’s research universities are the most transformative institutions on the planet—or in the course of civilization—yet the reform in large measure comes precisely with the reconfiguration of existing organization and rethinking of practices.” Could you unpack what might be viewed as two perspectives pulling in opposite directions?

**Crow:** Yes, here are the two perspectives: One perspective is built around the model of great faculty and high selectivity of students. This model becomes more and more selective every year, against the scale of society. The college or university becoming less and less
connected to the broader needs of society just happens as a function of that. If every public university also takes this path, such as down the road from you in Charlottesville (The University of Virginia now refers to itself as a “public Ivy”), then we are in big trouble. Operating under the notion that somehow an institution’s selectivity is the determinant of its quality is ultimately limiting for society.

This is really hard for people to grasp. We are a country of 320 million people and growing. The United States is a country of immense growth potential, as the third most populated country on the planet. In every age cohort group, we have millions of people as a result of either birth or immigration per year, ready to move on to higher education. Yet, our institutions of higher education are not scaled with that. The institutions that view themselves as elite are becoming more elite. Then there are those that are designated with the assignment of being access-only (these are the low-elite. Then there are those that are designated with the assignment of being access-only (these are the low-
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**Shushok:** As we’ve discussed, About Campus readers span all institutional types and roles at these institutions, yet all are committed to enriching the student learning experience. When you think of the American higher education enterprise today, and dream about what might be in 20 years, what do you hope will be different for students?

**Crow:** There are several things I hope for. One is that a new, fifth wave of institutions can emerge that can scale. We need to deal with our scale issues and our complexity issues.

I hope also that we embrace technology to really enhance learning outcomes. Technology is not meant to replace anything about the faculty whatsoever; it’s meant to augment the faculty’s ability to impact people’s lives. Rather than take one major, why not take three majors? I like the idea of a student saying: “I’m going to major in Electrical Engineering, French, and American History, and I’m also going to play the flute.” We need to empower people to learn more broadly, to make them even more adaptive learners for the future. This is not about narrowing, but about intensification, allowing technology to do that.

Lastly, if we do not find a way to take the bottom half of our socioeconomic families and give them better than what they have now, a 15 percent chance of ever getting a college degree, then we are going to have a hugely missed opportunity in this country. We have a deep problem relative to accessibility. In the bottom quarter of family income, there’s only a 9 percent college completion rate. That’s for a quarter of our population in a country of 320 million. It’s as if we have 100 million people in the United States who are basically operating on the same level as in a much less developed country. That just can’t be the outcome.

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**Shushok:** I recently had a conversation with Robert Putnam about his new book, Our Kids: The American Dream in Crisis, and he also highlights the tough subject you are discussing now. Like Professor Putnam, will you be candid with readers about what you think institutions must do differently if we are to meet the needs of lower socioeconomic populations?

**Crow:** I know Bob well, and I have worked with him on topics related to the ones he explores in the book and some other projects. The candid talk would go something like this: the public universities’ abandonment of the lower half of family incomes has led to the rise of the not very effective for-profits, and they are filling the gap that we should have been filling. This is unfortunate because the for-profit motive in the health or education sectors does not always produce good results and it seldom produces the best results. We at public research universities are failing to adjust to the scale of the old land-grant mission.

Your institution for example, Virginia Tech, was founded under state and federal action to be available to the sons and daughters of farmers and mechanics (families of the working classes at the time). Increasingly, that’s not the case. Research universities, and many other public universities, are increasingly available only to the upper half of family incomes, particularly from the perspective of success—who graduates and who doesn’t. The candid talk is that we have not constructed a new kind of research university capable of scaling to diversity and size to the extent necessary to accomplish the broader mission that we have for our society.

**Shushok:** There is section of your book with the subheading “A tradition worth defending robustly” where you argue that a liberal arts curriculum is centrally valuable to the mission of the New American University. In an era dominated by a focus on STEM-
related majors and vocational preparation, how do you continue to support and encourage a balanced portfolio of courses for students? Why does this matter?

Crow: Our goal is to produce master learners, not to produce engineers, or doctors, or so on. You cannot produce a master learner without a deep appreciation for logic, philosophy, rhetoric, and traditions of history and literature. These are essential to the master learner of the future and we are not doing a very good job with this at the moment. We are still structurally constrained within this four-year curriculum still thinking that all courses have to be taught for three-credits, three times a week, 50 minutes per session. What we need to do is take off the shackles. Our objective should be to educate people broadly, to prepare them to be master learners with an expanded core in the liberal arts and sciences, and then either specializing in those liberal arts and sciences more broadly, or taking other things. We produce a journalism degree at Arizona State, and if I had my way every journalism major would also be an English, history, philosophy, or political science major. We can’t pull that off because we haven’t built enough innovation and creativity and technological enhancement into our overall teaching and learning environment. So that is what we intend to do.

Shushok: Your commitment to innovation has clearly driven your work at Arizona State. What are the essential elements for creating conditions for innovation? What are the stumbling blocks? How can campuses create cultures that foster innovation and fight against institutional inertia?

Crow: The key to stimulating innovation is to change the focus of the culture at the university from the faculty to the students.

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By making higher education student-centric, one is forced to say to oneself, “Okay, I have students coming in from all these different family backgrounds, with a spectrum of types of intelligence; I need tools that human beings can put to bear to enhance learning outcomes.” If you change the focus from faculty-centric to student-centric, you realize that you need more tools to achieve certain objectives. At Arizona State, one of our objectives is for us not be able to predict student success based on family income. Right now, it’s unfortunately a key indicator. I want that not to be an indicator and there is no way to achieve this change without technological innovations. We need tools for active learning, for adaptive learning (advising tools, artificial intelligence-based simulation tools, and gaming tools) all in addition to the faculty and advisors that we have, to make all that work. Innovation is absolutely essential when you start thinking about the success of every student.

If we are at an institution that is only handpicking its students, we are only picking them because we already know they can be successful. But if you are at the 1950s version of the University of California in 2015, and you are admitting all these B-level students and above, it’s a little more complicated to make sure that they can be successful. You cannot make students successful without huge levels of innovation.

Shushok: My guess is that many readers are going to read this interview and say, “I love the ideas that Michael Crow is conveying and I’m all for them” but also have the inclination to add, “but he’s President of Arizona State University, and I’m just—insert title—Assistant Professor, Professor, Department Head, Student Affairs educator.” Could you talk about what you think people on the ground can do (day-to-day in the trenches working with students, trying to make a difference) to advance the kinds of ideas you are pressing upon in your book and in this conversation?

Crow: I think what any of us can do is to change our mindset to a focus on the student and student outcomes. Then, within any institution, we can begin to cluster with others who want to focus on that also. I think this is how internal innovations begin to occur. I can imagine a group of people sitting around and saying, “How do we enhance the retention levels of Native American students from families eligible for Pell Grants, where we are not having the kinds of graduation successes we would like to have?” Then people
work on that on their own, in their department, in their unit.

Also, begin to focus on embracing technology in ways that are compatible with the individual culture. I think there is opportunity for innovative variation to occur in any level in any university and to be impactful. Ultimately, that’s what’s happened here. We have created an environment where innovations are welcome. However, you can still innovate, even in an environment where innovations are not necessarily pursued.

**Shushok:** Can you tell us a new project, idea, or partnership that is occupying your thinking these days?

**Crow:** We have gotten 10 other major research and emerging research universities to join our university innovation alliance, uia.org—that’s 11 schools, Purdue, Michigan State, Ohio State, Iowa State, Oregon State, Central Florida, Georgia State, Texas, Kansas, UC—Riverside, and Arizona State. These schools have all come together and said they will do four things: produce more graduates, produce more graduates from low-income families, lower their cost to a degree, and innovate together. That’s a big project that we are working on, and that’s probably worth some of your readers considering.

**Shushok:** And what are the keys to lowering costs?

**Crow:** The key to lowering cost is the introduction of technology and new methods that help student success.

**Shushok:** Does Arizona State’s partnership with Starbucks play into this line of thinking?

**Crow:** The Starbucks partnership is something that we can undertake with a very thoughtful, what we call a Conscious Capitalism, corporation. Starbucks is very interested in their human capital and advancing this human capital, and we can make that work because of the innovations we’ve done already. We, by the way, have no intention of taking on additional corporations who are trying to do the same thing. We hope that other universities will, on their own, find consciously operating capitalist organizations, and find ways to advance college success within those organizations.

We are attempting to demonstrate that, one, you can complete college with no additional cost and no additional debt, and two, we can help all people—tens of millions of young adults and adults who have gone to college and never finished. This is a huge area of low-hanging fruit to enhance educational outcomes for our society. Starbucks would like to help its employees and help its corporate outcomes. We’d like to help their employees; we’d like to prove that these innovation models can work. Our Starbucks project is an outgrowth of our technological innovations, empowering our ability to be of further national assistance.

**Shushok:** I know we’re out of time, but I’m grateful we’ve covered so many topics. This has been a very provocative and helpful conversation, and I want to thank you for taking us to the borders of new possibilities. I can assure you that About Campus readers will take your challenges seriously.