

UNDERSTANDING HIGHER EDUCATION FINANCE

INTERVIEW WITH LARRY ROBINSON
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As part of a project on higher education finance supported by the Bill and Melinda Gates Foundation, Nate Johnson interviewed a number of experts and leaders to gather different perspectives on how major budget choices are made. The interviews have been condensed for publication so that the key insights are available to anyone who is interested.

This interview with Larry Robinson, who has had several stints as the interim president of Florida A&M University, covers the differences between doing research at private facilities versus universities, external funding for research, and how research connects to the instructional mission of a university.

If there's a federal agency that wants to accomplish some kind of R&D task, what are the advantages between going to a private contractor versus going to universities and asking them for help in solving the research problem?

I don't know if it's an advantage, but there are differences. Some of the same types of things apply. That is, if you have deemed a certain type of competency a core competency, then in general you want to have those types of people around to do that, and that's one of the things that [Oak Ridge National Laboratory] did, it identified a set of core competencies. We're going to be world leaders because this is important to the public entity, and we know that they're going to find these things. You build a strong core of individuals who have those capabilities. And you would never limit the fact that you can have special relationships with universities, because a lot of the facilities, many people don't realize this, are operated in the context of what's called user facilities.

User facilities are encouraged to partnership with the private sector, or partnership with the academic sector, et cetera. They're sort of built in, in terms of the expectations. It's out of tradition, but there's nothing that says that I, as a faculty member, should partner with anybody in the private sector, or should partner with anybody in the federal sector. I know how, if I want to survive as a research faculty member, you have to do these things. Now, in terms of the flexibility here is, I guess, on the private side the concept of tenure is not present. You do go through a process where you have to demonstrate your worthiness, but it's not legally binding in any way that if your performance falters that your presence wouldn't be challenged, and couldn't be dealt with in much simpler terms than it would be for a tenured faculty member.

That's some of the differences. Some people consider that, if you're the management side you might consider that an advantage, but if you're the actual person you might consider that a disadvantage.

I'm a strong advocate of, proponent of, tenure in the academic setting, because I think it allows universities to look beyond what might even be politically motivated fluctuations in federal funding, et cetera, because

that does happen. Sometimes, we, in the federal sector, as well-intended as we are, we don't always get it right. You might prematurely stop some type of research that is vitally important to the nation. You have some immunity to that, in a sense, in an academic setting, other than the fact that if that program at NSF goes away, or DOE, that program goes away, now you're going to struggle a bit more in the academic setting as to how you get funding to continue that type of work.

In many cases, what I've seen is that it may go away in one sense, but it comes back around. On the other hand, universities have to be very, very careful about what type of expertise that they are trying to build because I think, as we were developing the strategic plan or the report, you need to be just as powerful about those critical areas that the university needs to pursue, based upon its mission. You need to say, "These are critical areas of research because of the nature of the constituents we serve, that Florida A&M University, or the University of Kentucky, whatever, needs to be a player in." Build that around it, and if you do it, if it's core to your mission, then you find a way to support it even though there's fluctuation in external funding.

Is there a lot of worthwhile, potentially groundbreaking research in the physical sciences, chemistry, physics, or maybe biology as well, that could be done without substantial external funding?

The days of Isaac Newton, where you're independently wealthy, you've got time to sit under an apple tree, waiting for a good idea to come around, are pretty much gone. They've been gone, because the complexity of the types of tools that you need to do this high level, high impactful research, aren't generally available in your garage. Without some added capacity, I just don't think you're going to be able to get there. The level of sophistication you can get on a routine laptop that you buy at Walmart is phenomenal compared to what it was just thirty years ago when I started my career.

On the other hand, when you look at biology and the human genome and the types of tools you need to be successful with where that research is going, you can't go down to the local drug store and purchase. I just think that it's very, very important to realize that you're going to have to work successfully, you're going to have to have a high level of expertise, but also be able to work within teams, and more likely interdisciplinary teams, to really put together an impactful research program these days.

What is the case for the funders, for the federal government or for that model being a good way to do science, and the return on investment in terms of the scientific funding— having a dedicated facility where everybody works full-time on nuclear physics at a facility versus having a model where people interact with a resource like that or get together as a team to focus on a problem in biology or physics?

I think you have to have both. I think that my simple analysis is that I think the ideas on how to utilize these huge resource facilities, like the MagLab, and like the accelerator that we have in Oak Ridge, those ideas can come, and often do come, from people having no direct affiliation, but they have a principle or experiment that they can't get done where they are with the resources that they have. So although they may be the only one, it's still vital to that whole field of virology, if that's the case, or nuclear physics. In my opinion, I just don't believe the federal government, the U.S. Congress, unless they were designing these facilities like they once did solely for weapons production, that there's not enough interest, rationale, motivation to fund them just on a mission-related-only purpose.

In this model, in terms of using facilities, if you go to Europe, it's actually international in terms of the countries in the European Union who have access to certain facilities, and that's a joint-funding approach for those because it's beyond the capacity of any particular country, some of those facilities. I think it's a good model. I do believe, however, that what you have to be careful about is that you don't inadvertently exclude people with good ideas from having access to those facilities based upon the type of institution that they're in. Because that's where I believe you lose ground. The other thing, too, though, as opposed to many universities having just that one nuclear physicist, or one virologist, or whatever the case might be, they are looking, as you know, in terms of cluster hires these days where they're hiring groups of people. So you have an automatic, built-in community, and you don't have to go searching for the watercooler

effect. It's all right there. Instead of having one or two, you've hired three or four, so you've built this tremendous capacity.

In terms of kind of the breadth of your mission, from remedial education to Ph.D. physics programs, that's represented among different institutions. It's split between community colleges, research universities, private universities. I'm interested in the single institution that's doing all those things: How does external research funding fit?

I think the first fit has to do with the institutional mission. There's certain types of research, and certain constituents that are essential, I believe, to FAMU's mission. Either FAMU could inject itself into that research, or FAMU and HVCUs can just wait and hope somebody else does it. I'm not for the latter. I think it's important for FAMU to be aggressive and say that if prostate cancer is disproportionately affecting African American men, then FAMU ought to be a leader in prostate cancer. If environmental issues are disproportionately affecting communities where African Americans and persons of color in low economic means reside, then FAMU needs to be a player there. Not just in preparing students to go somewhere else to learn, but in areas that are specific to the very types of problem that FAMU wants to solve on behalf of those communities.

At the same time, I also believe that research and scholarly activities in general lift all boats. I think that it gives those students, who might not be as inspired academically before they got here, an opportunity to see all this wonderful learning and application of knowledge taking place, and it might inspire them to do even better than they thought they would do prior to getting here. There are data that shows that that happens, and there are all kinds of reports that attest to this.

Our students get a chance to benefit from the research experiences on and off campus, and that has proven out over time. FAMU has been blessed to have a well-organized array of Ph.D. programs. That's educational leadership.

Is it really true that all the sponsored research funds, the money that comes in from the federal government, doesn't have anything to do with the instructional mission of the university? I know on the books it looks like it doesn't, but you can certainly see with indirect costs how it would flow over, so it increases the indirect cost goes into your administrative budget, it enables you to do things that you probably couldn't do with just state funds and tuition dollars alone, it creates opportunities for undergraduates or allows you to have a better faculty than you would otherwise have.

I do think there are a lot of good faculty who engage 100% in teaching, and they do that extremely well. There is another group of faculty whose teaching and instructional side is enhanced by the opportunity that they have, and their students have, to be engaged in research, because students now get to translate what their learning in the classroom into some things in the real world. I also think it keeps that faculty member on the cutting edge of what's happening. Once you get through the foundation, let's say, of chemistry of environmental science, and you're trying to get students ready for the next level of post bachelor experience, whether it's the world of work or post bachelor graduate experiences, those students who have had a benefit of some research related scholarly experience are going to be much more competitive than students who haven't.

Are there other ways the department or college encourages a certain kind of entrepreneurial approach to applying for and getting grants?

The two major ones when it comes to the grant side of the house, you can actually include in the grant release time, academic year release time and summer salaries. Faculty members prefer nine months, faculty prefer the summer salary route because they would actually supplement their salaries, but it's a legitimate way because typically when they're not teaching during the summer they can focus more on their research, not that they're aren't doing it throughout the academic year. Those are the two primary mechanisms.

if you are a bona fide research institution, you're going to have to find a way to reduce the faculty contact hours such that our faculty can compete in terms of the amount of time that they have to do research, supervise students, and what their budgets look like when they are being compared to other institutions that we're competing with.

if you could wave a magic wand, and you could get five million dollars in additional revenue, and you could choose the funding source—it could be state appropriations, or tuition revenue, or sponsored research for the grant of your choosing, or it could be philanthropic, it could be a major gift—which one would you pick?

If I had enough revenue being generated from some licensed product the university had, in order to get to that, that means so many things would have had to go right, you see? So I would take that.

Is there a risk in the centrality of research or the prestige associated with research that faculty don't get the same career rewards from teaching that they do from research?

If you look at most of the publications, you go to most of the websites or the colleges and schools that are in the stem area, who do they acknowledge? They acknowledge people who have gotten a large grant, who've just published in the journal of all high and mighty, who just got back from the symposium of all this and all of that. There's much greater emphasis on research than on teaching, and I do think, particularly at a university like FAMU, it creates a mindset that people are not appreciated, necessarily, for the teaching that they do. We've spent most of this time, for example, talking about innovative ways of encouraging through compensation and other mechanisms, people that do research. We don't spend as much time talking about that on the teaching excellence side, and there needs to be more of that because here, where the spectrum of our students, in terms of the level of engagement that faculty have to provide to get them performing beyond their own expectations, is different than other places.

Larry Robinson previously served as Assistant Secretary of Commerce for Conservation and Management at NOAA and as Director of the NOAA Environment Cooperative Science Center.