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# Tom Ross: The real value of higher education

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America is losing her way with regard to higher education. We seem to have forgotten the real value of higher education – both to our economy and to our society. We have become too focused on metrics, return on investment and job preparation. I am not suggesting these are unimportant. Rather, I would remind us that higher education offers many other – and I contend greater – benefits to our nation and its citizens and communities.

Universities have long been known and respected as places of ideas and debate, of big discoveries and bigger dreams. It is within our universities that we have tackled some of our most perplexing problems and found solutions to them. It is on our campuses that generations of students have learned how to think for themselves and how to work collaboratively with others. Our universities have been places where ideas and dreams are converted to life-changing discoveries, and where our leaders of tomorrow are developed. Since the dawn of our nation, our universities have been at the center of our civil society and our search for excellence.

We increasingly view our colleges and universities as nothing more than factories that must demonstrate an immediate return on investment for consumers. Places that only train people for the workforce. We hear constant calls to drive out costs and produce more product at less cost. There is far less talk about academic quality and excellence and more about operational efficiency. We seem to measure the value of education to our students only in immediate post-graduation earnings. Again, I am all for accountability and efficiency, but if that is our sole focus, we may fail to provide the

return on investment that is perhaps most valuable for our students – the ability to think, reason and communicate more effectively.

Just last month, New York Times columnist Frank Bruni wrote persuasively about the value of higher education. In that piece, he said, “It’s impossible to put a dollar value on a nimble, adaptable intellect, which isn’t the fruit of any specific course of study and may be the best tool for an economy and a job market that change unpredictably.” I believe Bruni is right, and we would do well to heed his words.

In some significant measure, our nation has been great because our higher education system has been the best in the world. Our colleges and universities have been the foundation of our democratic society. We have produced talent that remained productive over a lifetime – not because of particular skills taught, not because of preparation for a specific job, but instead because our students acquired the ability to analyze, work with others, understand our world, communicate effectively and appreciate the value of learning throughout one’s life. It is this creative, innovative, adaptable talent that has been our competitive advantage against the world.

Today, however, America’s societal commitment to investing in higher education appears to have eroded. We now spend about 2 percent more on higher education in real dollars than we spent 25 years ago, even though enrollment in our universities and colleges has grown by over 60 percent during that period. We spend about 30 percent less per student today than we did 25 years ago. As a nation, we are disinvesting in higher education, and we are beginning to pay the price.

Other nations are making sizable investments to build new academic facilities, hire new faculty and raise the educational attainment of their citizens. Meanwhile, the rankings of our own institutions are falling, and our premier status as the place to be educated is fading. Growing numbers of American students can’t afford to attend college at all, and too many of those who do are burdened by significant debt. This is a dangerous trend. And it is reflective of the serious challenges facing the higher education community today.

In highlighting a few of the most pressing challenges, I will use our own public university system as an example. So for context, let me offer some brief background about UNC's structure and scope.

We enroll more than 220,000 students from every county in North Carolina, virtually every state in the Union, and numerous foreign countries.

We employ more people – approximately 60,000 – than any private enterprise in NC, just edging out WalMart.

We have 16 campuses that offer undergraduate, graduate and professional programs; two medical schools, two law schools, two dental schools, a vet school; five engineering schools, 11 nursing schools and 12 MBA programs; also, two high schools – School of Science and Mathematics; School of the Arts High School, along with UNC Health Care System, UNC-TV and the North Carolina Arboretum.

Our campuses attract more than \$1.2 billion in research grants annually– which in turn generate related jobs, discoveries, inventions, and spin-out companies.

Our total budget is just over \$9 billion – about \$2.3 billion from the state – making us the 11th largest industry in NC.

And according to a recently released statewide analysis, the UNC system creates \$27.9 billion of added economic value for the economy of North Carolina. That represents 6.4 percent of the State's annual GDP – and has the equivalent impact of creating 426,000 new jobs.

And we are operating in an environment of shrinking resources, disruptive technologies and shifting political ideologies. Not a week goes by that I don't read another round of reports from multiple sources and perspectives predicting major upheavals, overdue market corrections or the imminent demise of American higher education as we know it.

Which brings me to one of the most glaring challenges facing our colleges and universities: How do we finance public higher education in America going forward? The sharp reduction in state investment has triggered significant tuition increases across the

country. In effect, we have shifted more of the financial burden from the states to students and their families. I do want to acknowledge that North Carolina has shown stronger support of its public universities than most other states, and in-state tuition rates for our campuses are all in the lowest quartile among their public peers. In many instances they are the lowest or next to the lowest. And as a result, our students generally graduate with less debt than students in most other states.

In half of the states today, students at public universities pay more toward the cost of their education than the state does. In the year 2000, that was true in just three states. I am convinced we are moving in the wrong direction. Why? Because we know that America must educate more people if we are going to compete successfully in the global economy.

Now there are certainly those – including many in North Carolina – who would disagree and who sincerely believe we already send too many kids to college. But like it or not, we live in a world where talent is a precious commodity, and talent will provide the competitive edge of the future. That's why, with input from a blue-ribbon committee of business, government and education leaders, the UNC system has set a goal for North Carolina to have 32 percent of our people with at least a bachelor's degree by 2018 and to become a top-10 educated state by 2025. We are currently at about 28 percent and have a long way to go.

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**Yet since becoming UNC president, I have managed one budget cut after another,** including the largest in UNC's long history – more than \$400 million in 2011 alone. Under the governor's budget proposal, we would face more cuts this year. With limited exceptions, our faculty and staff have had only two small salary increases, averaging about 1.5 percent, during the last six years. Without great faculty, you cannot be a great university. And as we lose some of our best faculty to private industry and other institutions, they often take federal research dollars with them, which has collateral consequences in lost jobs, fewer discoveries and fewer spin-out companies. This is a dangerous trend for North Carolina.

As a state and as a nation, we must ensure that college remains affordable and accessible to everyone who has the ability and desire to pursue it. If we put the cost of public higher education out of reach and fail to invest in our faculty and staff, we will be unable to develop the talent our businesses will need in the years ahead. Just last month, Bloomberg reported that unemployment among college graduates had dropped to 2.8 percent and warned that America was at risk of not producing enough college graduates to meet its workforce needs.

We know that one's chances of being unemployed are heavily influenced by level of educational attainment. University graduates, who are more likely to be employed, shop more, buy more and pay more taxes.

Of course, there are other advantages to having a well-educated citizenry. College graduates on average enjoy a better quality of life, experience less obesity and other health issues, commit fewer crimes, vote more often and are able to give back more frequently to their communities.

Keeping college affordable and accessible will require renewed and sustained state investment in our public systems of higher education. It will also require ongoing efforts from within, and that brings me to a second major challenge. How can our institutions of higher education operate more efficiently without sacrificing the quality of education we offer?

Within UNC, we are constantly evaluating new ways to become more efficient: more shared services (residency determination; financial aid, audits); energy conservation efforts; academic and operational streamlining; collective e-purchasing; and IT efficiencies. We have eliminated hundreds of positions. As compared to five years ago, we are producing 18 percent more graduates, while spending 15 percent less per degree, when accounting for inflation. Very few businesses can boast that kind of increase in production along with that level of costs reduction. We can always become more efficient, of course, but at what point will efficiency begin to erode the excellence of the educational opportunities we offer?

Another challenge facing higher education is how we will manage and leverage the use of technology in teaching and learning. Will online education replace the traditional classroom? Will physical campuses be obsolete in 10 years or even sooner? If not, what is the proper role of online instruction? What about MOOCs (Massive Open Online Courses)? How should we use technology to both assess learning and then improve it? How must we change the way we teach to reach effectively students who have spent their entire lives in a digital world? You get the idea. I could devote an afternoon to this one topic, but allow me to share just a few quick thoughts.

First, I do not believe technology will replace learning in classrooms. Human beings still learn best from each other. Technology will, however, change the ways we teach. We will see many more “flipped classrooms” and the use of what is now called blended learning.

Online learning will continue to grow as a delivery method because it allows us to reach more students, but in most cases, it won’t be the only delivery method.

MOOCs are already fading from the scene. They may re-emerge, but not in the near future.

Another major challenge deals with research – a critical part of the university’s mission. How do we continue to finance what has become the nation’s primary research engine, while protecting the role of research in teaching and learning? Historically, industry in America conducted its own R&D in its own facilities. About a quarter century ago, however, a transition began. Industry realized it could shift some of its R&D capacity – and the associated costs – to the nation’s universities. Roughly 75 percent of research in America now takes place on university campuses. This captures both basic research and applied research.

North Carolina is no different. Our public and private universities bring more than \$2 billion in research grants and contracts to our state every year. About \$1.2 billion of that research is conducted by UNC campuses. We have hundreds of partnerships between the university and companies focused on R&D. N.C. State University alone has more than 700 corporate partners.

These grants and contracts support more than 22,000 jobs in counties all across North Carolina. In addition, over the past decade, they have generated more than 135 spin-off companies, including SAS, Cree and Quintiles, to name but a few. Let me offer several brief examples of UNC research that is making a difference.

Have you noticed that you rarely buy a mealy apple nowadays? “SmartFresh” technology, developed by a member of the faculty at NC State, is now used around the world to help control fruit and vegetable ripening. It is used on about 50 percent of all apples harvested in the U.S. So, when you buy an apple today, it tastes like you just picked it. This is thanks to “SmartFresh” and university-sponsored research.

In a couple of years, people with peanut allergies may be able to safely eat peanuts again. Faculty members from NC A&T State have patented a way to process peanuts that will remove 98 percent of allergens, and those products could be on your grocery shelf soon.

While you can’t even see the technology that comes out of the UNC-Chapel Hill spinout Liquidia, it could change – or even save – your life. Liquidia has created a process to design the size and shape of drug therapies at the “nano” level (that’s 100,000th the width of a human hair), to make sure they deliver treatment only to the exact body part that is ailing.

But as important as research may be to business, it is even more important as a teaching tool. I have been asked repeatedly by some policymakers why our faculty conduct research. Why are they not in the classroom teaching? Who reads all those research papers and books anyway? We must help people understand that today research is an integral part of teaching at both the undergraduate and graduate levels. At its core, research is another form of hands-on learning.

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**Another challenge is doing our part to prepare a sufficient supply of the best teachers possible** for our K-12 systems. Strengthening academic quality is a core goal of the UNC system’s five-year Strategic Plan – and one of the key strategies we identified for achieving that critical goal is preparing more, higher-quality teachers and

school leaders for North Carolina's public schools. UNC has already launched an innovative, research-based approach that allows us to assess the quality of our teachers and principals and the programs that prepare them.

But we have a looming crisis here in North Carolina and in other states as well. Last year, enrollment in UNC schools of education fell by 12 percent over the previous year. It has plummeted by a staggering 27 percent over the past five years. At the same time, we are losing our veteran teachers at an alarming rate. This is a recipe for disaster. If we are going to address this pending teacher-shortage crisis, we must change the narrative about what it means to enter the teaching profession. We must find effective ways to attract the best and the brightest into teaching and retain them once we invest in training them.

Other countries have found ways to do this successfully. We must, as well. It will take a multi-faceted approach that includes incentives to enter teacher-preparation programs; adequate compensation once one enters the classroom; support and professional development opportunities for new teachers; and strong systems of evaluation designed to help teachers improve. There is much work to be done in this arena if we are to have the teachers we need to develop the talent for tomorrow.

Finally, states across the nation are wrestling with the challenge of Veterans' Education Benefits. The UNC system wants to enroll, educate and graduate as many academically prepared service members, veterans and their dependents as possible. Our motivation is simple: National defense is now one of North Carolina's largest industries, veterans make great employees and the success of student veterans and their families attending UNC institutions is vital to the long-term success of the university and our state. We have made great strides in this area, but there is still much work to be done.

A number of states have enacted policies in recent years intended to promote college access and success for members of the U.S. Armed Forces. Last fall, Congress passed a measure that will compel all states to ensure that their public colleges and universities can provide resident tuition rates to qualifying veterans and their dependents or risk losing federal funding for vets. We're working with the General Assembly to pursue legislation that will bring us into full compliance with this federal mandate.



And I haven't mentioned issues like intercollegiate athletics, replenishing our aging faculty, the declining length of service by university presidents and the resulting loss of momentum and disruption transitions can cause, and on and on.

As a state and as a nation, we must decide whether our society still values higher education – particularly public higher education. There is an ongoing debate – sometimes beneath the surface and sometimes more overt – about whether higher education conveys a public good or a purely private benefit. The value of higher education is not fully measured by one's job title or earnings level. Higher education has value beyond the individuals who participate in it that extends to the public at large.

We must reverse the 25-year trend in this country and begin investing again in our public universities, in their faculties and students, in teaching and learning, and in research and discovery. We must again invest in America's dreams and America's future by investing in our students' dreams and futures. It is in our own selfish, self-interest to do so.

It is time we ask ourselves and engage our elected leaders in answering the questions: What kind of nation and state do we want America and North Carolina to be? What are our aspirations for our people, our children, and our communities? And how do we make those dreams and aspirations our reality?

If we increase educational attainment in North Carolina, we will have fewer people in poverty, there will be less demand for social services, fewer people will end up in our correctional system, more people will have better health outcomes, and we will have stronger communities with more civically engaged residents. Education is indeed the great equalizer. It is the pathway to opportunity.

We must be aggressive in our efforts to educate policymakers about the importance of education to the fabric of our society. It is our exceptional system of higher education, both public and private, that has enabled our nation to develop the No. 1 economy in the world. It is higher education that will prepare the creative and innovative leaders of business and communities. It is higher education that will produce the talent we will

need to win the economic competition we face globally. It is higher education that will preserve and protect our democracy.

The stakes are high for North Carolina and for our nation. I certainly hope that you will partner with the university and with me during the remaining time of my watch to share this important message.

*Thomas W. Ross is the president of the UNC system.*