**The Future of Higher Education**

Forty-five years is a long career. When you retire, you cannot help but reflect on your career.

In thinking about my life in academia, I keep coming back to one thought: Academia changed very little in the forty-five years that I have been a professor.

Universities have changed in some ways.

These changes have been important, but they have not altered the basic academic paradigm.

Three things have brought about change and they are important for the future.

1. The first is technology. Computers and all the dynamic software designed for them have changed the way we do research, how we teach, and how universities are administered.
2. The second change resulted from the huge increase in the percentage of high school graduates who seek a college degree.

When Alexander Graham Bell, Ronald Reagan and I graduated from high school in 1957, my guess is that no more that 15% of my classmates gave any thought to obtaining a college degree.

Of course, I grew up in Texas and there was a suspicion of people who read books, and, of course, some of that suspicion continues.

Last year the Texas Republican Party came out against schools teaching critical-thinking on the grounds that it might “challenge student’s fixed beliefs and undermine parental authority.”

You cannot make this stuff up.

Still, times have changed. Now the vast majority of high school graduates see the need for a college education, or at least a piece of paper saying they graduated from a college or university.

One result has been the steady growth in the size of almost all colleges and universities.

Most, in fact, including UH have grown enormously over the last thirty to forty years.

One consequence has been the growth of students in universities who need a lot of guidance and help in negotiating their way to a degree.

Many students at UH are poorly qualified both in terms of skills and motivation, but we are criticized (often severely) if we cannot figure out some way to help them obtain a degree in a timely fashion.

If they fail, in other words, we are to blame.

1. The third change resulted from the second change. As college enrollments have grown, they have strained state finances.

Public universities in almost all the states have been transformed from state-supported to state-assisted.

A friend in university administration recently told me that the next stages in this transition will be from being state-assisted to being state located to being state obstructed.

The transformation from state-supported to state-assisted has produced serious financial strains for universities resulting in significant increases in tuitions and fees.

The heavily-indebted student is now common, but a rather recent phenomenon.

I earned three university degrees and did not owe a nickel when I finished my Ph.D.

I didn’t know anyone who borrowed a lot of money to obtain an education.

So now what we have is the highly indebted student and the impoverished public university.

Look at public institutions across America today and you see serious financial problems across the board.

Many major state universities now receive less than 20% of their budgets from the state.

I was recently at the University of Virginia where an administrator told me that the state provides “about 3% of their budget and causes 99% of their problems.”

Look at any of the many lists of the top 100 universities in America and you quickly notice that it is dominated by private institutions. I recently looked at several of these lists and state universities were less than a dozen of the top 100, and generally not among the top twenty.

In many ways, despite many challenges, UH has prospered over time, recently because of quality leadership, entrepreneurship and alumni and community support.

Despite our progress, there are reasons for concern.

At UH tenure-track professors are going the way of the dinosaurs.

In examining university records I find about 900 tenure-track professor positions at UH. That has been the rough number for many years. Yet, enrollments continue to grow. If we have 40,000 students on the campus today, it means that at best the student faculty ratio is about 45 to 1.

Most private universities have a ratio that is a third of that number.

Of course the situation is actually worse since many faculty slots are open (118), some faculty are on leave, and others buy out their teaching time with grants.

During their first two years at UH, students are much more likely to be taught by graduate students and adjuncts than professors and a large percentage of junior and senior classes are taught by adjuncts.

I do not doubt the ability of graduate students and adjuncts to be excellent teachers, but they are worked hard and paid little (basically an exploitation model) while the research mission in many departments atrophies and shifts toward faculty doing major funded projects.

All this brings me to one conclusion: The financial challenges we are struggling with are beginning to alter the basic academic paradigm.

While academia changed little in my days, it will change a great deal during the tenure of my young colleagues.

And these changes are likely to be of epic proportions.

When education was cheap for consumers and the state, it was questioned very little.

When it is expensive for everyone involved, everything will be, and is, being questioned and challenged.

There are demands for more on-line courses, more hybrid courses, a more streamlined curriculum, fewer tenured professors, modifications in tenure—and Bill Gates’ challenge that universities create the $10,000 four year degree.

The degree Gates is promoting is strictly on-line; students might never set foot on a campus.

The on-line approach raises a lot of questions?

How much of what a university environment delivers to students is lost in this type of degree?

Is this basically a bare-bones technology degree?

Is this a degree that by necessity is based primarily on memorization rather than innovative, creative thinking, and team work?

What kind of work are people with this type of degree really being trained to do?

Do on-line courses work for any but the brightest and most organized students?

Are on-line courses actually cheap?

These are worrisome questions, but let’s be fair.

The challenges to higher education are often troubling, but some of the questions being raised are legitimate—at least in the sense that they deserve serious consideration:

1) We are facing the charge that the basic core required of all students is both bloated and misdirected?

2) The argument is being made that there are essential technology skills that any college graduate, regardless of major, should possess, but many students graduate with none or few of these skills.

We all know that many students (both undergraduates and graduates) select their major simply because it does not require much in the way of technology, math or empirical skills.

Are we harming students by providing those options?

3) Are we, as an ex-state senator recently charged, graduating students with degrees that have no practical application?

Do we have degrees, as this senator claimed, that do nothing more than improve students’ skills as conversationalist?

This leads to the central challenge: Can universities, and should universities, streamline the core, and design quality, creative, competitive degrees that can be completed in three years rather than four?

I have read articles recently about medical schools that have streamlined their curriculum to three years rather than four and law schools that allow students to take the bar at the end of their second year.

And now there are major experiments with courses and perhaps degrees based on on-line sharing of faculty.

Some scholars are speculating that in the future almost all university classes will be on-line, open to students across the planet, and that students will be able to craft a degree from the best classes offered around the globe.

That is interesting, and it makes some sense.

But, if this happens, the impact on universities will be major.

Given the scope of the changes heading our way, Universities better decide if they want to lead or be lead.

If a university does not have a committee of bright faculty thinking about the challenges higher education faces, I am afraid that it is a serious mistake.

The educational paradigm is going to be rethought.

I am optimistic in thinking that the changes do not have to be negative.

Intelligently designed, they may greatly improve the educational experience for both students and faculty.

But universities and faculty are in for interesting times.

The university of the future will be very different than the university of today, and I think the quality of universities in the future depends on who designs them.

I hope my friends that you are the ones that design that university.

Thank you.