



Megatrends *and* Myths:

By William A. Daigneau

Higher education is going through a period of unprecedented change. And what do those changes portend for the future? For those of us involved in the planning and management of facilities for higher education, this question is particularly germane. Few of the professions involved in the conduct of higher education have as much impact on its future as a facilities management officer. The choices a facilities professional makes today often affects a higher education institution for years, and decades, to come. And that in turn affects the capacity of higher education to successfully fulfill its mission of education and research.

Any decision to create space needed to support educational or research processes can and should be viewed as an investment decision. When we create space, are we not investing current and future resources into a facilities asset with the expectation that this investment will result in future benefits? If

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so then any investment should be evaluated by its future returns, measured by the length of time the asset is productive and the benefits it generates. If we extend this logic to every campus facility we own, we could theoretically rank each investment decision in terms of its return on investment (ROI). In a purely economic sense, greater success for a university means that it is maximizing its returns per dollar invested. In equation form, a successful university would do the following:

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In the 1950s through the 1970s, higher education in the United States faced a period of unprecedented change as it tried to grapple with a rapid increase in the number of eligible students. Many of the buildings constructed during this period are now considered obsolete or inadequate for meeting today's educational needs. The question is what could, or should have facilities professionals done differently back then to improve universities' returns on their investment?

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Facilities Management Practices in Higher Education

$$\text{Maximum ROI} = \text{Increased Returns} / \text{Fixed \$ Invested}$$
$$\text{Maximum ROI} = \text{Fixed Returns} / \text{Reduced \$ Invested}$$

“megatrends,” using the term first coined by John Naisbitt in his 1982 bestseller.

The megatrends that drive the future are important for us to understand since they fundamentally influence the returns side of the ROI model. If in fact the space in a university is configured at any point in time to support the functions and processes employed by that institution, then one can say that the usefulness of that space will be altered if the functions and processes for which it was originally designed are changed.

If the space can no longer support the new function, the return from that space drops to zero, and either reinvestment to alter the space is required, the space is abandoned, or a different function is assigned to the space if it can be successfully accommodated. Only through one of these three choices can ROI be maintained or increased, otherwise a negative ROI will occur.

So the question must be asked: what megatrends will influence the functions and processes of higher education in the future?

Megatrends can be grouped into one of five categories. The forces that define the future are related to changes in Society, Economics, Technology, Government, and the Environment. While the following summary of these megatrends is primarily focused on higher education in the United States, what evolves here is likely to be extrapolated to other countries and their higher education systems.

Megatrend #1: Changing Student Demographics

For many decades, higher education served a fairly homogeneous student population, all sharing many common characteristics. But that has and continues to dramatically change. Diversity amongst those seeking postsecondary education has significantly changed from the previous student pool. The changing mix of students includes gender, nationality, race, economic class, age, employment, family, and more. In response we have seen greater customization of educational systems necessary to address the larger variance in educational needs and goals. As educational processes and functions evolve, how will older space support these changes and what will be future facility requirements, both in terms of type and location?

Megatrend #2: Access and Efficiency

Since 1980, the growth of tuition has outpaced inflation by 179 percent. This at the same time we have actually seen deflation in the cost of many other essentials. It is certain that such increases cannot be sustained without eventually closing the door to large groups of potential students. The bottom line is that if economic and societal development is to be maintained in the United States and across the world, a well-educated workforce is required, and demand will continue to grow. Given a choice between putting higher education out of the financial reach of large portions of the population and finding more efficient ways to deliver higher education, the latter is likely to prevail. The pressure to control these costs

will undoubtedly drive changes in educational processes and thus the design and demand for different types of facilities.

Megatrend #3: Technology

Technology and higher education systems have two dimensions. The first is information technology (IT). It has been postulated that IT has made possible the shift from the traditional “instructional” paradigm to a “learning” paradigm, where face-to-face time with a faculty member will be devoted to laboratory or demonstration style sessions and not on lecture type instruction. This educational process and others like it would not only make classrooms and lecture halls obsolete, but also could significantly improve efficiency and reduce the cost of instruction.

The other dimension of technology is cost, primarily as it pertains to the research mission of higher education. Today’s research facilities are some of the most costly to build, equip and operate. As the cost of supporting research increases, more and more research may be concentrated at fewer and fewer institutions, those that possess the critical mass to continue to support this investment. Again such concentration will reshape the missions of higher education institutions and thus affect both existing and future space requirements.

Megatrend #4: Accountability

With a stable society and economic development at stake, government has increasingly inserted itself into the debate about higher education. Will greater activism by government in the management of higher education lead to more mandates on the what, where, and how? If government more tightly controls resource allocation and programs decisions, both in education and research, will there also be greater controls of building construction?

Megatrend #5: Green and Lean

Reduce, reuse, recycle. Never has concern over environmental protection been greater than it is now. Issues about the environment include indoor air quality, day lighting, and energy efficiency. As energy prices again begin to rise, there will be even greater pressure to revise buildings (reuse) or adopt new design standards (recycle), and even more importantly to actually improve utilization (reduce). What impact will environmental concerns have on future facility decisions?

While no one knows exactly what the future holds, the above-mentioned megatrends have the capacity to dramatically reshape higher education. How dramatic? Let’s just say that there is the potential for significant changes in a relatively short period of time. And if such changes do happen, there will be dramatic changes in how educational facilities are planned, designed, and managed.

Decisions on where and how much to invest in educational facilities are what is called “long fuse-big bang” decisions. In other words if a mistake is made in a major investment, it

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may not be apparent for years, but when it is, it can be disastrous. When making a decision today on what and how much space to build, how will the megatrends affect that decision, and how quickly? While no one knows the answer to that question, there are some current facilities management practices and beliefs that should be seriously reexamined. These are the current “myths” of higher education facilities management.

Myth #1: Build for the Long Haul

Many facilities managers believe they should construct buildings to last for 50, even 100 years. But space built to satisfy a specific need or technology today, may not provide the expected returns tomorrow if higher education goes through a major paradigm shift.

Myth #2: Build Flexibility into the Design

The question is “flexibility for what?” Hedging one’s bet on change by building those so-called flexible buildings means one knows enough about the future to plan for it in the design. Many such investments prove worthless.

Myth #3: Form Follows Function

Today almost every building constructed in higher education is a custom building. Unfortunately, as program needs

change and the building does not, form begins to “influence,” or worse, “dictate” function. During any period of change, all design standards based on past practice need to be openly challenged.

Myth #4: Deferred Maintenance is Bad

Some existing facilities are not likely to generate a future return on their initial investment. These buildings represent a sunk cost, and further investment in them should be curtailed. We need to understand that not all deferred maintenance is bad, only that which is unplanned.

Myth #5: Facilities Attract Students

In fact, facilities are not a primary motivator in a student’s decision to pursue higher education. APPA’s own recent research study, “The Impact of Facilities on Student Recruitment and Retention,” states that while the appearance of the campus facilities are important in a student’s selection process, the fact is that the top reason for their selection is the educational programs. Most students are motivated by factors other than how the campus looks. What’s its reputation (for quality), does it have the programs they want, can they afford it, what do others think (for example, parents or friends), and where is it located? Money spent beyond that necessary to support good education or research is just wasted. A university’s leadership does not need to make a world-renowned

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architectural statement for every building. A good clean, well-lighted classroom with comfortable chairs, good audiovisual, and comfortable temperatures and ventilation is fully satisfactory to meet educational needs. The fact that it has painted concrete block walls in lieu of rosewood paneling or marble floors makes little difference to students who are trying to learn. We should spend less money on fancy buildings and instead invest that money in good faculty possessing the best technology.

As the cost of higher education spirals upward, we need to get back to basics, and facilities professionals need to lead the

The megatrends that drive the future fundamentally influence the returns side of the ROI model.

way. Institutions should spend money on building the least expensive building they can, that is easily maintained and operates well and efficiently, and then spend the rest of the money to provide the best faculty they can with the latest equipment.

In discussing these megatrends and myths, it is not suggested that anything in higher education will, for certain, change in the next decade. It's a lot like predicting the weather. If you say that tomorrow's weather will be just the same as today, you will be correct 50 percent of the time. The problem is that you also will be wrong 50 percent of the time. Let's just say that like the weather, forces for change are prevalent that could mean either rough seas or smooth sailing. And like good captains of a ship, facilities professionals should hope for the smooth seas, but prepare their institutions for rough weather.

The people who plan, design, and manage education's facilities are in a critical position to prepare for change and ensure success, and there are a few things that will help them fulfill that responsibility. First, senior facilities officers must understand the impact of their decisions in terms of both today's and tomorrow's context. Second, they need to treat the various campus buildings as a portfolio of investments, and should maximize the value of the total portfolio, not the individual investments alone. Third, they must make a more proactive effort to develop facilities strategies that will better position their institutions to deal with changing paradigms and economic conditions.

And lastly, they must shed their own narrow view that they are just the stewards of facilities and must better understand the complete functioning of higher education: its economics, its processes, and its purpose. Only then will they be able to help higher education meet its worthy mission of enhancing the knowledge of humankind. 🏛️



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