A. Historical perspective of higher education.

Higher education is doing something right. In his book Academic Strategy: The Management Revolution in American Higher Education (Johns Hopkins University Press, 1983), George Keller attributes an interesting fact to University of California President Clark Kerr and his staff: “Taking as a starting point 1530 when the Lutheran Church was founded, some 66 institutions that existed then still exist today in the Western world in recognizable forms. These are the Catholic Church, the Lutheran church, the parliaments of Iceland and the Isle of Mann, and 62 universities. Universities in the past have been remarkable for their historic continuity and have come out less changed than almost any other segment of their societies.” (Bologna, 1088; Paris, 1150; Oxford, 1167; Cambridge, 1209.)

Major changes every fifty years beginning near 1900: 1900 - government support and access; 1950 - the research university; 2000 - the digital age.

Until the late 1800s, universities tended to be church-related with access to just a privileged few.

The Morrill Act (1862), Hatch Act (1887) and Smith-Lever Act (1914) with major federal and state support opened higher education to many more people.

Then around 1950 with the end of WWII and the Manhattan Project and the onset of the Sputnik era, the research university as we know it now was born. Large federal dollars were made available to faculty through new agencies such as NSF and ONR. Science took on new prominence as described by Vannevar Bush in his 1946 report to President Truman entitled Science, The Endless Frontier.

Also, the GI Bill made education more universally available to veterans (mostly men) who returned from WWII, vastly increasing the access and availability of education for all income categories.

By 2000, the digital era had begun transforming higher education through the Internet, Web, online classes, technology-supported classroom instruction, and many forms of social networking and digital communication. Online learning has become a factor, if not a norm at this point.

The issue of an open source environment is a challenge and opportunity for universities and their libraries.

What will happen in the next half-century to higher education structure and delivery of teaching, research, service, economic development, and community partnerships? Since change is happening very rapidly, we should ask what will happen in each decade, starting now with 2010: 2020, 2030, 2040, up to 2050?

It should be recognized that within the structure of the university, many individual faculty with respect to their research/scholarship/creativity in their disciplines are most nimble and remain at the cutting edge of change and progress.
B. Cost structures in higher education.

Early on, public higher education was funded primarily by state appropriations with tuition in many cases providing much less revenue (e.g., California where there was no tuition for many years).

In the latter quarter of the 20th century, state funding was reduced gradually in many states (or not increased) as costs increased. Tuition became a greater proportion of funding, and by now tuition and fee income exceeds that from state appropriations for many universities, including UM.

The current funding model of public and private research universities supports the costs of research not supported by grants (including overhead beyond the approved indirect cost percentage) and graduate education costs (beyond tuition paid by graduate students) from undergraduate tuition and fees.

Private universities are successfully lobbying for a greater share of public higher education funding, including state supported scholarships (e.g., access scholarships in Missouri that give greater amounts to students at private universities than public universities) and larger amounts of research grants. Mid-level private universities are struggling with higher costs of education through increased tuition and fees, but if their endowments for scholarships and other support are inadequate, they will struggle to maintain enrollments, leading them to lobby and push more strongly for increased state and federal support such as Pell grants and state scholarships.

For-profit universities are providing significant competition to traditional universities.

C. Trends and opportunities for change.

Year-round educational opportunities are being demanded and are desirable for many students. In order to consider year-round operations on a cost-effective basis using our current level TT/NTT faculty (with increases if/when demand and enrollment increases), several changes should be considered:

Changes to the retirement system rules for faculty to allow credit for any two of three semesters (fall, winter/spring, summer) to count as one 9-month year credit rather than only allowing fall and spring semesters now.

Changes to the general semester or quarter schedules to allow course delivery year-round in variable terms, such as 2-, 4-, 6- or 8-week terms (as we do in summer and inter-sessions); increased weekend scheduling or other non-traditional scheduling to better meet student and employer needs.

Increase online course delivery, considering hybrid models with some face-to-face contact.

Explore collaborative efforts with the non-academic sector, such as industry (ESI-UMSL partnership).
Increase cooperation and interfaces among universities within the greater region for higher efficiency in academic programs.

Offer more courses and whole programs at community colleges, on site at businesses and industries, or at other locations.

Increase actions to close the education and income gap in P-20 institutions through improved preparation (P-12) and access and affordability to higher education at the community college and university levels (undergraduate and graduate studies) and in the post-doctoral and employment sectors.

Respond to the changing demographics of students, where it is projected that after 2020 minority students will outnumber white students.

Seek opportunities with respect to international programs and students.

Consider changes in the structure of the university (this one has hot buttons).

Redefine faculty scholarship/creativity in an expanded fashion, such as tech transfer.

Restructure funding away from undergraduate tuition subsidizing research grants that don’t pay full cost and graduate education - how? Focus more on instruction within the department, with more research focus in institutes/centers? (It is recognized, of course, that some undergraduates participate in research, and there is a high value placed on faculty at the cutting edge of their disciplines teaching undergraduates.)

Tenure/non-tenure-track faculty mix.

Revise the overall structure of tenure.

Five sample articles:


