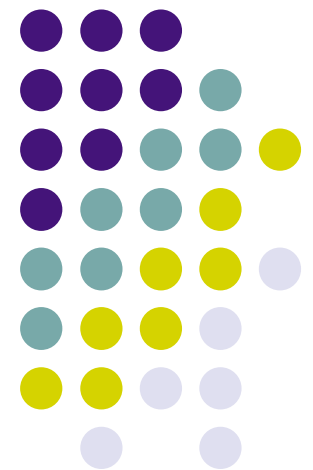


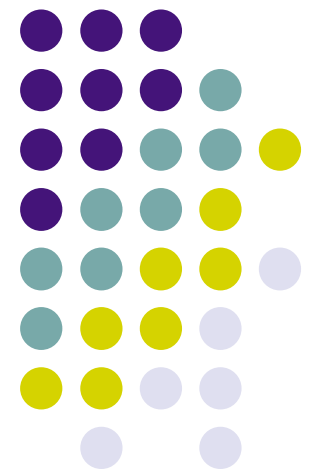
Higher Education in the 21st Century

Global Imperatives,
Regional Challenges,
National Responsibilities,
And Emerging Opportunities

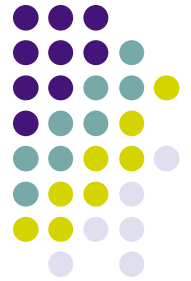




Global Imperatives

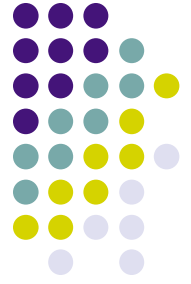


The Age of Knowledge



- A radically new system for creating wealth has evolved that depends upon the creation and application of new knowledge.
- In this "Age of Knowledge", the key strategic resource necessary for economic prosperity and national security has become knowledge itself—**educated people and their ideas**.

Globalization



- "We see globalization—the growing interconnectedness reflected in the expanded flows of information, technology, capital, goods, services, and people throughout the world—as an overarching mega-trend, a force so ubiquitous that it will substantially shape all the other major trends in the world of 2020."
 - National Intelligence Council Project 2020

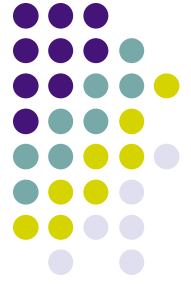


The World Is Flat

A BRIEF HISTORY OF
THE TWENTY-FIRST CENTURY

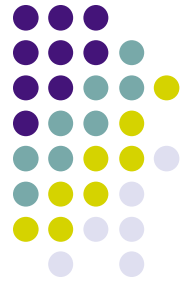
Thomas L. Friedman

Tom Friedman



“The playing field is being leveled. Some three billion people who were out of the game have walked and often ran onto a level playing field, from China, India, Russia, and Central Europe, nations with rich educational heritages. It is this convergence of new players, on a new playing field, developing new processes for horizontal collaboration, that I believe is the most important force shaping global economics and politics in the early 21st century.”

Aging Populations



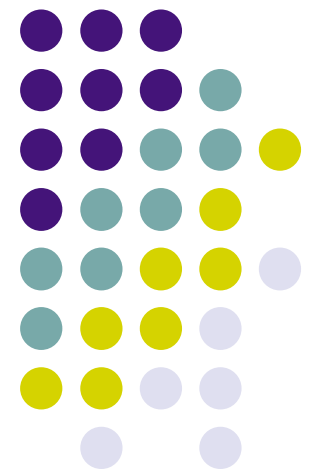
- Over the next decade the percentage of the population over the age of 60 will grow to over 30% to 40% in the U.S., Europe, and parts of Asia.
- Much of the world's population lives in countries where fertility rates are not sufficient to replace their current populations.
- Aging populations and shrinking work forces will have an important impact, particularly in Europe, Russia, and some Asian nations such as Japan, South Korea, and Singapore.

The Developing World

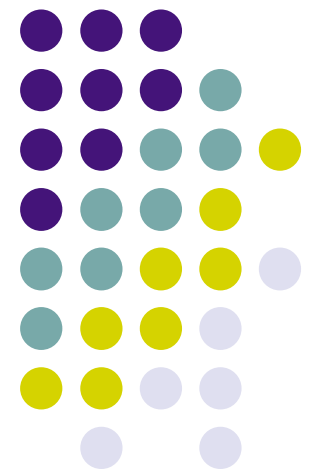


- Most population growth will occur in the developing world with high fertility rates—Africa, Latin America, Asia—where the average age is less than 20.
- In the global, knowledge economy, the key to the future of these young people is education.
- Yet it is estimated that today there are over 30 million people who are fully qualified to enter a university but there is no place available. This number is predicted to grow to over 100 million over the next decade. (Jon Daniels)

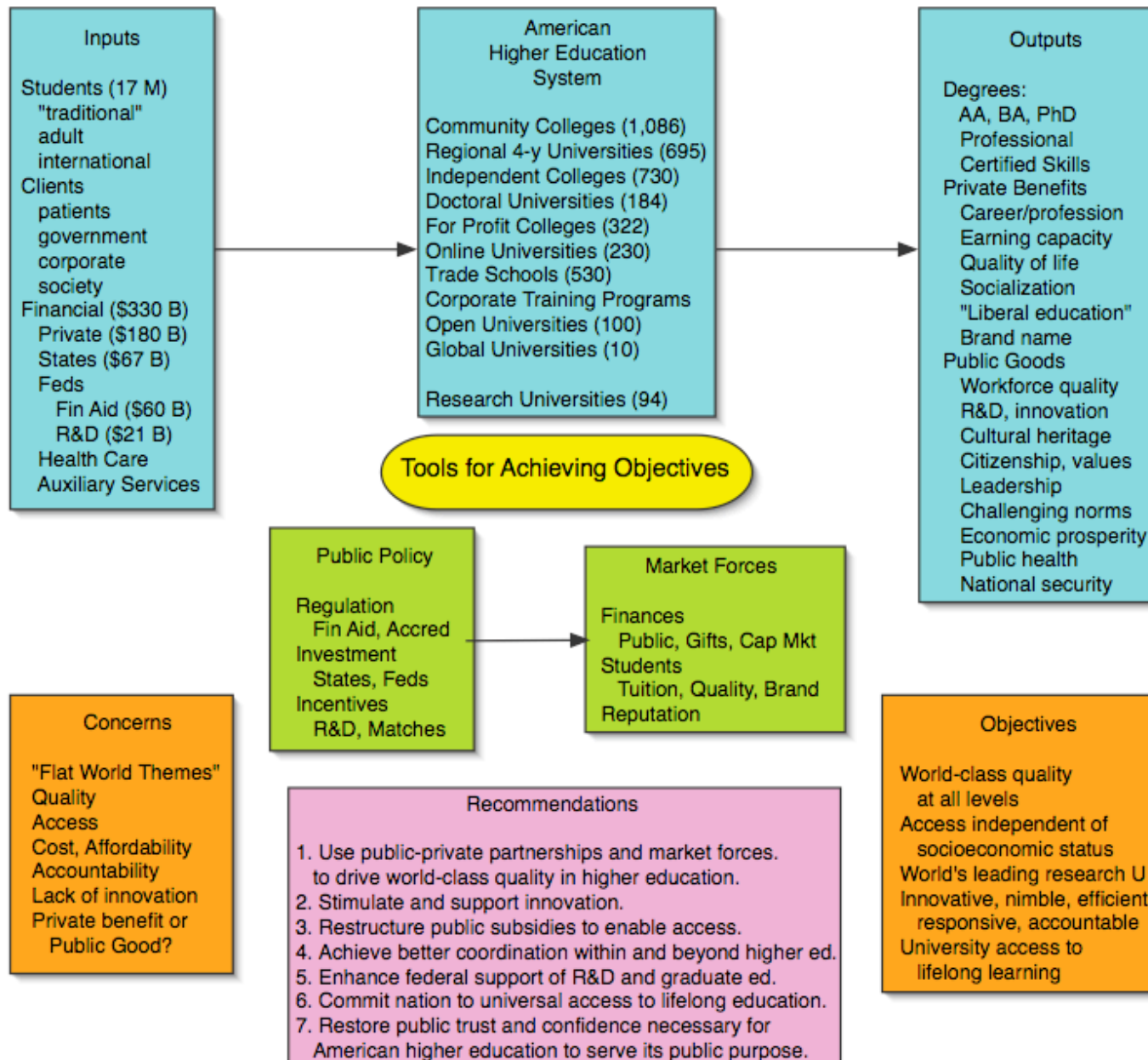
National Responsibilities



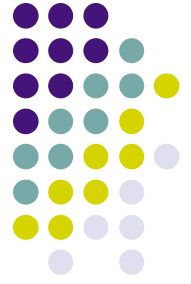
A Case Study: The United States



Aligning American Higher Education with National Priorities

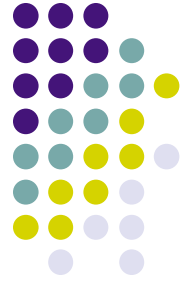


Characteristics



- The great diversity among institutions and missions.
- The balance among funding sources (private vs. public, state vs. federal).
- The influence of market forces (for students, faculty, resources, reputation).
- Its global character (attracting students and faculty from around the world)
- The absence of a centralized system that leads to highly decentralized, market-sensitive, and agile institutions, students, and faculty.
- Supportive public policies (academic freedom, institutional autonomy, tax and research policies).
- The research partnership between universities, the federal government, and industry.

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A TEST OF LEADERSHIP

Charting the Future of U.S. Higher Education



Pre-Publication Copy September 2006



A Report of the Commission Appointed by
Secretary of Education Margaret Spellings



A NATIONAL DIALOGUE:
The Secretary of Education's Commission
on the Future of Higher Education

CHARLES MILLER

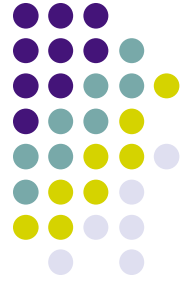
WANGARI SHELLENBARGER

CHERYL DOSHMAN



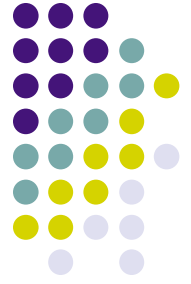


Charge



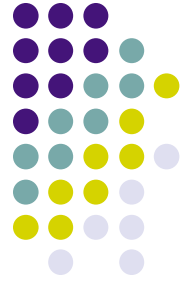
- To determine the higher education needs of the nation both for today and in the future.
- To assess the degree to which the current U.S. higher education enterprise is capable of meeting these needs.
- To suggest implementation strategies for better aligning higher education with the needs of the nation.

Concerns



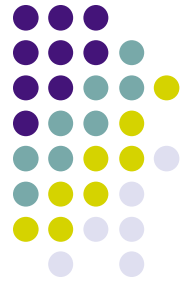
- Changing national needs
- Access
- Affordability
- Accountability

The Changing Needs of the Nation



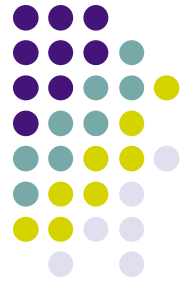
“The flattening of the world is moving ahead apace, and nothing is going to stop it. What can happen is a decline in our standard of living if more Americans are not empowered and educated to participate in a world where all the knowledge centers are being connection. We have within our society all the ingredients for American individuals to thrive in such a world, but if we squander these ingredients, we will stagnate.” (Thomas Friedman, 2005)

Access



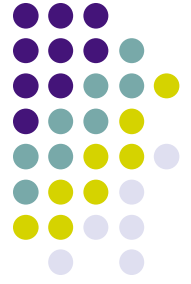
- There is evidence that both the access to and the distribution of students within American higher education are becoming **alarmingly stratified based upon economic status, race, and ethnicity.**
- Only 8% of the bottom quartile will graduate from a four-year institution, compared to 75% of the top quartile.
- While there are important actions that can be taken both by colleges and universities and by their patrons (state and federal government, private support) to improve access at the margin, **major gains are not likely without a sustained improvement in secondary education.**

Affordability



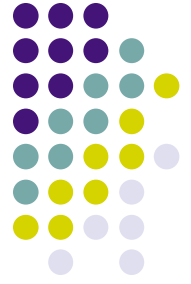
- The **rapid increase in the price of a college education**, driven in part by cost shifting from tax support to tuition in public institutions, by inefficiency and stagnant productivity gains, and by unbridled competition for the best students, faculty, resources, and reputations, is undermining public confidence in higher education.
- Do current **financial aid programs conducted by the federal government, the states, and individual institutions** adequately address the goals of increased access by those students with need, increased retention or graduation, and reduced debt burdens that might otherwise prevent lower-income students from pursuing low-paying and socially beneficial areas?

Accountability



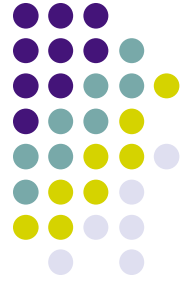
- The inadequate performance of much of the higher education enterprise as measured by graduation rates, time to degree, learning outcomes, and even literacy.
- The limited capacity of postsecondary education to innovate and adapt to changing needs and conditions.
- The lack of transparency in providing public information about costs, prices, and value.
- The reluctance of many higher education institutions to recognize their public purpose and respond to the changing needs of the nation.

Findings: The Good News



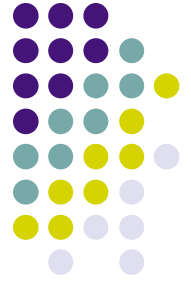
Whether America's colleges and universities are measured by their sheer number and variety, by the increasingly open access so many citizens enjoy to their campuses, by their crucial role in advancing the frontiers of knowledge through research discoveries, or by the new forms of teaching and learning that they have pioneered to meet students' changing needs, these **postsecondary institutions have accomplished much of which they and the nation can be proud.**

Findings: The Bad News



Despite these achievements, however, the Commission believes U.S. higher education needs to improve in dramatic ways. Our year-long examination of the challenges facing higher education has brought us to the **uneasy conclusion that the sector's past attainments have led our nation to unwarranted complacency about its future.**

Too many Americans just aren't getting the education that they need – and that they deserve.

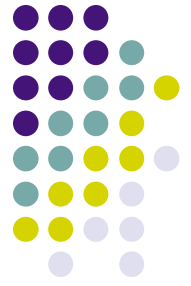


More Bad News

American higher education has become what, in the business world, would be called a mature enterprise: increasingly risk-averse, at times self-satisfied, and unduly expensive.

It is an enterprise that has yet to address the fundamental issues of how academic programs and institutions must be transformed to serve the changing educational needs of a knowledge economy. It has yet to successfully confront the impact of globalization, rapidly evolving technologies, an increasingly diverse and aging population, and an evolving marketplace characterized by new needs and new paradigms.

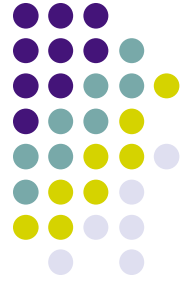
As others see us...



“There is no shortage of things to marvel at in America’s higher-education system, from its robustness in the face of external shocks to its overall excellence. However, what particularly stands out is the system’s flexibility and its sheer diversity...It is all too easy to mock American academia. But it is easy to lose sight of the real story: that America has the best system of higher education in the world.”

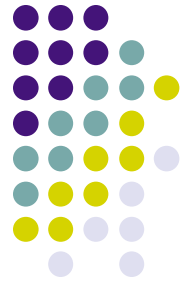
The Economist - 2005

As the Commission concluded

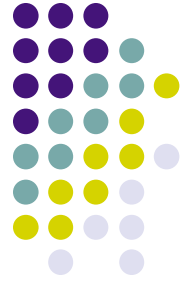


Social Justice: For close to a century now, access to higher education has been a principal – some would say *the* principal – means of achieving social mobility. Much of our nation’s inventiveness has been centered in colleges and universities, as has our commitment to a kind of democracy that only an educated and informed citizenry makes possible. Yet today too many Americans just aren’t getting the education that they need – and that they deserve.

Moreover



Global Competitiveness: The world is becoming tougher, more competitive, less forgiving of wasted resources and squandered opportunities. In tomorrow's world a nation's wealth will derive from its capacity to educate, attract, and retain citizens who are to able to work smarter and learn faster – making educational achievement ever more important both for individuals and for society writ large. Yet again numerous recent studies suggest that today's American college students are not really learning what they need to learn. As Derek Bok summarized it, the education provided today by many of our colleges and universities is “not good enough and getting worse.”

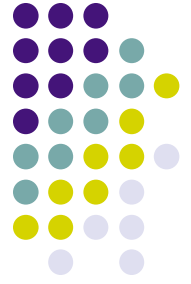


Recommendation 1

Removing the Barriers to Access and Success:

Every student in the nation should have the opportunity to pursue postsecondary education. **We recommend, therefore, that the U.S. commit to an unprecedented effort to expand higher education access and success** by improving student preparation and persistence, addressing non-academic barriers and providing significant increases in aid to low-income students.

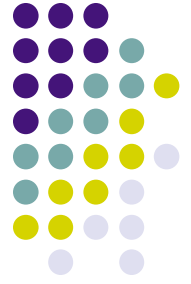
Recommendation 2



Restructuring Public Support:

To address the escalating cost of a college education and the fiscal realities affecting government's ability to finance higher education in the long run, **we recommend that the entire student financial aid system be restructured** and incentives put in place to improve the measurement and management of costs institutional productivity.

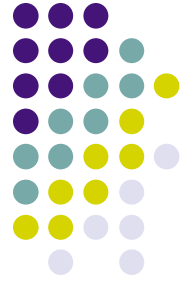
Recommendation 3



Transparency, Accountability, and Public Purpose:

To meet the challenges of the 21st century, higher education must change from a system primarily based on reputation to one based on performance. **We urge the creation of a robust culture of accountability and transparency throughout higher education.** Every one of our goals, from improving access and affordability to enhancing quality and innovation, will be more easily achieved if higher education embraces and implements serious accountability measures.

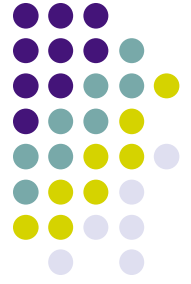
Recommendation 4



Investing in Innovation:

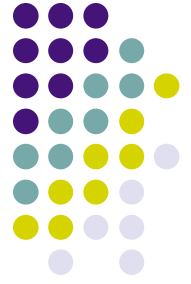
With too few exceptions, higher education has yet to address the fundamental issues of how academic programs and institutions must be transformed to serve the changing needs of a knowledge economy. **We recommend that America's colleges and universities embrace a culture of continuous innovation and quality improvement** by developing new pedagogies, curricula, and technologies to improve learning, particularly in the area of science and mathematical literacy.

Recommendation 5



Lifelong Learning:

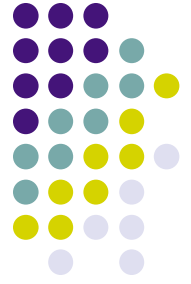
America must ensure that our citizens have access to high quality and affordable educational, learning, and training opportunities throughout their lives. **We recommend the development of a national strategy for lifelong learning** that helps all citizens understand the importance of preparing for and participating in higher education throughout their lives.



Recommendation 6

Responding to the Imperatives of a Global, Knowledge Economy:

The United States must ensure the capacity of its universities to achieve global leadership in key strategic areas such as science, engineering, medicine, and other knowledge-intensive professions. **We recommend increased federal investment in areas critical to our nation's global competitiveness** and a renewed commitment to attract the best and brightest minds from across the nation and around the world to lead the next wave of American innovation.



Note:

- No standardized testing...
- No tuition price fixing...
- No national (federal) accreditation...
- No "No Child Left Behind" or "A Nation at Risk"...
- No federalization of American higher education!

The Economist: "The strength of the American higher education system is that it has no system!"



Possible "blockbusters"

- A major engagement of higher education with primary and secondary education.
- A restructuring of public support for higher education that places priority on need-based financial aid.
- A new level of transparency and disclosure (e.g., cost structures, educational effectiveness) to earn public trust and confidence.
- A much higher priority given to experimentation and innovation.
- A call to establish lifelong post-secondary education as a "civil right" of all Americans.
- Meeting the needs of an innovation-driven nation in a global, knowledge-economy.

EXECUTIVE SUMMARY

Prepublication Copy

RISING ABOVE THE GATHERING STORM

*Energizing and
Employing America
for a Brighter
Economic Future*

NATIONAL ACADEMY OF SCIENCES,
NATIONAL ACADEMY OF ENGINEERING, AND
INSTITUTE OF MEDICINE

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OF THE NATIONAL ACADEMIES



AMERICAN COMPETITIVENESS INITIATIVE

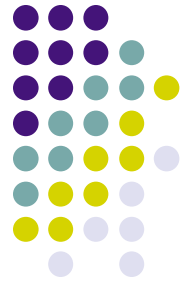
LEADING THE WORLD IN INNOVATION



***DOMESTIC POLICY COUNCIL
OFFICE OF SCIENCE AND TECHNOLOGY POLICY***

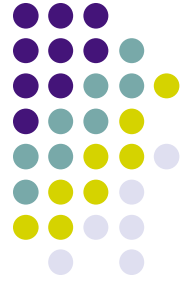
FEBRUARY 2006

RAGS-ACI Recommendations



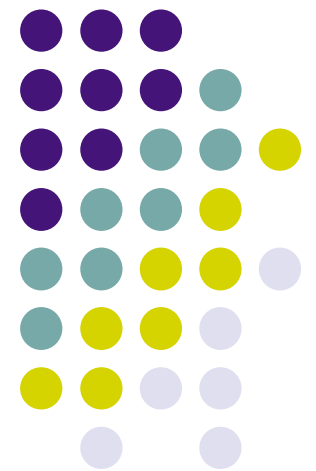
- Double federal investment in basic research in physical science and engineering (from \$9.7 B to \$19.5 B)
- Major investments in science and engineering education
- Tax policies designed to stimulate private sector R&D
- Streamlining intellectual property policies
- Business policies that stimulate and encourage entrepreneurship
- Transforming immigration policies to attract scientists and engineers from around the world

RAGS-ACI Recommendations

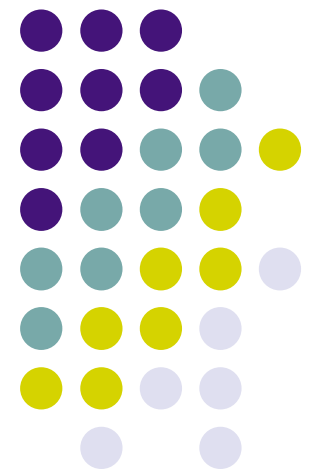


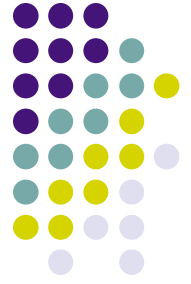
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What Was Missing?



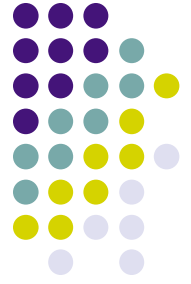
Paradigm Shifts





Entirely New Paradigms

- Importance of lifelong learning
- Emergence of "universities of and in the world"
- The "meta" university
- The "virtual" university...revisited
- Universal access to knowledge and learning



Entirely New Paradigms

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TOMORROW!!!

(my Chuck Vest imitation...)