Secretary of Education's Commission on the Future of Higher Education

Quality Subcommittee

Nashville, TN
December 9, 2005

1

Guiding Principle

Quality of Higher Education must be Assessed and Enhanced from a *Global Perspective*

2

Possible Starting Points for our Task

- Define Quality and Excellence.
- Consider Key Roles not included in A3.
- Delineate and sustain existing strengths of U.S. Higher Education..
- Focus on Urgent Recommendations of Recent National Reports

3

Defining Quality and Excellence

- Institutional
- For the Student
- Regional/Mission Context
- Utopian
- Utilitarian

4

Key Roles not included in Access/Affordability/Accountability

- Education
  - Undergraduate
  - Graduate
  - Professional
  - Life-Long/Continuating
- Development of the Individual
  - Creating Opportunity
  - Widening Vistas and Capabilities

5

Key Roles not included in Access/Affordability/Accountability

- Conservator of Values and Culture
- Independent Critic
- Knowledge Generation/Discovery
  - Research
  - Scholarship
  - Economic Development
  - Advancing Innovation

6

Delineate and sustain U.S. Higher Education's Existing Strengths

- Diversity of institutions
- Multiple Funding Sources
- Market Forces - Intellectual and Financial
- Magnet for International Students and Scholars
- Decentralized, Agile System
- Supportive Public Policies
- Research Partnership with Federal Government

7

Focus on Urgent Recommendations of Recent National Reports

- ***Rising Above the Gathering Storm***, National Academies
- ***Innovate America***, Council on Competitiveness
- ***Sustaining the Nation's Innovation Ecosystem***, PCAST
- ***Waiting for Sputnik***, CSIS
- ***Engineering 2020***, NAE
- ***Assessing the Capacity of the U.S. Engineering Research Enterprise***, NAE

8

Quality Subcommittee Focus on *Rising Above the Gathering Storm* for 12/9 Meeting

- Specificity and Timeliness
- Centrality of Higher Education in Recommendations
- Recommended by Sec. of Energy Bodman at Commission's first meeting
- Participation of Senator Alexander

9

Committee on Prospering in the 21st Century (National Academies)

- Study Requested by Senators Lamar Alexander and Jeff Bingaman, joined by others.
- Question addressed:

  What ten actionable items should the Federal Government undertake to ensure that the U.S. will prosper in the global economy?

10

Rising Above the Gathering Storm

10,000 Teachers, 10 Million Minds

- Increase America's talent pool by vastly improving K-12 science and mathematics education

11

Rising Above the Gathering Storm

Sowing the Seeds Through Science and Engineering Research

- Sustain and strengthen the nation's commitment to long-term basic research.
  - Potentially transformational
  - Maintain the flow of new ideas that
    - fuel the economy,
    - provide security, and
    - enhance quality of life

12

Rising Above the Gathering Storm

Best and Brightest in Science and Engineering Higher Education

- Make the United States the most attractive setting in which to study and perform research so that we can:
  - Develop, recruit, and retain the best and brightest students, scientists, and engineers
    - From within the U.S.
    - From around the world

13

Rising Above the Gathering Storm

Incentives for Innovation and the Investment Environment

- Ensure that the United States is the premier place in the world to innovate.
  - Invest in downstream activities such as manufacturing and marketing.
  - Create high-paying jobs that are based on innovation by:
    - Modernizing the patent system
    - Realigning tax policies to encourage innovation
    - Ensuring affordable broadband access.

14

Rising Above the Gathering Storm

Recommendations relevant to Higher Education's Opportunities and Responsibilities

15

Rising Above the Gathering Storm

10,000 Teachers, 10 Million Minds

- 4-year scholarships annually for 10,000 college students
  - Bachelor's degree in science, engineering, or mathematics
  - Concurrent K-12 certification
  - Commitment to teach for 5 years in public K-12 schools

16

Rising Above the Gathering Storm

10,000 Teachers, 10 Million Minds

- Strengthen skills of 250,000 teachers
  - Summer Institutes
  - Science and mathematics master's programs
  - Train 70,000 AP or IB instructors, and 80,000 pre-AP or pre-IB instructors
  - Freely available K-12 curricular materials based on world-class standards

17

Rising Above the Gathering Storm

Sowing the Seeds

- Increase Federal investment in long-term basic research by 10% a year for the next 7 years.
- Research Grants to 200 outstanding Early-Career researchers
- $500 million/yr research infrastructure fund for next 5 years
- 8% of agency research budgets for high-risk research

18

Rising Above the Gathering Storm

Best and Brightest

- 25,000 new 4-year UG scholarships to increase number and proportion of U.S. citizens earning BS degrees
- 5,000 new graduate fellowships for U.S. citizens in "areas of national need."
- Federal tax credits to employers for continuing education
- Continue to improve visa processing for international students and scholars.

19

Rising Above the Gathering Storm

Best and Brightest

- 1-year automatic visa for STEM PhD graduates to seek employment in U.S.
- New skills-based preferential immigration option
- Reform the "Deemed Export" system

20

Quality Subcommittee

Some things we will explore going forward

21

Maintaining a robust group of world-class universities

- AAU-class public universities are particularly at risk.
- Pedagogy, learning and technology must be explored.
- Several topics associated with globalization must be developed.

22

Other Important Topics

- The purpose of education
- Leading vs. Reacting
- Institutional Characteristics for the 21st century
  - Nimble
  - Resourceful
  - International
  - Diverse
  - Robust
- Flexible system of higher education; Not a centrally-planned monolith.

23