

Online Learning:

A Strategic Tool for University Growth and Community Economic Development

Jack M. Wilson, Ph.D.
President, University of Massachusetts

May 3, 2010



University of Massachusetts

Amherst • Boston • Dartmouth • Lowell • Worcester • UMassOnline

The Paradox

- At the same time that Universities are facing extraordinary financial pressures due to a collapse of state revenue and endowments
- Everyone is looking to Universities to lead us out of the economic decline
- Creating futures for students and communities
- And solving social challenges like
 - ▣ improving college readiness
 - ▣ Reducing disparities (racial, economic, gender, etc)
 - ▣ Increasing graduation rates
 - ▣ Attracting students into STEM fields
 - ▣ Better matching workforce needs

An Opportunity to Innovate

3

- An era of shrinking budgets and reduced funding sources – colleges and universities are facing unprecedented challenges to their financial models.
 - Even with the market turnaround, colleges may continue to face financial pressures for years to come, according to a recent report by Moody's Investors Service.
- At the same time, communities, states, and regions are looking to these institutions to solve pressing problems of economic and community development.
 - Job market is overcrowded yet starved for professional contributors who are adaptable, understand the process of learning, are intellectually agile, and are critical holistic thinkers.

President Obama's Goal

- To be first the world by 2020 in the proportion of college graduates.
 - ▣ -Address to Congress on Feb. 24, 2009.
- The US was tied for 6th place at 30% according to 2006 data.



The Catalyst for the Future

- What do Boston, Bombay, Beijing, Bangalore have in common with
- San Francisco, Austin, Raleigh, Cambridge, and other world economic leaders?
- They are vibrant economic regions nucleated by world class universities.

The Secret Sauce?



- Universities pouring out highly educated graduates with skills and intellectual property.
- World class research that is curing illnesses and creating new jobs, companies, and even entirely new industries.
- And doing this at very large scale.

New York is no exception

- CornellNYCTech:
 - Even NYC, which is at the head of the line on some many metrics, felt a need to expand the opportunity for research and education in technology by establishing a new university with Cornell and the Technion. Presently housed at Google.
- I was pleased to be part of a major effort here in the Capital district
- Buffalo, Rochester, and other regions have their own strategies underway.

The Path

- I love to say:
- “The path to economic and social development in Massachusetts goes through the University.”
- It is fair to say that the path to economic and social development in the world goes through our world class universities, and through the continuum of world class education from K-Retirement.

Change

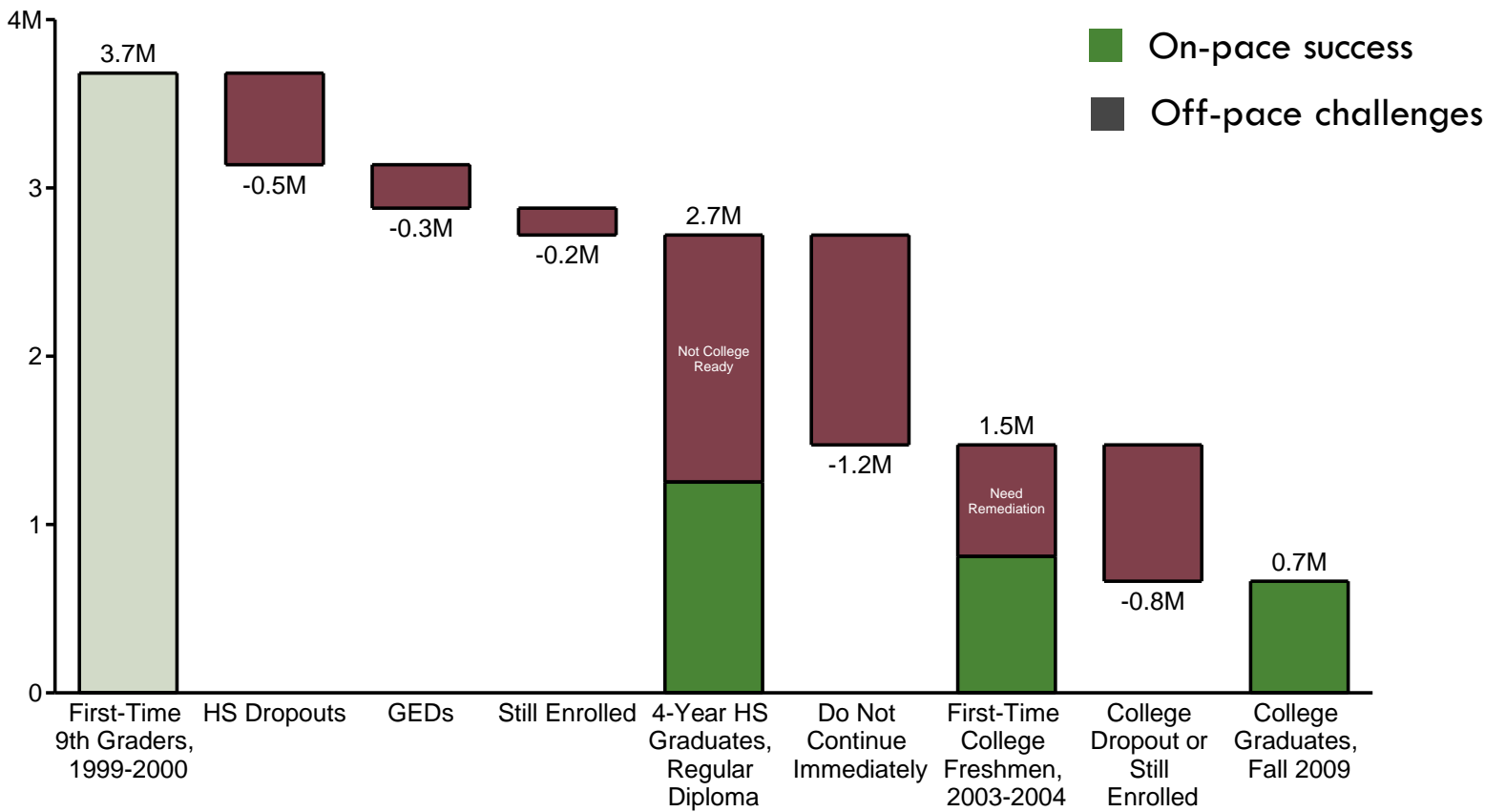
- But it is not your father's (or mother's) university any more.
- The Ivory Tower has cross-pollinated with the Silicon Village through the information superhighway to create:
- A more engaged university – in many ways fulfilling the 21'st century vision of the original land grant mission.

How can we do this?

- The **only way we can possibly approach these goals** is through a much more intense focus on online learning and technology enhanced learning.
- Otherwise we do not have the traditional capacity to meet the increased needs for both quality AND quantity.
 - Need to deliver educational experiences to K-12 that are not presently uniformly available.
 - Improve success, retention, persistence, and graduation rates through higher quality learning experiences.
 - Reach students unable to participate in traditional learning settings for a variety of reasons.
- Are we ready?

18% of first-time 9th graders graduate on-time from college;
 remediation needs play an outsized role

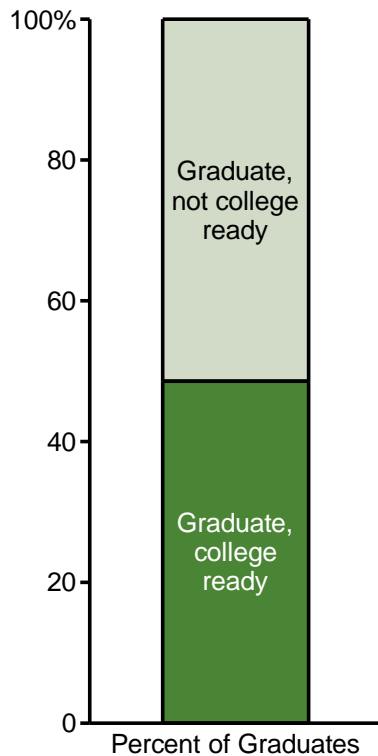
Progression of Fall 1999 First-Time Public School Freshman Cohort



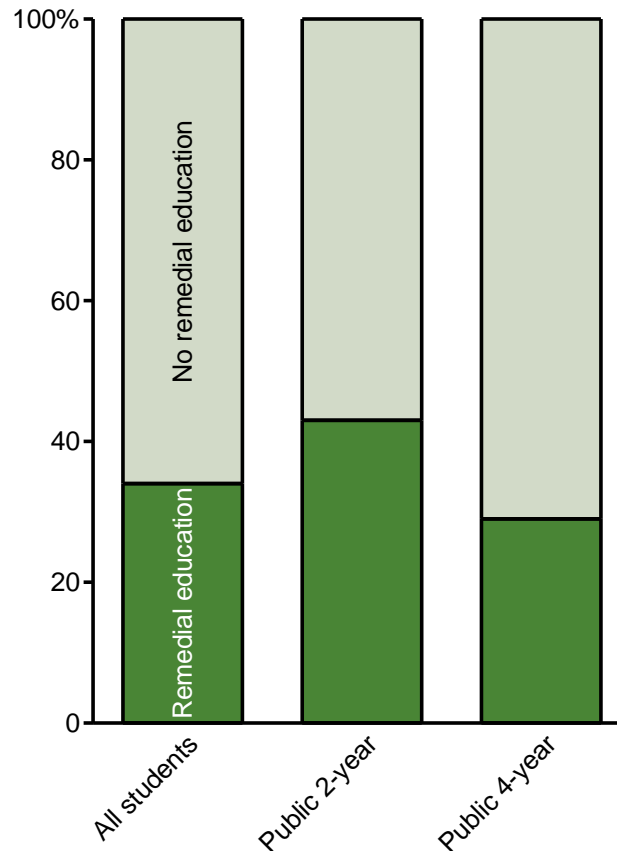
Source: IPEDS, NCES, The Manhattan Institute (Greene & Winters, 2005), David Conley (College Knowledge, 2008), National Center for Public Policy and Higher Education -Parthenon

A significant segment of the college student population must enroll in remedial courses

Nearly 1/2 of high school graduates are not ready for college...



...and over 1/3 of first year college students require remediation

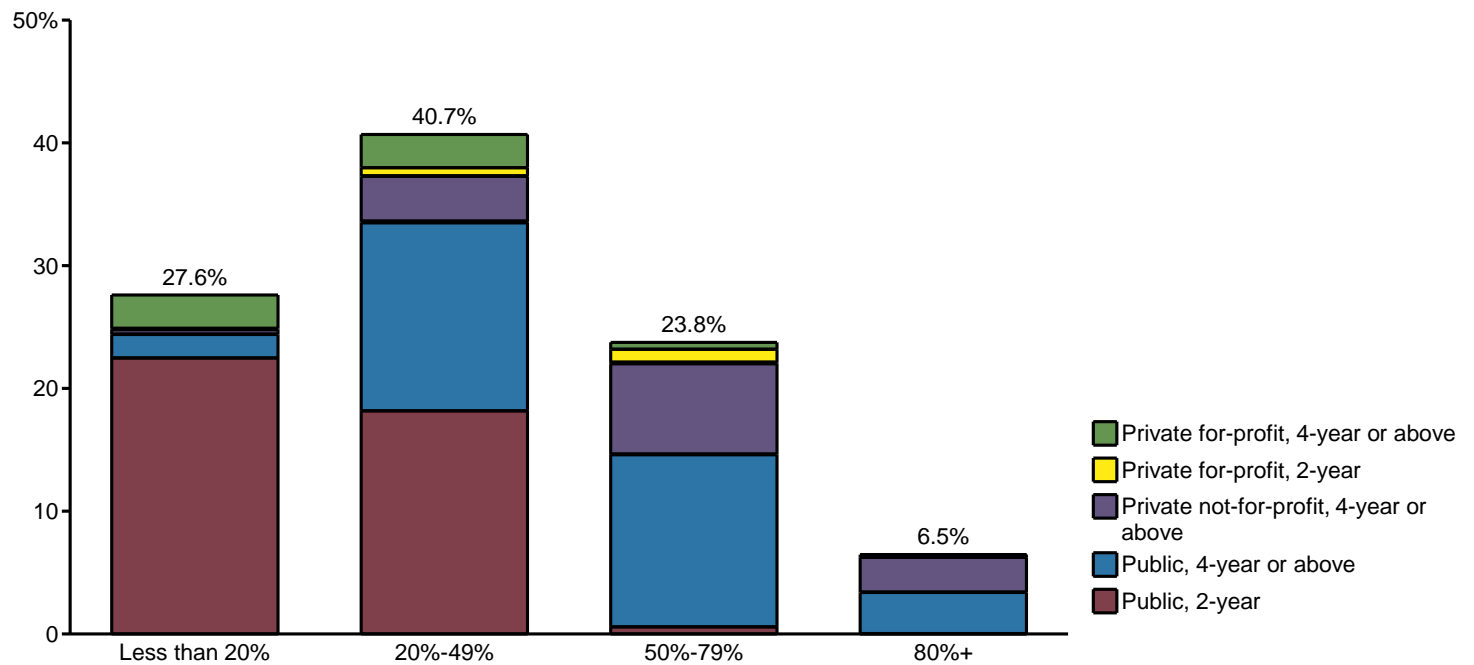


Examples of remediation needs span the nation

While results are varied and different standards make exact comparisons difficult, research efforts in many states indicate significant levels of remediation:

- More than 60% of the 40K freshman admitted each year to the California State University system require remediation of some kind
- Three-quarters of the 17,500 students enrolled in CUNY community colleges need remediation
- Over 80% of enrolled students in Oklahoma's community colleges were enrolled in a remedial course in 2007
- 36% of students in Ohio's public higher education system were placed in remediation for either mathematics, English, or both in 1998

2/3 of Students Attend Schools < 50% Grad. Rate



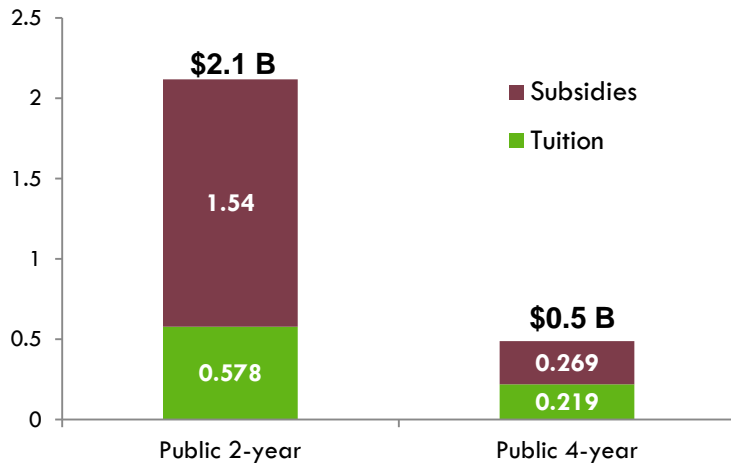
Institutions	710	1,680	1,216	292
Weighted grad. rate	12%	33%	63%	85%

Source: IPEDS 2009 from Parthenon

Cost of College Readiness Remediation

Remediation Costs for 2- and 4-year Public Colleges

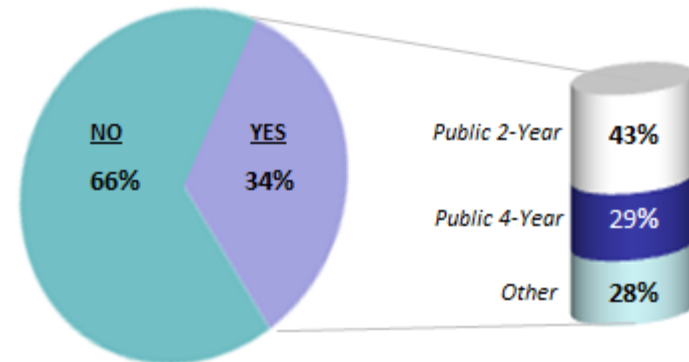
\$2.6 billion is spent each year on remediation in public institutions



Percent of Students Receiving Remediation

34% of all U.S. students enroll in remedial classes

Percent of Students Receiving Remediation



Private Sector Example: The EO Online Methodology



STEP 1
Student is assessed

Student is pre-assessed online to ascertain where each student has individual strengths or learning gaps.



STEP 2
Individualized program developed based on student's academic need

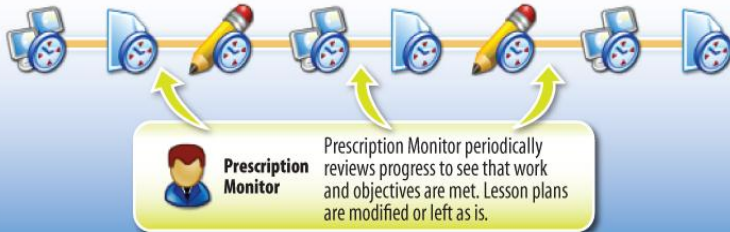
Based on the assessment, create a personalized learning plan for each student, specific to his or her learning needs.



Live Instructor

STEP 3 - LEARNING ENVIRONMENT

Student works on lesson plan developed specifically for them with a live instructor. Mastering individualized learning objectives and periodic monitoring by an educational specialist ensures success!



- Differentiated curriculum.
- Standards alignment.
- Home-based convenience.
- Live, teacher-led, only state-certified teachers.
- Progress reviewed by Prescription Monitor.
- School involvement and tracking.
- Mastery teaching and formative assessment (ongoing online progress testing).



STEP 4
Student is assessed

Two-hour post assessment is administered online to calculate skills mastered and grade level gains achieved.



REPORTED RESULTS
To Districts, Schools & Parents/Guardians

Results such as grade level gains, skills mastered, and individual learning objectives completed are delivered in easy-to-read, comprehensive reports.

Primary Program Features

Algebra Readiness

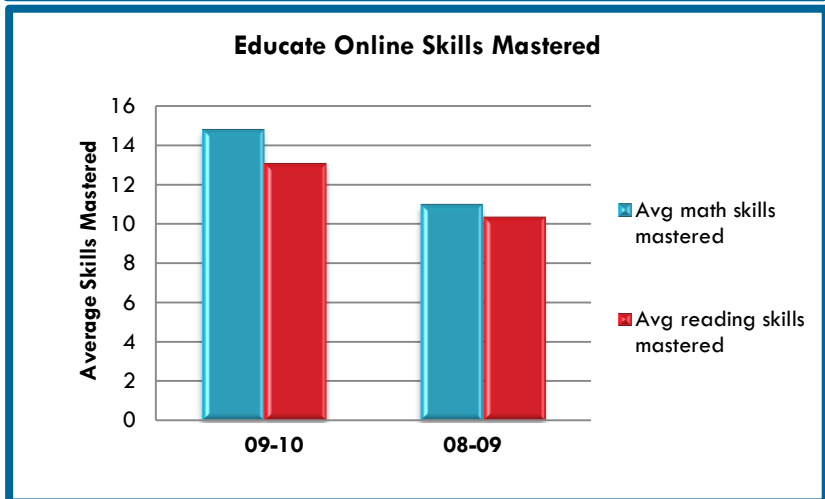
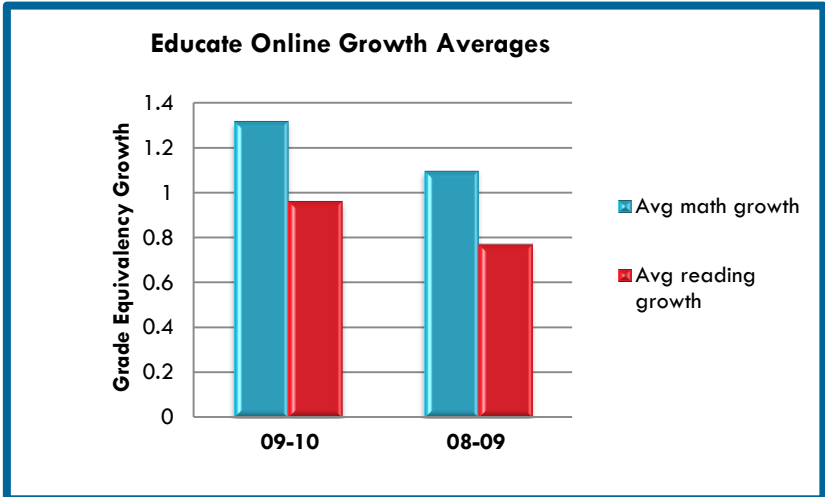
- Program Goal – To remediate students' learning gaps to fully prepare them to take Algebra I in a college setting.
- Targeted students - Students with limited/dated/no exposure to Algebra I.
- Program service model:
 - **Pre-Assessment** – CAT/5.
 - **Prescription** – Based on EO's basic math Individual Learning Objectives.
 - **Instruction** – Provided live online by certificated teachers on a 3:1 basis.
 - **Number of sessions** – Can vary by student need and resource availability; typically 25-30 sessions per student.
 - **Interim Assessments** – At the completion of each skill taught.
 - **Interim Reporting** – Online reporting for each student available to students, teachers and program administrators.
 - **Post-Assessment** – CAT/5
 - **Post Reporting** – Comprehensive report of student performance and participation.

Algebra Proficiency

- Program Goal – To remediate students' learning gaps to be fully proficient in the principles of Algebra I.
- Targeted students - Students with some proficiencies in Algebra I, but with significant learning gaps.
- Program service model:
 - **Pre-Assessment** – Accuplacer, Compass or EO-provided assessment.
 - **Prescription** – Based on EO's Algebra Individual Learning Objectives.
 - **Instruction** – Provided live online by certificated teachers on a 2:1 basis.
 - **Number of sessions** – Can vary by student need and resource availability; typically 25-30 sessions per student.
 - **Interim Assessments** – At the completion of each skill taught.
 - **Interim Reporting** – Online reporting for each student available to students, teachers and program administrators.
 - **Post-Assessment** – Accuplacer, Compass or EO-provided assessment.
 - **Post Reporting** – Comprehensive report of student performance and participation.

Online Academic Results

- Academic gains are measured in terms of grade equivalencies (GE) on a pre- and post test basis.
- Average GE gains after a 25 session program:
 - ▣ Math: 1.32 GE.
 - ▣ Reading: .96 GE.
- The average number of skills mastered per student:
 - ▣ Math: 14.8 skills.
 - ▣ Reading: 13.1 skills.



Online Education: A Strategic Tool

- While most faculty use online technology to support their teaching, too few institutions systemically and institutionally support a portfolio of programs that can be completed at online and at a distance
- However, for many institutions, distance and online learning is becoming an indispensable part of their strategic plans
 - A tool that can reach diverse communities of learners in an efficient, sustainable way
 - Providing additional financial resources to institutions.

An Opportunity to Innovate

19

- In this information- and knowledge-driven economy
 - Work force needs to remain intellectually agile and creative.
 - It is not enough to simply stay technically competent.
 - Incredibly rapid pace of change.
 - Professional development needs to be a career and lifelong commitment.
 - Learners need flexible, cutting edge offerings
 - Education partners need to collaborate with business and professional communities, ensuring relevance and rigorous credentialing for knowledge portability.

APLU Initiative in Online Learning

- Grant from Sloan Foundation to *create a cadre Presidents and Chancellors knowledgeable about the strategic value of online learning*
- Established APLU-Sloan National Commission on Online Learning (Jack Wilson, President, University of Massachusetts, Chair; seven Presidents; and other senior administrators)
- Commission Strategies:
 - Understand the knowledge base and experience of Presidents/Chancellors re: online learning
 - Target the key priorities and concerns of senior leadership
 - Determine the potential of online learning to serve as a strategic tool to address those issues
 - Develop strategies/resources that could assist Presidents and Chancellors in overcoming barriers limiting the strategic utilization of online learning

Online Learning as a Strategic Asset

21

- APLU-Sloan Benchmarking Study: Online Learning as a Strategic Asset
- First survey of Presidents and Chancellors regarding their attitudes and experiences regarding online learning. A significant study:
 - Surveyed more than 850 people, including more than 300 Presidents/Chancellors.
 - Institutions in this study represent more than 1 million students and more than 100k online enrollments.
- The Overarching Question: Are Universities equipped to respond to this challenge?

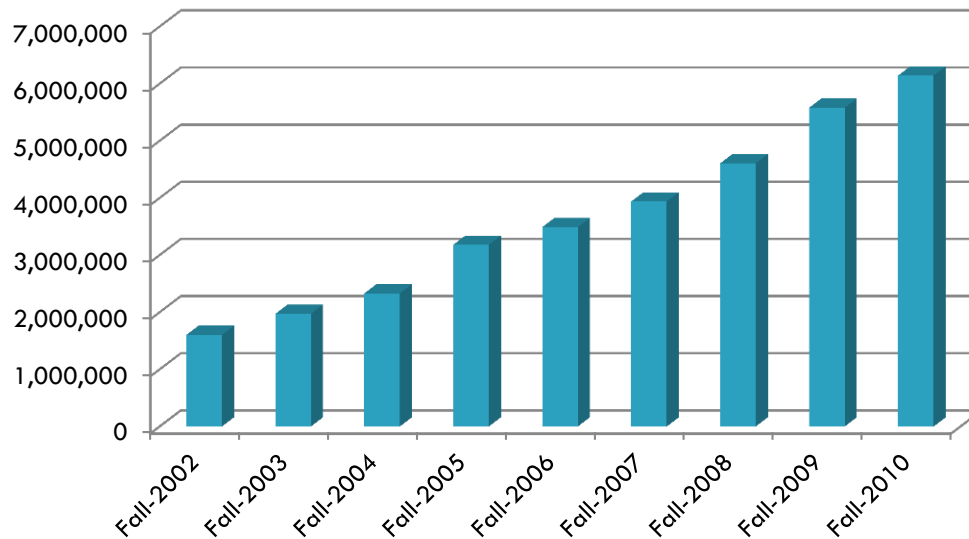
APLU-Sloan National Commission on Online Learning

- Surveys:
 - ▣ APLU Presidents and Chancellors
 - ▣ Tribal Colleges and Universities Presidents
 - ▣ NAFEO Presidents and Chancellors

- 27 dialogue events:
 - ▣ 850 participants; 300+ CEOs

Key Survey Findings: Is there a disconnect?

Students Taking at Least One Online Course



Strategic Importance of Online Learning

Critical to long-term strategy of institution

Represented in institution's strategic plan

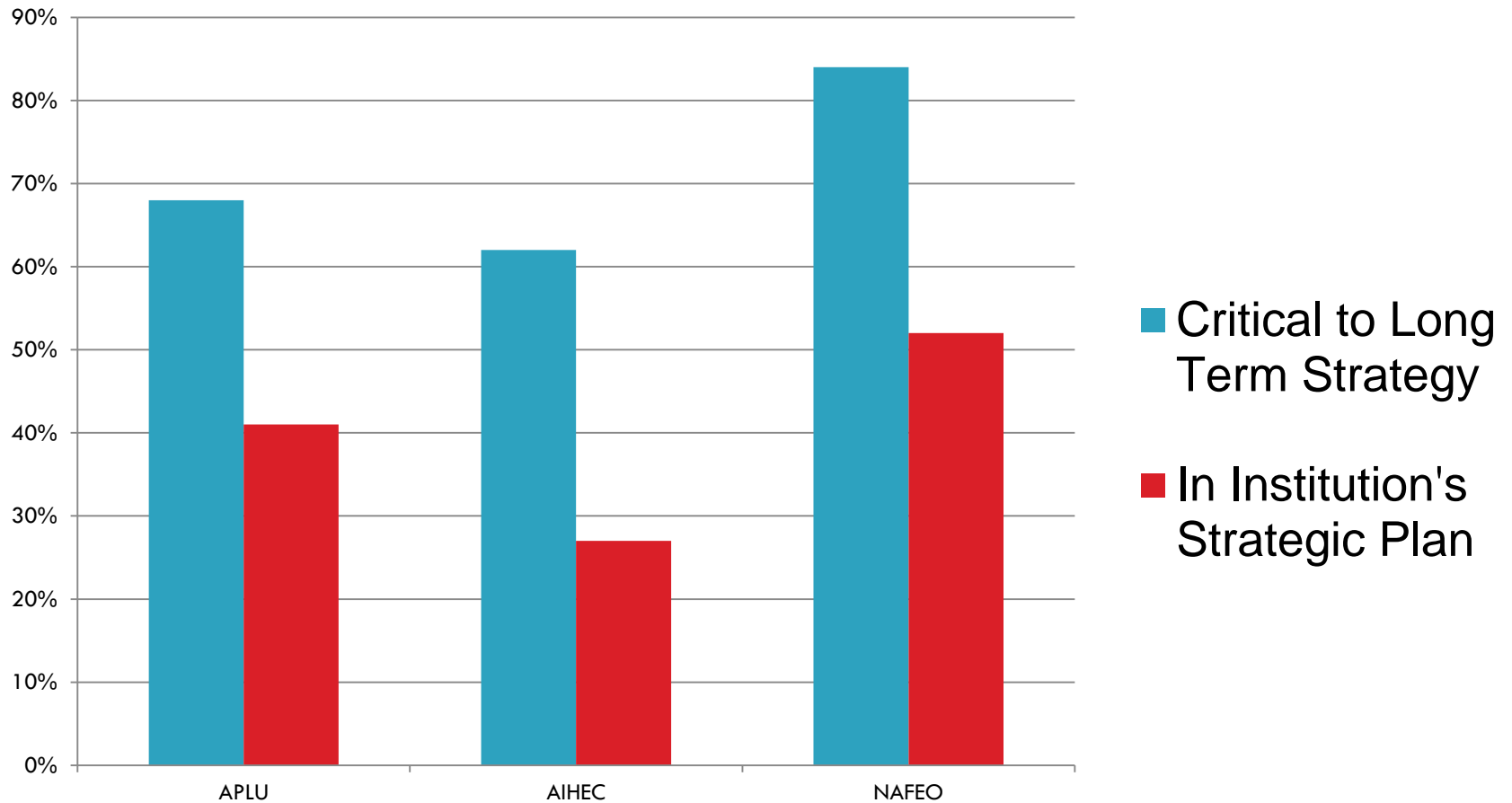
Not critical to long term strategy

APLU- 68% AIHEC – 62% NAFEO – 84%

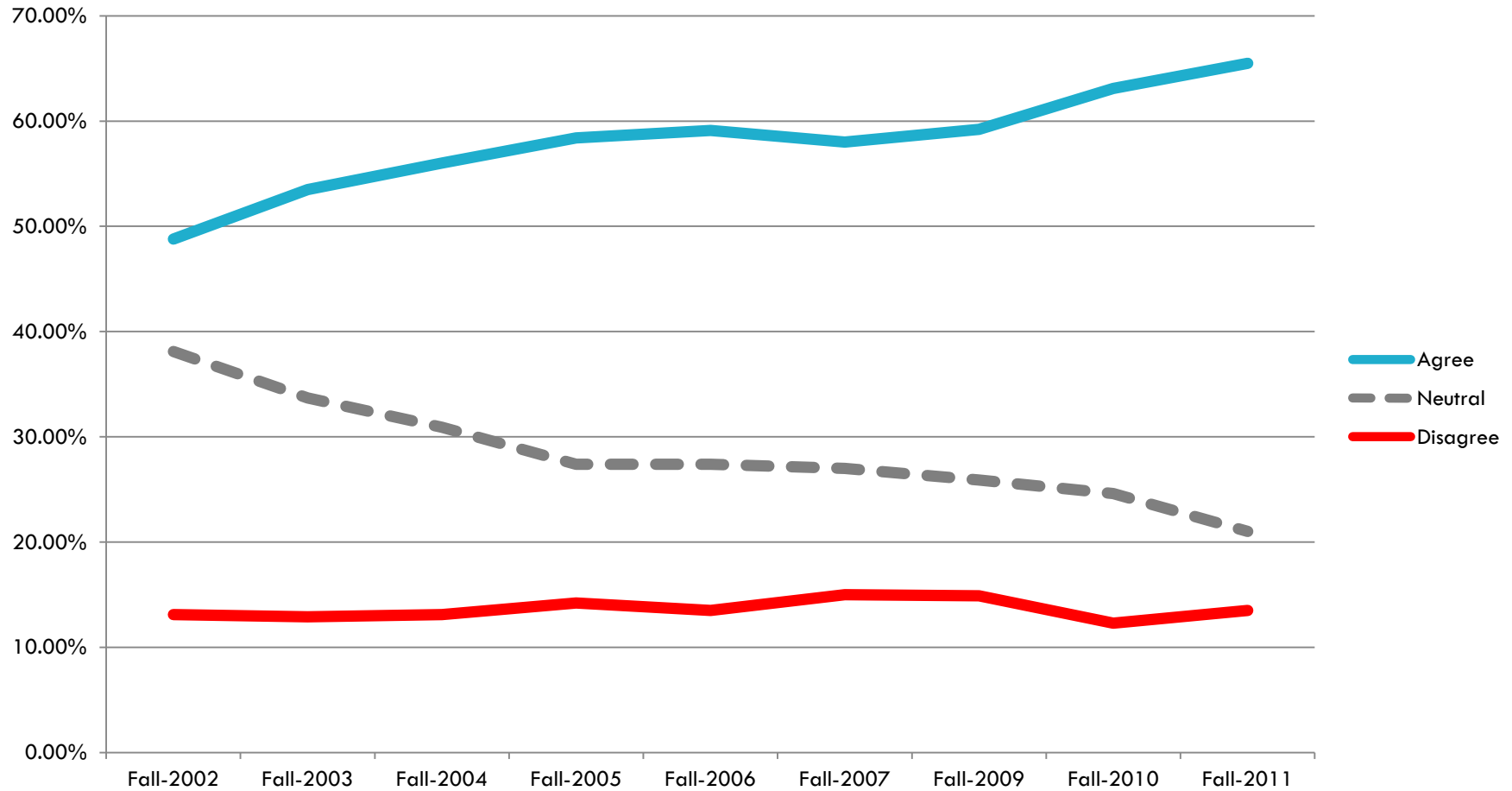
APLU- 41% AIHEC – 27% NAFEO – 52%

APLU- 4% AIHEC – 15% NAFEO – 7%

There IS a disconnect!



EDUCATION IS CRITICAL TO THE LONG-TERM STRATEGY OF MY INSTITUTION -- FALL 2002 TO FALL 2011



Online Learning as a Strategic Asset

26

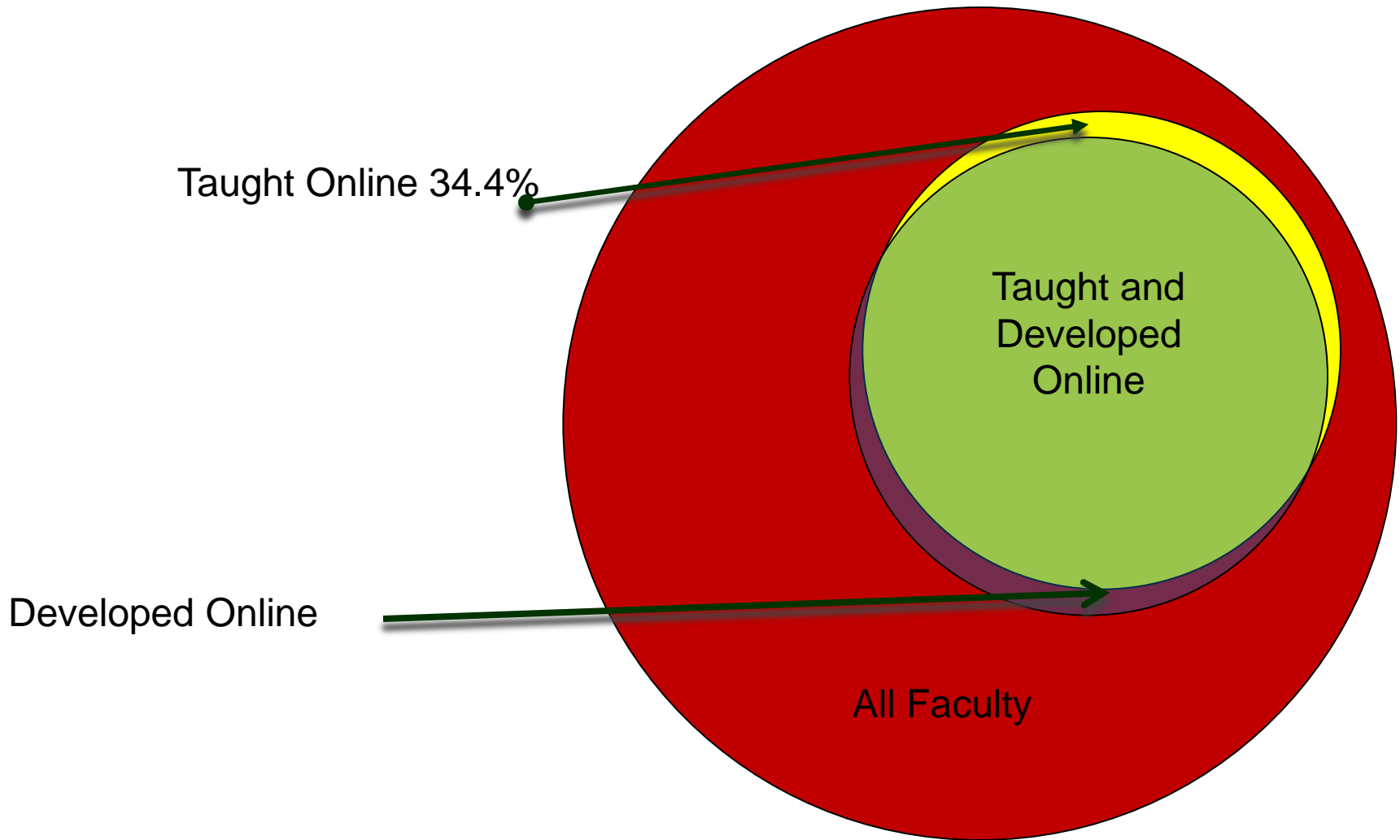
- Survey revealed that President's know that distance learning needs to part of the strategic plan, however, they **were not well equipped by past experience** to understand how these programs, once considered peripheral, could become an **integral tool of their institutions strategic plans.**



Online Learning as a Strategic Asset

- Another striking finding from the surveys of campus leaders was the presence of a “disconnect” or gap between a recognition by campus leaders of the **strategic value** of online learning and the **strategic utilization** of online.
- This gap exists even at a time when online enrollments have grown an average of almost 20% per year over the past six years.

Who Teaches and Develops Online?



Benchmarking Study Results

The Opportunities

- Everyone teaches (full, part time, tenured, non-tenured, early and late career) – stereotypes are not correct
- Faculty are motivated by student needs
- Faculty recommend online
- Faculty with online experience are more positive

Benchmarking Study Results

Imperatives for Campus Leaders

- Administrators need to know who is teaching online and why
- Campus leaders need to develop creative ways to recognize and reward faculty
- Faculty and administrators need to resolve issues around perceptions of quality
- Online initiatives must be routinely reviewed and assessed to identify and address needs and opportunities as they arise

Institutional Interviews

Key Observations

- Integrate online into institutional planning, academic structure
- Review and assess routinely over time
- Develop reliable financing mechanisms
- Develop adequate and consistent resources for both faculty and students
- Engage senior leadership

32

Launching the UMass Online Consortium



University of Massachusetts

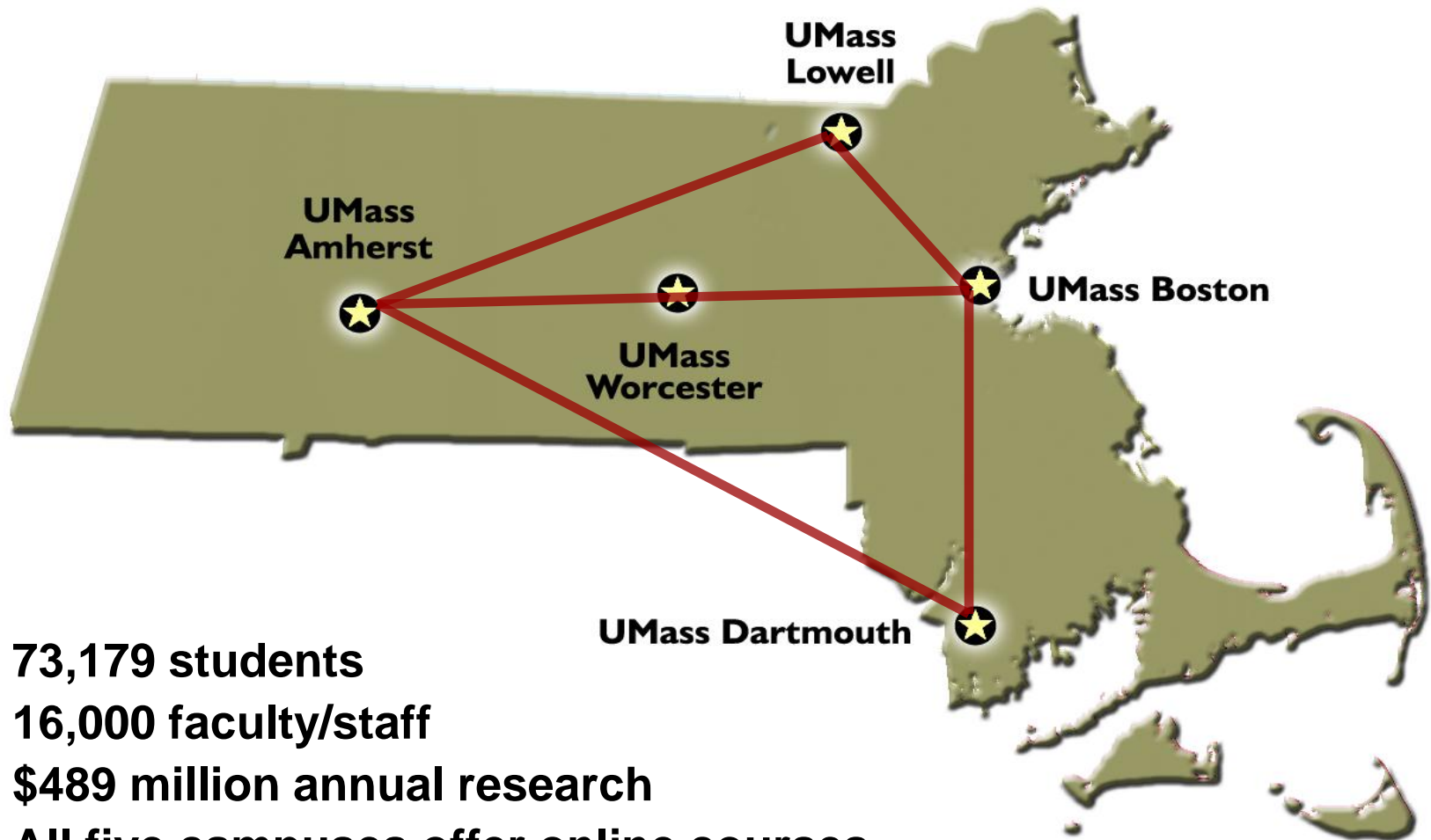
Amherst • Boston • Dartmouth • Lowell • Worcester • UMassOnline

UMass Mission and Positioning Statement

33

- **Mission:** The University's mission is to provide an affordable and accessible education of high quality and to conduct programs of research and public service that advance knowledge and improve the lives of the people of the Commonwealth, the nation and the world.
- **Positioning Statement:** “The Commonwealth's public research university needs to be world-class for our students and our state to be competitive in the global economy. **The path to social and economic development in Massachusetts and its diverse regions goes through the University of Massachusetts.**”

UMass Campuses



- **73,179 students**
- **16,000 faculty/staff**
- **\$489 million annual research**
- **All five campuses offer online courses and programs through UMassOnline**

UMassOnline at UMass

35



- Founded in 2001
- Supported by the Board of Trustees, the President and five Chancellors
- Financed by a \$15 million loan at 7.5 percent interest, with additional support in the form of grants for technology.
- Focused on serving the community - particularly with respect to economic development - and revenue generation.

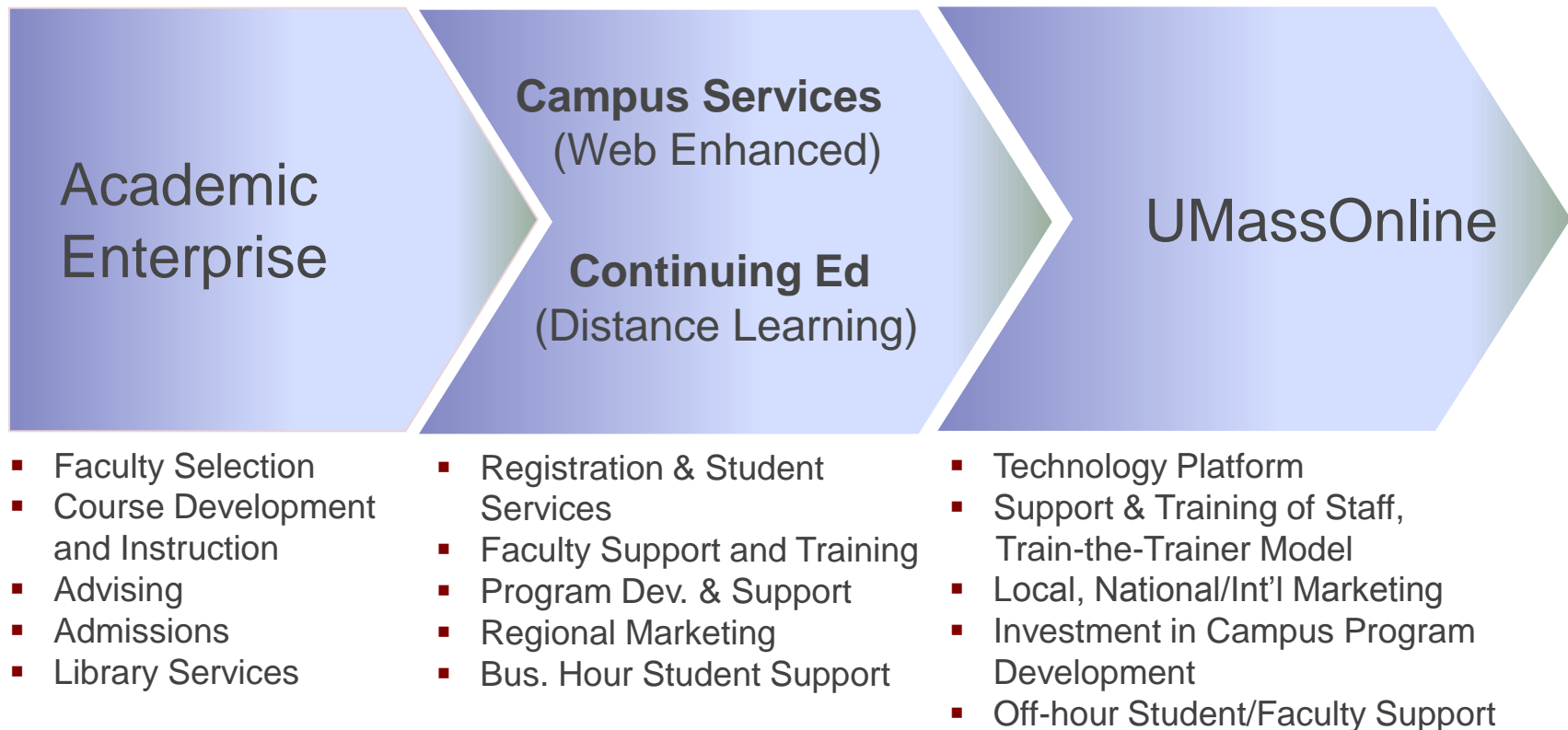
UMassOnline, Created to Support University Strategic Priorities

36

- Increase student **access** and **success**
- Drive **revenue** to the campuses
- Grow educational **opportunities**
- Meet state, national and international **workforce** needs
- Attract students outside the traditional service area
- Increase the rate of **degree completion**
- Improve student **retention**
- Reduce or contain costs
- Increase **diversity** of student/alumni population
- Enhance **brand** of the university

UMassOnline Collaborative Model

37



UMassOnline Values

38

- Brings together the best traditions of high-quality education with the opportunities that technology provides, and student focused programming, under a well established, quality university brand.
 - Allocation of responsibility for academic and instructional quality to those parts of the university that embody the traditions of **academic excellence, rigor, and integrity**.
 - Complemented by **creating capacity through UMassOnline** to meet the changing needs of a dynamic economy, globalizing society, and increasingly networked community of students and instructors (learners and faculty).

UMassOnline Values

39

- The core values that UMassOnline brings to:
 - ▣ **Students:** is the ability to transcend the traditional boundaries of campus and provide access to quality programming, interaction with global peers and faculty which enriches their classroom experience
 - ▣ **UMass:** is that it meets the demands of a evolving student population and market, provides the support and services for adult learners as well as faculty and realizes revenues for the University to invest back into campus developments.

40

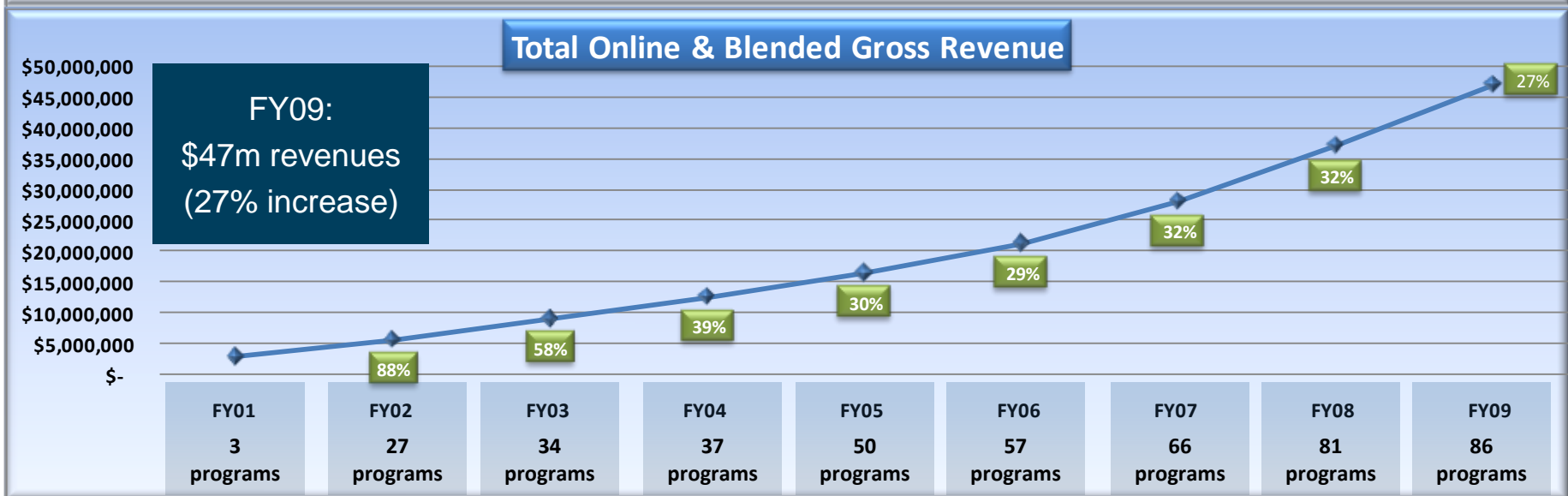
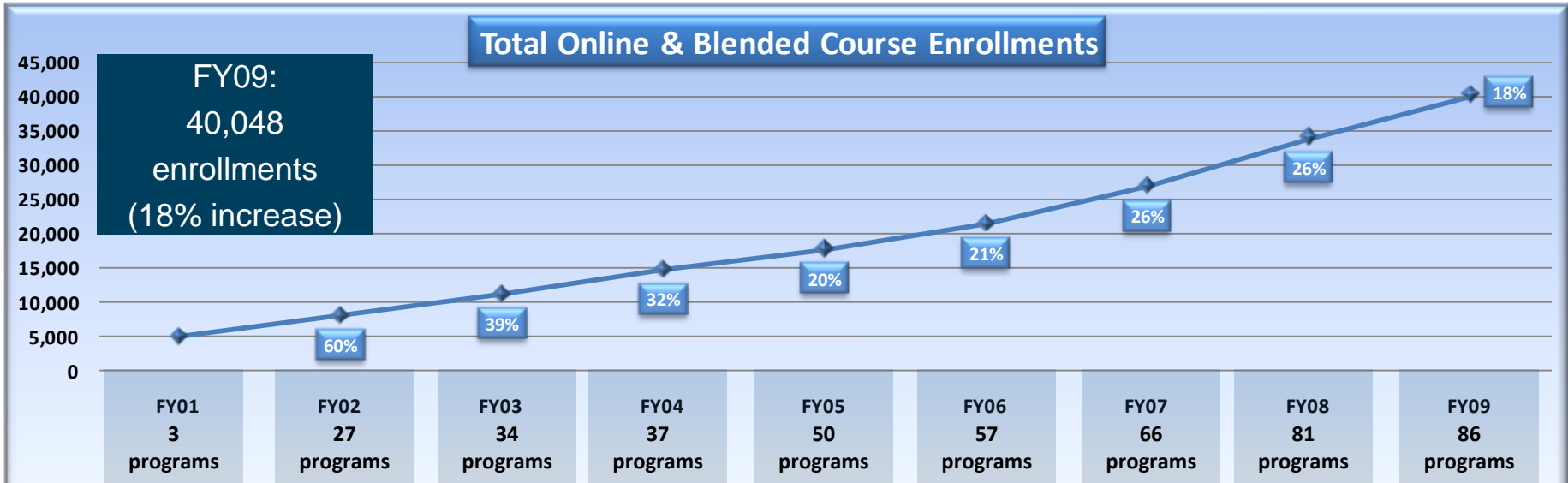
Impact of UMassOnline on UMass



University of Massachusetts

Amherst • Boston • Dartmouth • Lowell • Worcester • UMassOnline

UMassOnline Growth Trajectory



UMassOnline in 2009

42

- **93** online and blended programs and **1,500** courses (FY10 YTD):
 - **30** new programs in development
 - **4** new programs launched since July 2009
- Cumulative total revenue since founding UMassOnline = **\$180 million** (FY01-09)
- Double-digit growth in both enrollments and revenues. Generated **40,048** enrollments and **\$47m** in revenue (FY09)
- Delivered approximately 44,000 student inquiries to the campuses (FY09)
- Provides technology solutions to 15 campuses

The Rest of the Story

- UMassOnline, the Shrewsbury-based division of the University of Massachusetts, saw a **12 percent increase** in student enrollment in fiscal year 2011, the university said.
- Enrollment in the online program increased from 45,772 to **51,097** year-over-year and the program saw a 16 percent increase in revenue, from \$56.2 million to **\$65.2 million**.
- The four UMass campuses launched **22 new** online programs during the past year and recently inked a deal with the National Education Association that offers 15 online master's degrees to NEA members.
- It is the **10th year in a row** that UMassOnline has reported double-digit growth in both enrollment and revenues. The program was founded in 2001.

Expanding Access to UMass Education

44

- Online Learner Demographics at UMass
 - ▣ 22.2% of all UMass students took at least 1 online course in FY09
 - ▣ Under 35 yrs of age largest growing segment of online learners:
 - 40% of our students are under 25 yrs old
 - 72% of our students are under 34 yrs old
 - ▣ Approximately 1/3rd of our students come from outside Massachusetts
 - Both out of state and in state population growing steadily
 - ▣ 43% of prospective student inquiries come from outside of Massachusetts, with inquiries from every state within the US and over 184 countries

Foundations of UMassOnline Success

45

- UMassOnline is Embedded in the Academic Enterprise
 - In recognition of curriculum being a core faculty responsibility—online learning is offered under the academic authority of the campuses
 - On most campuses online learning is delivered through the divisions/offices of Continuing Education.
 - The divisions of Continuing Education are a conduit for academic programs on their campus
 - UMassOnline offers services and an extended brand for online programming.
 - Focus on quality and assessment has earned widespread credibility for quality among students, teachers, parents, and employers
 - Faculty development and support fostered at the system and campus level
 - Significant grants for program and pedagogical development
 - Promoted as an opportunity for faculty to engage in cutting-edge technology and innovation

Foundations of UMassOnline

Success

46

- UMassOnline offers strong resources, support and infrastructure to make online as easy as possible for faculty and students
 - ▣ Sound business models to provide incentives to faculty, departments and deans
 - ▣ Robust, user friendly infrastructure that incorporates and accommodates system/campus needs to scale
 - ▣ Aggressive brand and market development
- Focus on students' needs
 - ▣ New technologies and approaches to education will help transform the role of the learner from passive recipient and consumer into co-creator, which is increasingly what our economy demands and what our learners expect.

UMassOnline: Examples of Success

47

Example 1: RN to BS Program Revitalization

- ❑ **60 credit UMass Boston RN to BS** was revitalized by online education. Near-closure in 2002. Converted to online delivery 2003.
- ❑ Today: Attracts local and national students (528 student inquiries in FY09)
- ❑ Converts and retain students (Retention rate 88%)
- ❑ Provides access (159 enrolled FY05, 428 enrollments currently (FY10); goals to increase to 1,000 in FY11.
- ❑ Increases revenues for the University and responds market need (e.g., nursing shortage).
- ❑ 90% of the revenues generated remain on campus

UMassOnline: Examples of Success

48

Example 2: Professional Science Master (PSM) Grant

- UMass awarded a **\$124,200** grant to develop **10 PSM** degrees, combining interdisciplinary academics, industry experience, and practical business and communications skills vital to the Massachusetts innovation economy.
- Plans call for significant portion of PSM courses to be offered primarily through UMassOnline to provide blended experience.
- **Life sciences** indentified as one of the fastest growing high-potential sectors of the Massachusetts economy.
- UMass produces more life sciences undergraduates than any other Massachusetts institution.
- Grant funding has been applied to the Online “Plus” courses, and UMassOnline has committed \$100,000 to support additional course design and development through contestable funding for the campuses.

UMassOnline: Examples of Success

49

Example 3: Sloan Foundation Blended Learning Grant

- Through the Sloan Foundation, UMassOnline was awarded \$650k national grant to expand access through blended learning
- Grant launched 10 new programs, responsive to market need, that blended face-to-face classroom elements with online education
- Blended programs reduce campus overhead and classroom limitations and provide increased access and flexibility for the student
- Blended programs have generated close to \$2m* in revenues within its first 2 years

*FY09 Enrollment/revenue data

50

Looking Ahead

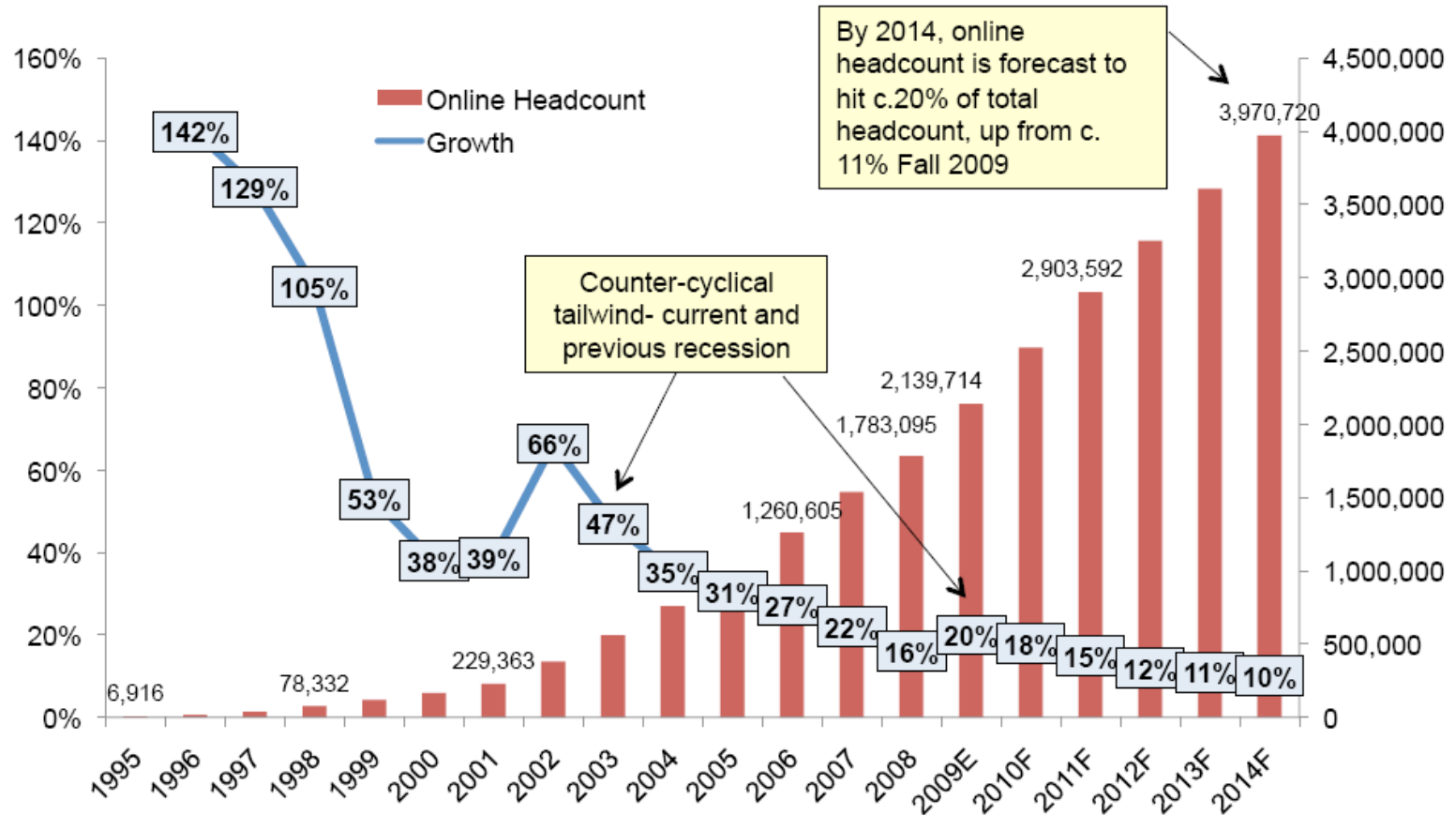


University of Massachusetts

Amherst • Boston • Dartmouth • Lowell • Worcester • UMassOnline

What's in the 'Distance' for Online Education

To date, online is both acyclical and counter-cyclical; low penetration/ improving brand combination should perpetuate pattern five years out



Online significance in the adult market- Eduventures estimates that in Fall 2009, online headcount represents c.24% of total adult (aged 25+) headcount at degree-granting schools; and is forecast to hit 35-40% by 2014

The Rise of the For-Profit University

- During the 10 years spanning from 1996-1997 to 2006-2007 the total number of accredited degree granting institutions grew approximately 7.5%,
- The number of public institutions decreased slightly, while private institutions increased by almost 14%.
- Within the private sector, the number of accredited non-profit institutions decreased by more than 3%, while accredited private for-profit institutions grew by over 60%.

Table 1: Changing Profile of US Accredited Degree Granting Institutions

Year	All Institutions	Public	Private	Private Non-Profit	Private For Profit
1996-1997	4009	1702	2307	1693	614
2006-2007	4314	1688	2626	1640	986
% Change	7.61%	-0.82%	13.83%	-3.13%	60.57%

[1] 2007 Digest of Educational Statistics: http://nces.ed.gov/programs/digest/d07/tables/dt07_255.asp

Future Online Learning Trends

53

- **Social and Mobile Learning:**
- Web 2.0 enable tools allow enhanced opportunity for collaborative authoring and for personal publishing. Social software coupled with mobile learning and geo-tagging enhances the flexibility associated with online learning, while opening opportunities for infusing virtual space with coherent elements of the physical world.
- **Personal Learning Environments:**
- There is a notable trend toward the use of small, flexible and inexpensive learning tools that are becoming available to teachers and learners over the coming years. Learning is a very personal activity. We all learn differently, have different motivations, desired outcomes, standards for success, and capacity. Until recently, most of us were forced to engage in rather standardized forms of education “delivery,” during which the learner’s role was principally that of a consumer. New technologies and approaches to education will help transform the role of the learner from passive recipient and consumer into co-creator, which is increasingly what our economy demands and what our learners expect.
- **Open Access and Open Educational Resources:**
- Creative Commons, WikiEducator, and other open access projects
- Enabled the creation, distribution, and modification of quality educational resources.
- online learning & digital media => open resources & advantages to alternative licensing, distribution, and management of intellectual assets.

Creating the Future

- Creating strong Universities to lead us out of the great recession.
- Leading the world in the proportion of college graduates.
- Distance learning is nothing less than a juggernaut.
- Most Universities are struggling with their financial model
- Many (but not all!) traditional universities are struggling to understand the strategy.
- For-Profit Universities are stepping in to fill the vacuum, but are increasingly under attack for their poor performance on retention, persistence, and graduation rates and for their poor use of federal financial resources.

Thank you

- On-line Education- that which was once peripheral is now strategically important.
- Too many leaders of traditional universities know this **should be** strategic, but do not know enough to actually **make** it strategic.
- Distance learning success requires:
 - **Vision, support and leadership** from the top of the organization,
 - A learner-centered environment
 - Well-defined roles where academics, technologists, and support staff are encouraged to collaborate and do the work that they each do best.
- We **all** have work to do!