

188 Whitten Road Augusta, Maine 04330 207.622.3066 (telephone) 866.622.3066 (toll-free) 207.622.3053 (facsimile) www.MELMACFoundation.or

# SUMMARY OF STUDY OF STUDIES July 2002

in collaboration with

FOUNDATION STRATEGY GROUP, LLC

20 Park Plaza, Suite 1127 Boston, Massachusetts 02116 617.357.4000 (telephone) 617.357.4007 (facsimile) www.FoundationStrategy.com



## **Studies Summarized**

| Page | Study  | Date | Source   |  |
|------|--|------|--|--|
| 3    | A Decade of Progress and Some Lessons Learned  | 2001 | Maine Education Symposium                      |  |
| 4    | Measures of Growth 2002  | 2002 | Maine Development Foundation                   |  |
| 5    | Maine Kids Count: 2002 Data Book   | 2002 | Maine Children's Alliance                      |  |
| 6    | The Condition of K-12 Public Education in Maine  | 2002 | Maine Education Policy Research Institute, USM |  |
| 7    | Quality Educators: The Best Opportunity for Maine Children,<br>Report of the K-12 Educator Recruitment and Retention<br>Commission | 2001 | Maine Legislature                              |  |
| 8    | Maine's Disappearing Youth: Implications of a Declining Youth Population   | 2002 | Maine Leadership Consortium                    |  |
| 9    | Barriers to College in Maine Discussion Groups   | 2001 | Mitchell Institute                             |  |
| 10   | Aspirations Survey - Data from 60,000 Students Representing<br>Every County in Maine, October 2001                                 | 2001 | National Center for Student Aspirations        |  |
| 11   | Survey of Maine Citizens Who Have Not Attained a College Degree  | 2001 | Maine Technical College System, SMS            |  |
| 12   | Maine's Labor Force Analysis Regions   | N/A  | N/A  |  |
| 13   | A Fresh Look at College Going Rates in Maine   | 2000 | Finance Authority of Maine                     |  |
| 14   | Degree Recipients Older, Census Shows  | 2001 | Bangor Daily News                              |  |
| 15   | Comparisons of Higher Education Information for New England States   | 2001 | Maine Education Policy Research Institute, USM |  |
| 16   | Higher Education Achievement in Maine  | 1998 | Maine Development Foundation                   |  |
| 17   | Report of Blue Ribbon Commission on Postsecondary Attainment   | 2002 | Maine Legislature                              |  |
| 18   | Higher Education for All Maine People  | 2001 | Maine Center for Economic Policy               |  |
| 19   | The Community College Gap in Maine Higher Education  | 1998 | Maine Center for Economic Policy               |  |
| 20   | The Public Policy Dilemma for Financing Opportunity for Higher Education in Maine  | 1997 | Finance Authority of Maine                     |  |
| 21   | 30 and 1000: How to Build a Knowledge-Based Economy in Maine and Raise Incomes to the National Average by 2010                     | 2001 | State Planning Office                          |  |

### "A Decade of Progress and Some Lessons Learned" – Maine Education Symposium

### **Study Topics**



## Quantitative Data and Trends

 Performance data focused on the accomplishments of Maine students, particularly at the K-12 level, and the remaining challenges, particularly regarding the share of K-12 students not excelling on exams and postsecondary enrollment and attainment

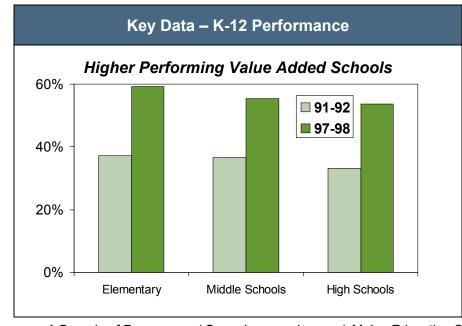
### **Key Trends**

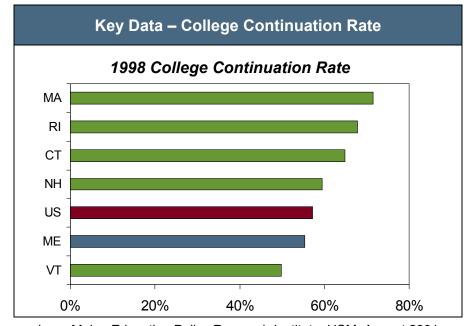
#### **Accomplishments**

- Increasing MEA 4<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup> grade performance
- High percent of HS students taking Algebra 2 or equivalent and Chemistry by graduation
- · High public HS graduation rate
- Increasing average SAT scores
- Increasing postsecondary enrollment plans of HS seniors
- Average NAEP reading and math scores rank in the top 3 nationally

### Challenges

- 9-12% of Maine K-12 students do not meet proficiency in writing on the MEA
- 29-39% of Maine K-12 students do not meet proficiency in math on the MEA
- Approximately 1/4 of students do not achieve basic proficiency on the NAEP
- Math SAT scores are below national averages
- Other New England states outperform Maine on the AP exam
- Only 30% of Maine's current 9<sup>th</sup> graders will attain a postsecondary degree





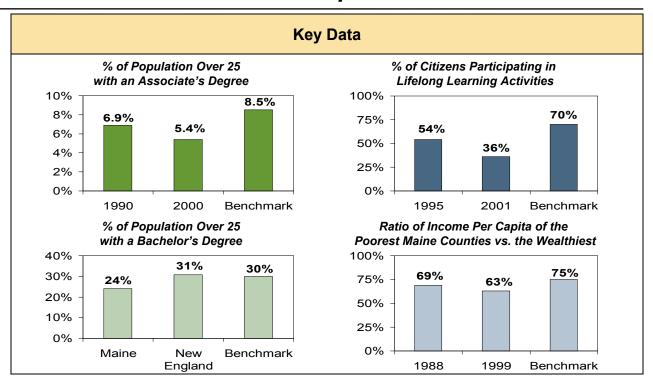
Source: A Decade of Progress and Some Lessons Learned, Maine Education Symposium - Maine Education Policy Research Institute, USM, August 2001

### "Measures of Growth 2002" - Maine Development Foundation

### **Study Topics**



- Quality of Life indicators for all Maine citizens
- Measurable outcomes for performance and select benchmarks



### **Observable Trends**

## Positive Trends and Performance Relative to Benchmarks

- · High school completion rates are high
- Two-thirds of Maine jobs earn a living wage
- The poverty level across the state is declining and lower than the national average
- · Strong citizen participation in community activities
- Civic engagement is extremely high voter turnout in recent years has been highest in the nation

## Negative Trends and Performance Relative to Benchmarks

- Post-secondary degree attainment is low overall and Associate and Graduate degree attainment is declining
- · Lifelong learning is declining
- · County income disparity is growing

### "Maine Kids Count: 2002 Data Book" - Maine Children's Alliance

### **Study Topics**



## Quantitative Data and Trends

 Data tracking the well-being of Maine children over time

### **Key Trends**

### *Improvement*

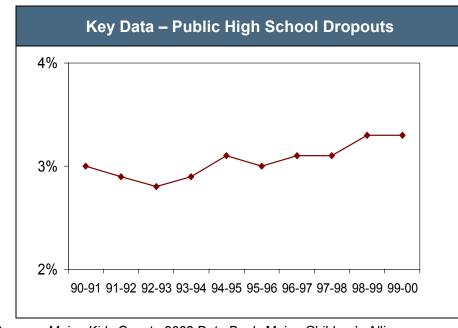
- · Infant mortality rate
- Rate of low birthweight births
- Rates of child and teen deaths and teen violent deaths
- Uninsured children
- · Arrests of children
- Teen pregnancy rate

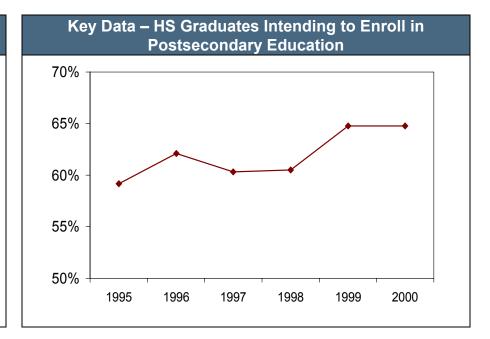
### **Mixed Progress**

- Unemployment rate
- % of jobs in Maine that pay a livable wage
- Child poverty rate
- % of Maine children living in low-income families and receiving reduced-price school lunch
- Median household income

### **Immediate Attention**

- Children staying in homeless or emergency shelters
- Number of children who are victims of child abuse and neglect
- Child and teen suicide rate
- Numbers of children with disabilities





Source: Maine Kids Count: 2002 Data Book, Maine Children's Alliance

### "The Condition of K-12 Public Education in Maine" -

### Maine Education Policy Research Institute

### **Study Topics**



## Quantitative Data and Trends

 General information about K-12 public education in Maine, including indicators covering educational context of the K-12 public schools, resources, and results

### **Key Data - K-12 Resources and Results**

Maine's students are top performers in the National Assessment of Educational Progress

#### Science

- 4<sup>th</sup> graders rank among top 6 states
- 8<sup>th</sup> graders score above national and northeast averages

#### Math

 4<sup>th</sup> and 8<sup>th</sup> graders scored above the national and northeast averages

### Reading

ranked 1st nationally • 8th graders

4<sup>th</sup> graders

 8<sup>th</sup> graders ranked 2<sup>nd</sup> nationally

### Writing

- 4<sup>th</sup> graders ranked 4<sup>th</sup> nationally
- 8<sup>th</sup> graders ranked 2<sup>nd</sup> nationally

### **Key Data – Preparing for College**

#### SAT Exams

Maine students score slightly below the national average in math and equal to the national average in verbal. Scores are higher for students whose parents have high levels of educational attainment

#### AP Exams

Achievement in qualifying scores (3 or above) slightly exceeds the national average. However, a smaller percentage of students take the exams, despite high availability of AP courses

#### **Enrollment Plans**

65% of Maine's public school graduates in 2000 intended to enroll in some type of postsecondary education program. This is an increase from 59% in 1995.

### "Quality Educators: The Best Opportunity for Maine Children" - Maine Legislature

#### **Study Topics**



## Quantitative Data and Trends

 Data on supply and demand, retention, and recruitment for teachers and administrators



### Recommended Strategies to Address Needs

 Recommendations of the Legislative Commission to address shortages

### **Key Trends**

#### **Teacher Shortages**

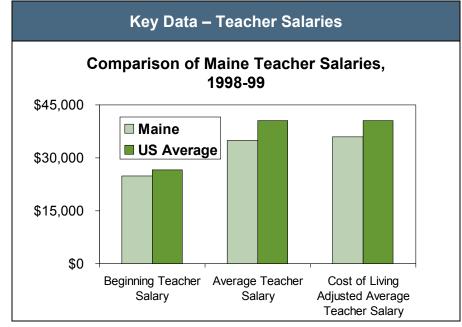
- Foreign Languages
- Special Education
- Math
- Science
- Guidance/Counseling
- Librarians
- Technology Coordinators/ Specialists
- Visual/Performing Arts

### Typical Teacher in Maine

- White female
- 43 years old
- Having close to 16 years of teaching experience
- Some education beyond a Bachelor's degree, earned in Maine

#### **Concerns**

- Large number of teachers near retirement in all regions
- Under-prepared teachers in current shortage areas
- Poor competitive position nationally in recruiting
- Programs preparing elementary teachers, not a shortage area



### **Key Recommendations**

- Increase salaries and study total compensation schedules
- Improve retirement system and provide increased incentives
- Centralize recruiting and retention programs within DOE
- Offer scholarships for students who teach in Maine for 3 years
- Develop alternative routes to certification
- Provide support for new teacher and administrator induction programs
- Increase the availability of flexible jobs for educators
- Support teachers seeking National Board Certification
- Expand University of Maine coursework for educators
- Establish a Center for Inquiry on School Leadership
- Raise the status of the education profession

Source: Quality Educators: The Best Opportunity for Maine Children, Maine Legislature, K-12 Educator Recruitment and Retention Commission, April, 2001

### "Maine's Disappearing Youth" - Maine Leadership Consortium

### **Study Topics**

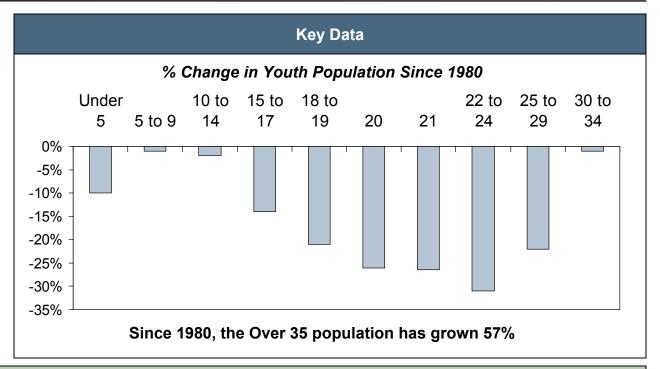


Discussion of Important Success Factors



Quantitative Data and Trends

Analysis examining
 Maine's declining youth
 population, due to a
 declining birth rate,
 increasing youth out migration and slowing youth
 in-migration



#### **Discussion of Factors**

#### **Factors**

A Falling Birth Rate Increasing Youth
Out-Migration

Decreasing Youth In-Migration

### **Motivations for Increasing Youth Out-Migration**

- "Leaving the state is becoming part of the youth culture."
- "The most likely community to suffer a youth brain drain is in an isolated urban area, with a well-educated population that spends a lot on their schools...an accurate description of many areas in Maine."
- Pursuit of higher education and pursuit of better jobs are the primary motivations for leaving

### **Implications**

- Labor force
  - Shortage in entry level positions typically filled by young workers, hurting tourism/recreation first
  - Baby boom retirees leave a smaller workforce behind
- Public education system
  - A 9% decrease in enrollment is expected from 1997 to 2009 – school closings, district consolidations, and declining state aid are anticipated
- Culture
  - Potential decay of communities' vital institutions
  - Falling educational attainment statewide, as those most likely to leave are the higher educated

### "Barriers to College in Maine" Discussion Groups – Mitchell Institute

### **Study Topics**



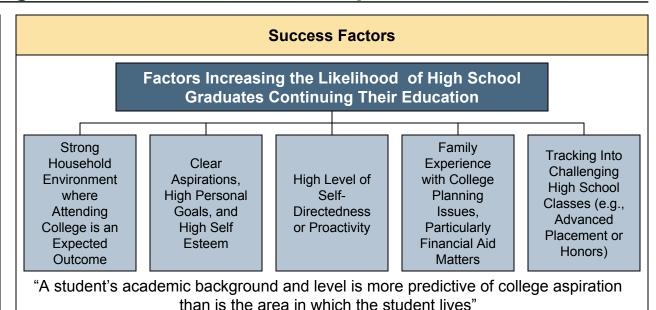
Discussion of Important Success Factors

 Observations on students' college aspirations and planning



Recommended Strategies to Address Needs

 Resources students have found useful in college planning



### **Recommended Strategies**

- 1. Most useful resources as cited by students in AP/Honors courses (proactive and self-directive)
  - Borrowing various books and guides from the guidance office
  - Visiting college prep websites and/or sites of specific colleges
  - Using a special computer matching program or other 'test' to narrow college choices
  - Attending workshops on applying to college or advising sessions held by faculty
  - Making field trips to colleges for information sessions – mandatory or initiated by students and/or families

- 2. Useful resources cited by students in College Prep courses (generally responsive to suggestions)
  - Borrowing various books and guides from the guidance office
  - Using a special computer matching program or other 'test' to narrow college choices
  - · Spending in-school time on applications
  - Attending college fairs/school visits by admissions representatives
  - Talking to family, friends, and older students/peers
- 3. Useful resources cited by students in General/ Vo-tech courses (passive)
  - Limited

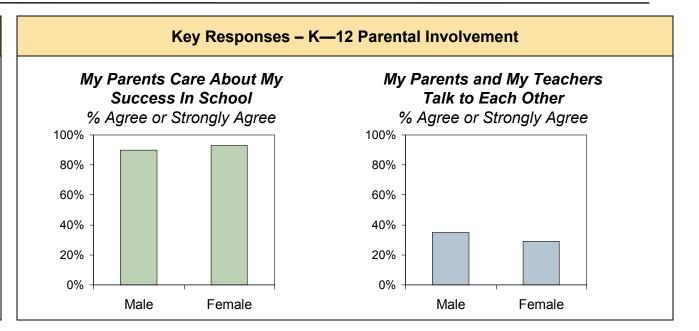
### Aspirations Survey – National Center for Student Aspirations

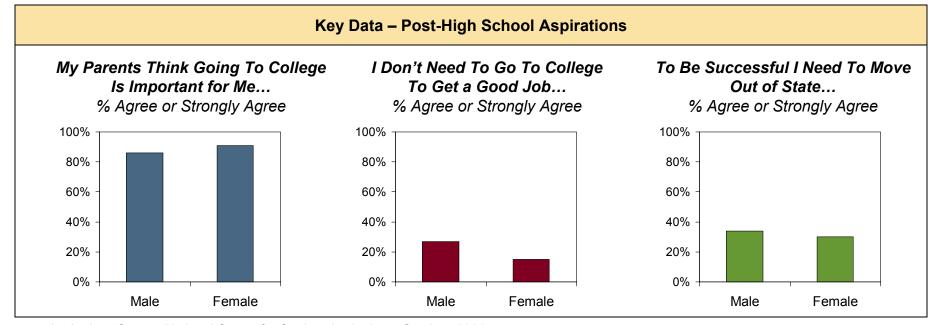
### **Study Topics**



## Quantitative Data and Trends

 Aspirations survey data collected from over 60,000 students representing every county in Maine





Source: Aspirations Survey, National Center for Student Aspirations, October, 2001

### "Survey of Maine Citizens Who Have Not Attained a College Degree" –

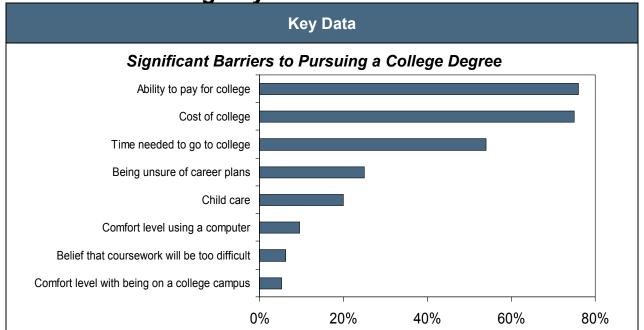
Maine Technical College System and SMS

### **Study Topics**



## Quantitative Data and Trends

Survey of Maine adults
 (18+) without a college
 degree about aspirations
 to continue their education
 and barriers to enrolling



### **Key Data**

### High Degree of Interest in Pursuing a Degree

- 53% are interested in pursuing a college degree
- 20% are very interested in attaining a degree representing 90,000 Maine adults (age 18-55)
- 56% of those interested in attaining a degree would likely go in 1 or 2 years and 56% are sure of what degree they would pursue

### **Financial Factors Are a Major Barrier**

- 30% report that money has been one of the principal reasons why they have not pursued a degree
- 92% report that *financial aid* would make pursuing a degree easier; 89% said *low cost of college*

### Time Availability Is Also a Major Barrier

- 81% report that a convenient location would help them go to college
- 56% indicated that the *ability to attend college part-time* would make obtaining a degree easier
- 56% indicated that evening or weekend courses would facilitate going to college

### **Support Services Would Make Going to College Easier**

- 75% said that small classes would make it easier to go to college
- 57% said help with coursework would make it easier
- Less than 10% cited comfort level on campus as a barrier

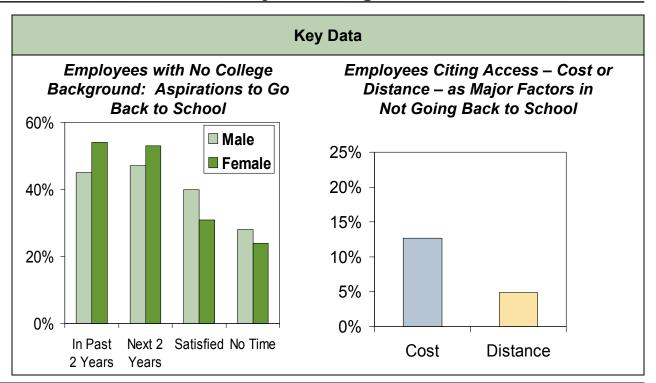
### "Maine's Labor Force Analysis - Regions"

### **Study Topics**



## Quantitative Data and Trends

 Survey data of Maine employees about educational attainment and aspirations



### **Observable Trends**

### **Aspirations**

- Employees with a college degree are more likely to have been back to school in the previous 2 years or plan to go in the next 2 years
- The primary reason cited by adults with no college for not going back to school is that they are satisfied with their current educational attainment; reason number two is a lack of time; cost and distance are not cited as primary reasons by the vast majority of respondents
  - For adults with some college, the reasons are the same

#### Access

- Only 13% of employees surveyed across the state agree that costs are too high to go back to school
  - Rates of agreement are highest in Hancock (23%) and Somerset (20%) counties
  - Rates are lowest in southern Maine
- Only 5% of employees surveyed across the state agree that distance is a major factor in not going back to school
  - Distance is most significant for residents of Franklin and Washington Counties (for both approximately 9% of respondents cited distance as a major factor)

### "A Fresh Look at College-Going Rates in Maine" - FAME

### **Study Topics**



Discussion of Important Success Factors



Quantitative Data and Trends

 Analysis examining Maine's low national ranking in terms of the percentage of adults with at least a bachelor's degree

#### **Discussion of Factors**

Low Percentage of Adults with at Least a Bachelor's Degree (significantly lower than national average)

Low College Going Rates of Recent HS Graduates?

- College-going rates of recent HS graduates are higher than 22 other states
- Enrollment at 4 –year institutions is above average; below average at 2-year institutions

Low Persistence (Those who start don't finish)?

Graduation rates from 4
year institutions are
above or near the
national averages;
technical colleges
exceed the national rates
for 2-year colleges

In-and Out-Migration and Population Changes?

- Net out-migration of first year freshmen from Maine
- Declining youth population
- Declining number of undergraduates enrolled

### **Key Data**

- The percentage of Maine adults with college degrees is significantly lower than the national average, lower than all but six states, and trending downward
  - Changes in the age structure of the state's population, it's in-and out-migration patterns, and possibly college graduation rates are bigger contributors than low high school graduation rates, poor preparation levels, or low college-going rates
- Maine's college-going rates are similar to those in other non-metropolitan, small town or rural states
- Recent HS graduates in Maine enroll at 4-year colleges at a rate higher than the national average

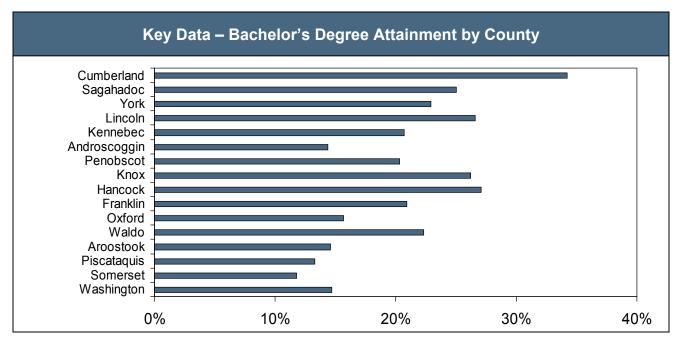
- Enrollment at public technical colleges is lower than the national average for 2-year programs
  - Technical and community colleges play a relatively minor role in Maine
  - Those who would in other states enroll in associate degree programs at community colleges instead enroll at an associates program at a 4-year institution this hybrid structure affects graduation rates from these public 4-year institutions
- Recent HS graduates leave the state to enroll at a 4-year institution, rather than a community or vocational school
- There is a net out-migration of HS graduates for school

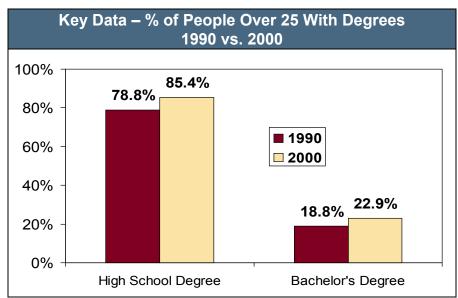
### "Degree Recipients Older, Census Shows"- Bangor Daily News

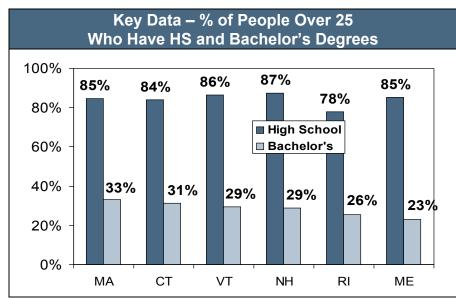
### **Study Topics**

## Quantitative Data and Trends

- Data illustrating Maine's gains in degree attainment from 1990 to 2000
- Comparisons between Maine's degree attainment by county and Maine relative to other New England states







Source: Degree Recipients Older, Bangor Daily News, 2001

## "Comparisons of Higher Education Information for New England States"

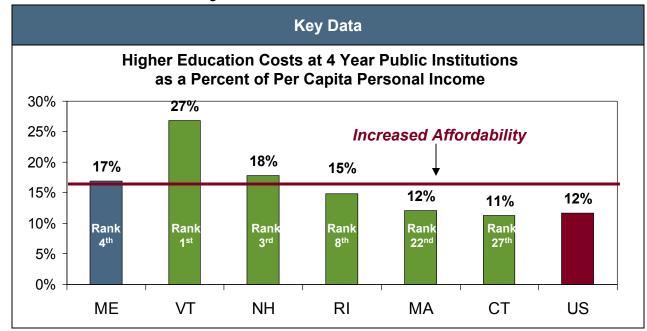
### Maine Education Policy Research Institute

### **Study Topics**



## Quantitative Data and Trends

 Data comparing the performance of all 6 New England states and the US average, focused on college degree attainment and factors affecting enrollment patterns such as tuition cost and state support



| Key Data – Rankings for Multiple Factors  |                             |                        |  |  |  |
|---|-----------------------------|------------------------|--|--|--|
| Factor  | National<br>Ranking         | New England<br>Ranking |  |  |  |
| Percent of population 25 years or older with at least a Bachelor's degree               | 35 <sup>th</sup>            | 6t <sup>h</sup>        |  |  |  |
| Percent of population 25 years or older with at least an Associate's degree             | 26 <sup>th</sup>            | 6 <sup>th</sup>        |  |  |  |
| Percent of 1998 High School graduates who enroll in college/university after graduation | 30 <sup>th</sup>            | 5t <sup>h</sup>        |  |  |  |
| Percent of High School graduates who enroll outside resident state in 1998              | 7 <sup>th</sup>             | 4 <sup>th</sup>        |  |  |  |
| Freshman net migration rates in 1998 (enrollment in-state less enrollment out-of-state) | 47 <sup>th</sup> (net loss) | 5 <sup>th</sup>        |  |  |  |
| Average undergraduate tuition and fees for full-time students                           | 11 <sup>th</sup> (high)     | 5 <sup>th</sup>        |  |  |  |
| Average tuition and fees for community/technical colleges in 1998-99                    | 2 <sup>nd</sup> (high)      | 2 <sup>nd</sup>        |  |  |  |

Source: Comparisons of Higher Education Information for New England States, Maine Education Policy Research Institute, USM, October 2001

© MELMAC Education Foundation

### "Higher Education Achievement in Maine" – Maine Development Foundation

### **Study Topics**



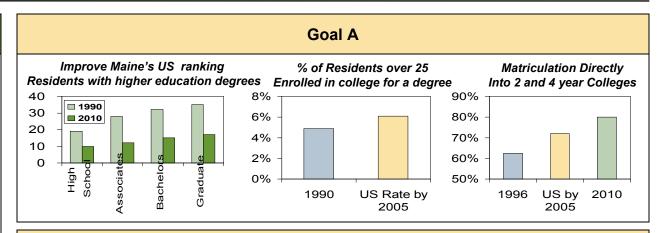
## Quantitative Data and Trends

Suggested goals for higher education



### Recommended Strategies to Address Needs

 Variety of approaches thought to impact higher education attainment



#### Goal B

- Strengthen higher education institutions to assure students and graduates succeed in work and society
  - Increase student, graduate, and employer satisfaction with higher education
  - Increase the number of programs receiving national accreditation

### **Recommended Strategies**

- 1. Support learning results
  - A. Implement career preparation component
  - B. Connect *learning results* to college admission standards
- 2. Expand career planning and counseling start early and integrate work experience
- 3. Improve college student retention programs with a particular focus on freshman year
- 4. Launch a public information and education campaign
- 5. Facilitate targeted community programs to raise higher education participation rates

- 6. Provide low cost access to college alleviate
  Maine's competitive disadvantage, the lack of a low
  cost entry opportunity, like community colleges
- 7. Continuously improve the core curriculum
- 8. Increase higher education program accountability and assessment
- 9. Establish a Maine Partnership for Higher Education in the 21<sup>st</sup> Century

Source: Maine Development Foundation's Task Force on Higher Education Achievement, March 1998

### Final Report – Blue Ribbon Commission on Postsecondary Educational Attainment

### **Study Topics**



### Recommended Strategies to Address Needs

 State support recommended to increase educational attainment of Maine citizens

### **Key Factors**

Postsecondary education is a prerequisite for the kinds of jobs that make achieving middle class status possible The State plays a critical role in ensuring postsecondary opportunity – improvements must start at the State level

An overall vision for improving postsecondary educational options is needed – for both job training and education for its own sake

Insights into the aspirations and barriers to postsecondary education are needed to develop a successful plan – for K-12 and nontraditional students

#### **Recommended Strategies**

- 1. Create a long term vision for higher education in the state
- Create a permanent voice the Higher Educational Attainment Council - to establish a vision for, advocate on behalf of, and promote higher education in Maine
- 3. Develop a plan to accelerate implementation of the Career Preparation component of *Learning Results*, integrated into the curriculum; measure its success versus best practices or benchmarks. Mobilize retiree and former student volunteers to counsel current students on higher education
- 4. Identify best practices to increase students' aspirations
- 5. Develop a plan to support adult learners, increase their postsecondary access, and provide remediation for students who graduate from high school unprepared to continue on
- 6. Support employers counseling employees on career planning and educational choices

- 7. Double the Maine Student Grant Program in 5 years
- 8. Consider establishing new student financial assistance programs
- 9. Consider using tax credits to encourage private giving to educational endowments used to provide student aid
- 10. Consider tax credits for graduates who remain in Maine and for employers who offer tuition reimbursement
- 11. Convene higher ed institutions do develop a plan to improve persistence
- 12. Convene entities focused on developing an R&D capability
- 13. Regularly examine the capacity of postsecondary institutions
- 14. Periodically augment funding for public higher ed institutions for quality and capacity of services

### "Higher Education for All Maine People" - Maine Center for Economic Policy

### **Study Topics**



## Quantitative Data and Trends

 Trends pertaining to Maine citizens' attainment of and access to higher education



Recommended Strategies to Address Needs

 Variety of approaches thought to contribute to higher education for all

### **Key Data**

Approximately half of high school graduates do not go on to college

Approximately half the students who enroll do so out-of-state

Half of those who enroll quit before getting a degree

Over 75% of Maine adults do not have a Bachelor's degree

#### HOWEVER ...

Half of Maine people between 18 and 55 without a degree have some interest in getting one

Over 90% of students and parents agree that 'continuing education past high school is a necessity'

### **Recommended Strategies**

## 1. Invest adequate funding strategically in public higher education

- Use an objective cost-benefit analysis to make investments that maximize the social and economic benefits to Maine people
- Support cost-effective programs that increase graduation rates
- · Realign and combine Maine's public institutions

## 2. Turn the Technical College System into a first-rate Community College system that:

- Creates a low-cost entry point to higher education
- Provides tuition waivers for Maine people living below the federal poverty level
- Includes institutions within the University of Maine system that meet objective criteria distinguishing a community college

### 3. Create an Office of Public Advocate for Higher Education to:

- Serve as an independent source of accurate up-to-date information upon which the Governor, legislature and the people of Maine can rely
- Represent and advocate for Maine people in the interest of higher education for all
- Monitor higher education investment spending for cost-effectiveness and public benefit, making recommendations for efficient investment without institutional bias

Source: Higher Education for All Maine People, Maine Center for Economic Policy, 2001

### "Community College Gap in Maine Higher Education" – ME Center for Economic Policy

### **Study Topics**



## Quantitative Data and Trends

 Economic value of higher education and cost as a barrier to college



### Recommended Strategies to Address Needs

 Key policy changes recommended in the public education systems

### **Key Data**

## An educated workforce is vital to economic growth:

Workers with a bachelor's degree earn \$1.3M more over a lifetime than those with a HS diploma In families where 1 parent has postsecondary education, only 4% of children live in poverty; in ME 16% live in poverty

## Cost, not aspirations, is the chief barrier to college:

More than 80% of
Maine's 11th
graders intend to
enroll in
postsecondary
education; Lack of
money is most
frequently cited as
a barrier

Maine's public college tuition is substantially higher than comparable states; Maine has the 7th highest tuition for 2-year public institutions in the nation

#### Vision

Transforming a post-secondary education:

Picture a post-secondary education that serves as a flexible infrastructure for meeting diverse needs in a time of rapid change. In such a system, all segments of higher education – community colleges, universities, research institutions, technical training schools – would be focused on working together to stay abreast of changing needs and market demand. Traditional boundaries would give way to new alliances among various segments of the post-secondary system and a stronger sense of partnership with K-12 education."

Education Commission of the States

### **Recommended Strategies**

"The highest state budget priority should be support of higher education. No other issue will so determine the future quality of life for our citizens"...Key recommendations:

- Offer low-cost two-year programs to serve as an entry point to higher education and resolve issues of nontransferable credits between public institutions
- Hold secondary schools accountable for the quality of education and reduce remedial work required at the post-secondary level
- Support community college partnership plans of the University and Technical College systems (transfer agreements and coordination of curriculum)

# "The Public Policy Dilemma of Financing Opportunity for Higher Education in Maine"— College Awareness Project, FAME & Postsecondary Education OPPORTUNITY

### **Study Topics**

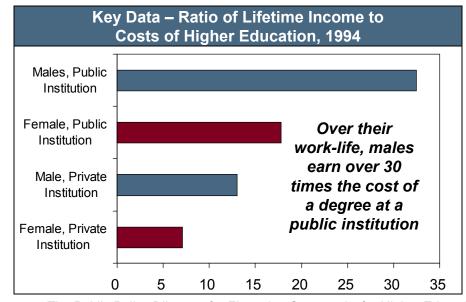


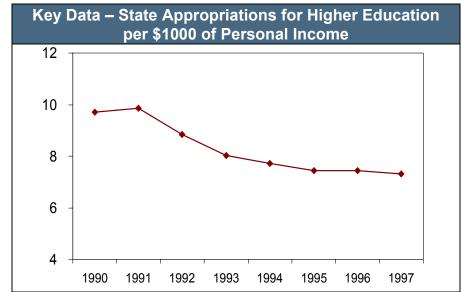
## Quantitative Data and Trends

 Data highlighting connections between attainment of higher education, economic factors, and public support for higher education

### **Key Trends**

- Americans must get substantial amounts of postsecondary education and/or training to qualify for the best paying jobs that the economy has to offer
- The federal government and all 50 states have been sharply curtailing social investments in postsecondary education since the end of the 1970s
- Costs of higher education have been shifted since 1979 from taxpayers to students
  - Federal level: shift from grant aid to students, to educational loans
  - State level: shift of state budgets away from higher education, increasing tuition
- College completion has become more unequally distributed across levels of family income – students from average and lower income families encounter increasing financial barriers to higher education
- As an investment, college is as good a buy today as it has ever been lifetime income gains from college education have kept pace with costs, and the labor market for the non-college-educated has collapsed since the early 1970s





Source: The Public Policy Dilemma for Financing Opportunity for Higher Education in Maine, Finance Authority of Maine and Postsecondary Education

### "30 and 1000: How to Build a Knowledge-Based Economy in Maine and Raise

### Incomes to the National Average" - State Planning Office

### **Study Topics**



Recommended Strategies to Address Needs

 Recommended steps to address two factors that are linked to raising Maine's per capita income and building a knowledge-based economy:
 Bachelor's degree attainment and investments in research and development



### **Recommended Strategies**

- 1. Increase the number of "knowledge workers" in Maine through education and attraction of talent
  - A. Increase the % of Maine's adults with high school diplomas from 89% in 2000 to 92% by 2005
  - B. Increase Associate degrees from 2,400 to 3,500 per year and Bachelor degrees from 6,000 to 9,000 per year, including Science & Engineering degrees from 900 in 1996-97 to 1,200 per year by 2010
  - C. Increase recent Science & Engineering graduates in Maine's workforce from 9,900 in 1996-97 to 20,000 by 2010

- 2. Create the equivalent of a tier-one research university through alliances between and among the University of Maine System and the state's nonprofit research labs
  - A. Increase total spending by these institutions from \$88 per employed working in Maine to \$200
- 3. Clear away barriers and provide incentives to encourage investment by industry in R&D
  - A. Increase R&D spending by industry to \$835 per worker (total spending by industry to \$575M per year, versus \$82M in 1998)

Source: 30 and 1000: How to Build a Knowledge Based Economy in Maine and Raise Incomes to the National Average by 2010, State Planning Office Report,