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An Educated Workforce for a 21st Century Economy

Public Policy Opportunities for Higher Education in Maine

Prepared for

the Maine Compact for Higher Education and Maine Community Foundation

by the Senator George J. Mitchell Scholarship Research Institute



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Sponsors

The Maine Compact for Higher Education is a non-partisan, independent organization created by the Maine Community Foundation and Maine Development Foundation in 2003 in response to Maine's higher education challenge. The 21st century economy requires a highly educated workforce, and Maine's working age adults have the lowest postsecondary attainment levels in New England. The Compact's mission is to champion higher education attainment.

The Maine Community Foundation serves thousands of people who share a common mission: improving the quality of life in our state. Individuals, families, businesses and organizations create charitable funds that help Maine meet the challenges of changing times. Maine Community Foundation grants cover the full range of nonprofit undertakings, with a special focus in the areas of education, the environment, civic engagement and economic development. Since opening its doors in 1983, the foundation has awarded more than \$150 million in grants and scholarships.

The core mission of the Mitchell Institute is to increase the likelihood that young people from every community in Maine will aspire to, pursue and achieve a college education. Each year, a Mitchell Scholarship is awarded to one graduating senior from every public high school in Maine who will attend a two- or four-year postsecondary degree program. Selection is based on academic promise, financial need and a history of community service. The Mitchell Scholarship Program has awarded nearly \$8 million in financial assistance to almost 1,800 Maine students since 1995. The Mitchell Institute Research Program seeks to evaluate the impact and outcomes of its scholarships and, more broadly, to learn about the obstacles that stand between Maine students and higher education and how best to navigate or remove those obstacles.

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Executive Summary

The Maine Compact for Higher Education and the Maine Community Foundation commissioned this paper to provide a framework for understanding, discussing and acting on higher education public policy issues in Maine.

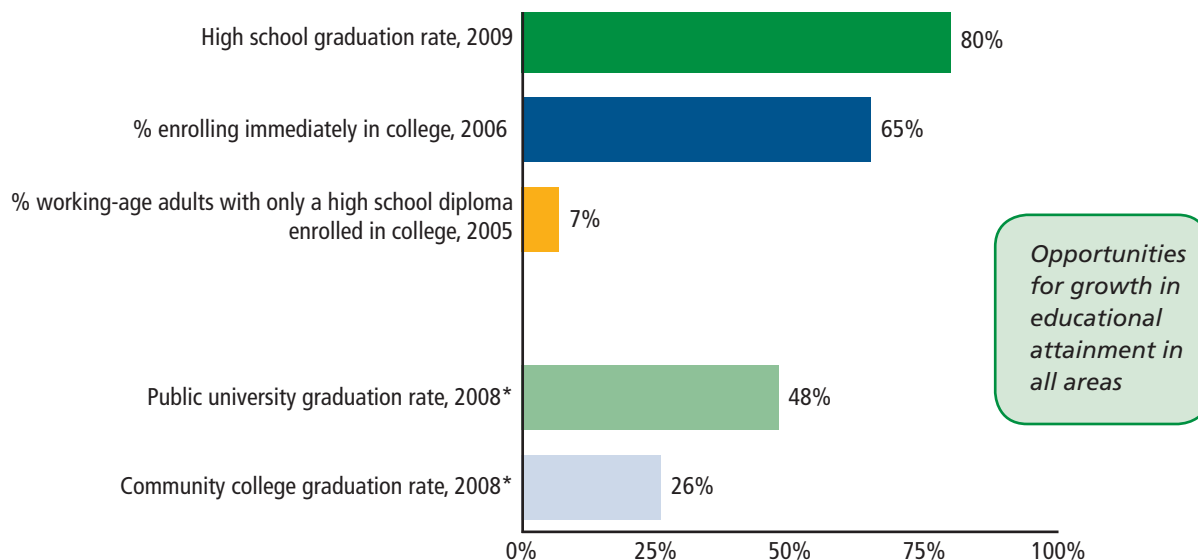
Goal

The Compact’s vision is that Maine workers will be among the best educated and highly skilled in America. This vision is built on the belief that education achievement is the catalyst and foundation for individual opportunity, sustainable economic growth, and a high quality of life. The Compact’s goal to achieve the vision is that the proportion of Maine’s workers who have earned a college degree or postsecondary certificate will exceed the New England average by 2020. This will require an additional 40,000 degree-holders above projections.

Making the Case: Economic Prosperity and Education Attainment

- Maine has the lowest postsecondary degree attainment in New England, and the lowest per-capita income. Within Maine, economic needs are most critical in the regions with the lowest educational attainment.
- Maine’s population is projected to stop growing by 2020, and our population of traditional-age high school and college students is projected to decline by 20% over the next decade.

COLLEGE PREPARATION, PARTICIPATION AND COMPLETION IN MAINE



*Graduation within 150% of normal program time (3 years for associate degrees and 6 years for baccalaureate degrees); does not include students who transfer and graduate from another institution.

Sources: Maine Department of Education, National Center for Higher Education Management Systems, National Center for Education Statistics—IPEDS Data Center

Four Key Public Policy Opportunities

I. Aligning Higher Education with Workforce Needs

- In Maine, jobs requiring postsecondary education or training are projected to grow by 15,000 over the next decade, while jobs for high school graduates and dropouts combined will increase by only 2,200.
- Unemployment—a key measure of workforce demand—has risen by more than 50% during this decade for Maine workers with a high school diploma or less. Unemployment of workers with some college education has remained stable, and unemployment has dropped for workers with a bachelor's degree.

What public policy approaches will ensure that Maine higher education best serves workforce needs?

II. Financial Access to College

- In the past twenty years, college costs nationally have increased at a rate four times faster than the consumer price index, far outpacing even the growth of medical care costs. On average, the cost of college has increased by 38% in Maine over the past decade alone.
- Unmet financial need for college is on the rise for lower-income families. Total unmet financial need among all Maine undergraduate students five years ago was estimated at \$117.4 million—or \$1,692 per student—for one year of college.

What public policy changes will allow more students with financial need to go to college?

III. State Support for Higher Education

- Relative to personal income, Maine's fiscal support for higher education has dropped by 40% since 1990. By this measure, state support for higher education in 2010 reached its lowest level since 1967.

Given demographic trends, what public policy decisions will provide sufficient financial support for higher education in Maine?

IV. Multiple Pathways to Higher Education

- A minority of Maine's high school students demonstrate academic readiness for college. Fewer than half of Maine 11th graders meet or exceed state learning standards each year.
- Nearly one-half of first-time students entering the Maine Community College System and one-quarter of those entering the University of Maine System need at least one remedial college course.
- Maine has 250,000 working-age adults with only a high school diploma. In 2005, however, less than 7% of these adults were enrolled in postsecondary education, placing Maine 42nd among the 50 states.

How can public policy strengthen multiple pathways to postsecondary education and training for both traditional-age students and adult learners?

Introduction

“[College] attainment rates cannot be improved simply by boosting performance within postsecondary education. They have to be tackled at the cross-sector level by increasing high school graduation rates, improving college-going rates, shoring up community-college degree production, improving transfer, beefing up baccalaureate production, and reaching out to older working adults. Governors are in the best position to lead this discussion among postsecondary, legislative, and business leaders...A gubernatorial debate is the perfect platform for this type of discussion.”

—Dennis Jones and Jane Wellman, “Breaking Bad Habits: Navigating the Financial Crisis,”
Change: The Magazine of Higher Learning, May-June 2010.

The Maine Community Foundation and the Compact contracted with the Mitchell Institute to research and author a paper to provide a framework for understanding, discussing and acting on the public policy issues that will most impact the achievement of the Compact’s goal to increase higher education attainment in Maine. A committee of key stakeholders developed an outline, solicited feedback and suggestions from a dozen Maine experts, and considered proposed areas of focus based on the extent to which they: 1) impact achievement of the Compact goal; 2) are influenced by public policy; and 3) center on postsecondary education.

Many issues around higher education and public policy were proposed and considered. Using the criteria above, the four issues selected and discussed in the following sections of this paper are:

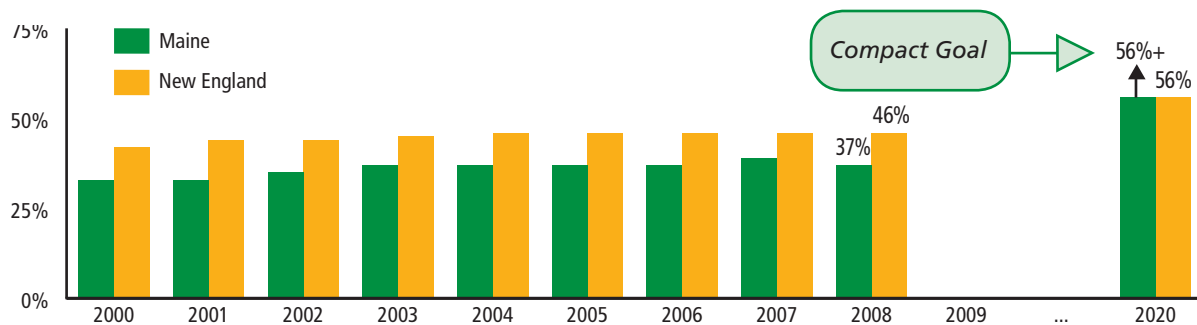
- Aligning higher education with workforce needs
- Financial access to college
- State support for higher education institutions
- Multiple higher education pathways

This paper describes critical issues facing the next governor and legislature of Maine. These issues will frame a gubernatorial candidates’ debate at the Compact’s Symposium in September 2010.

Goal and Purpose

The Compact's vision is that Maine's workers will be among the best educated and highly skilled in America. This vision is built on the belief that education achievement is the catalyst and foundation for individual opportunity, sustainable economic growth, and a high quality of life. The Compact's goal to achieve the vision is that the proportion of Maine's workers who have earned a college degree or postsecondary certificate will exceed the New England average by 2020. This will require an additional 40,000 degree-holders above projections.¹

WORKING-AGE ADULTS WITH A COLLEGE DEGREE: MAINE AND NEW ENGLAND



Source: U.S. Census Bureau, Decennial Census (2000) and American Community Survey (2001-2008)

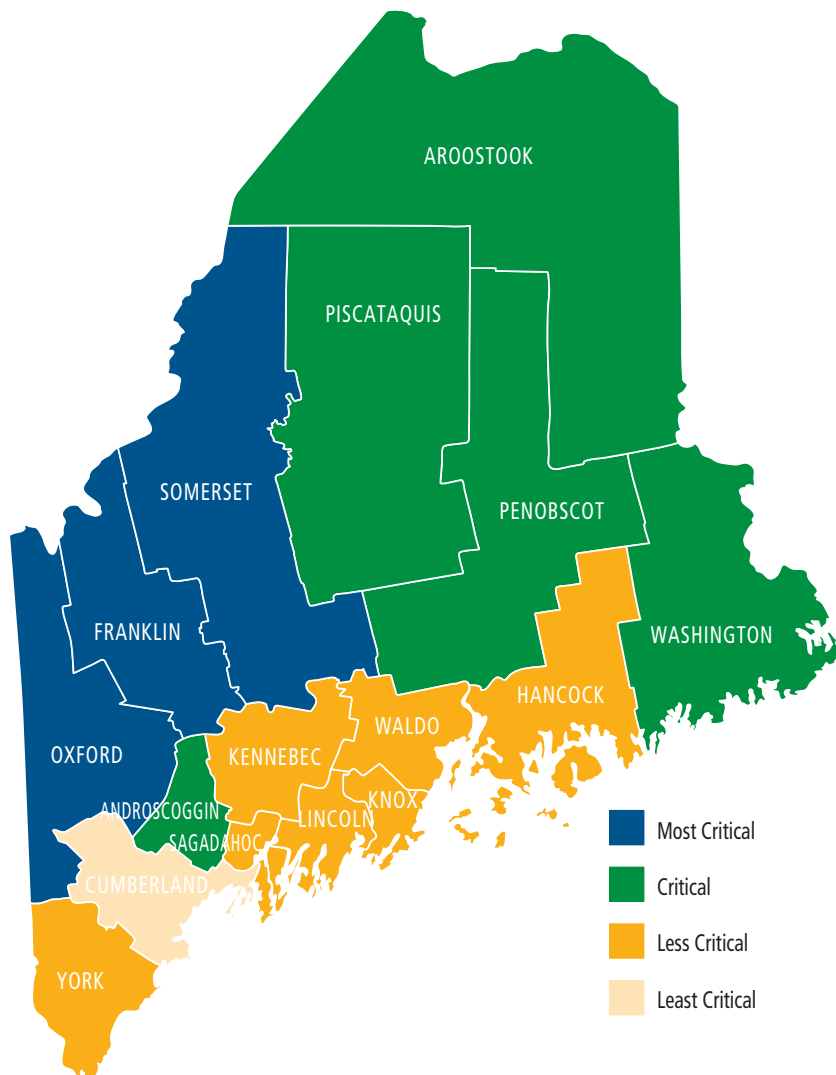
Since the Compact articulated its goal in 2004, similar objectives have been put forward at the national level by foundations such as the Lumina Foundation for Education and the Bill & Melinda Gates Foundation, and by the current Presidential administration. National higher education policy experts suggest that states will not successfully address the challenge of funding higher education until they set “hard-edged goals for degree attainment. These in turn can become the basis for decisions about the roles and responsibilities of different sectors of postsecondary education and about the financing strategies needed to reach those goals... [This] needs to be a visible public discussion among policy and educational leaders at the highest level about the future social, economic, and cultural needs for higher education in the state and what it will take to satisfy them” (Jones and Wellman).

¹ The specific target is to increase the percentage of Maine's working-age population (ages 24-65) with an associate, bachelor's, or graduate degree from 37% in 2008 to 56% by 2020. The Compact uses the word 'college' to include postsecondary educational credentials, including non-degree professional certificates and associate, bachelor's and graduate degrees.

Making the Case: Economic Prosperity and Education Attainment

Educational attainment and economic prosperity are strongly linked. Maine has the lowest post-secondary degree attainment and the lowest per-capita income in New England. Within Maine, educational attainment and incomes are correlated within counties and regions. As shown below, a recent national analysis found economic needs most critical in Western Maine and critical in Northern Maine and Androscoggin County.

EDUCATIONAL NEEDS INDEX: ECONOMIC FACTORS, 2005²



² The Educational Needs Index used data from the Census's annual American Community Survey. The smallest regional units for which these data are available are known as Public Use Microdata Areas (PUMAs). Maine has 10 PUMAs, not all of which correspond with county boundaries.

EDUCATIONAL NEEDS INDEX: ECONOMIC FACTORS, 2005

Criteria	U.S.	Maine	Least Critical Region	Most Critical/Critical Regions			
			Cumberland	Franklin/Oxford/Somerset	Androscoggin	Aroostook/Washington	Penobscot/Piscataquis
Unemployment rate	7.12	5.44	2.37	9.77	7.24	7.88	6.15
% of population under 65 at or below poverty	16.0	18.5	19.6	21.0	18.0	20.3	17.9
Per-capita income	\$25,360	\$23,588	\$25,973	\$19,263	\$21,123	\$19,443	\$21,380
% of employment in manufacturing industries	12.0	10.2	6.7	13.9	13.5	12.6	9.1
Rate of population growth, age 64 and under (2000-2005)	2.7	0.4	-1.8	2.9	-0.5	-6.4	0.3
% 25-64-year-olds with associate degree or higher	36.8	36.4	51.2	25.5	29.1	26.1	34.7

Source: Davis, Noland and Kelly, www.educationalneedsindex.com

A unique combination of demographic trends in Maine intensifies the need to improve educational attainment above current projections:

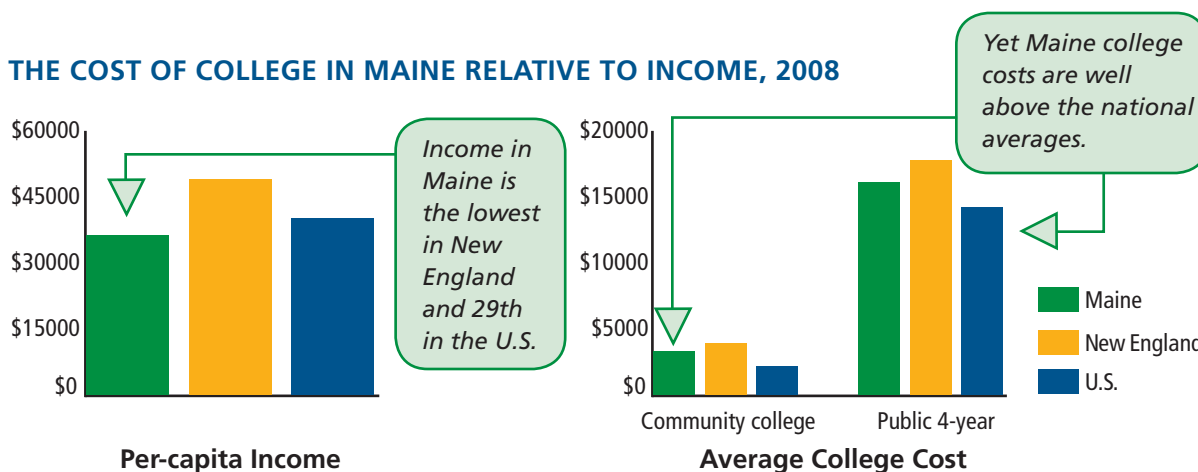
- Population growth is slowing, and is projected to stop growing after 2020.
 - Maine’s population of 15 to 24-year-olds—traditional-age high school and college students—is projected to decline by 20% over the next decade.
- Both Maine’s population and its labor force are aging.
- Future job openings in Maine are projected to come primarily from replacement demand, rather than from job growth. Replacement positions tend to require more knowledge and skills than do newly-created jobs (Dorrer).
- Going forward, two in three high-growth, high-wage jobs in Maine will be filled by workers with some postsecondary education (Dorrer).

Employer demand for postsecondary education is growing. Jobs requiring postsecondary education or training are projected to grow by 15,000 in Maine over the next decade, while jobs for high school graduates and dropouts combined will increase by only 2,200. A new national report makes the case that many of the fastest-growing industries—including information services, professional and business services, financial services, health care and education—also have the greatest need for workers with at least some college education. At the same time, increasing use of technology and automation has improved productivity in industries—such as manufacturing—with lower education requirements, so that they need fewer employees (Carnevale).

Maine faces considerable barriers to improving educational attainment:

- Our state has strong traditions of agriculture, fishing, and manufacturing, which in the past provided good jobs without requiring education beyond high school.
- Because college traditions are not strong, Maine has a larger population of potential “first-generation” college students—those whose parents do not have any education beyond high school—who face particular barriers to college access.
- Maine is a low-income state in a high-income region of the U.S. Our college costs are 10 to 15% below the New England average, while per capita income is 35% lower. Even though college is less expensive in Maine, the cost represents a higher proportion of average incomes than in the rest of the region (see the following chart).

THE COST OF COLLEGE IN MAINE RELATIVE TO INCOME, 2008

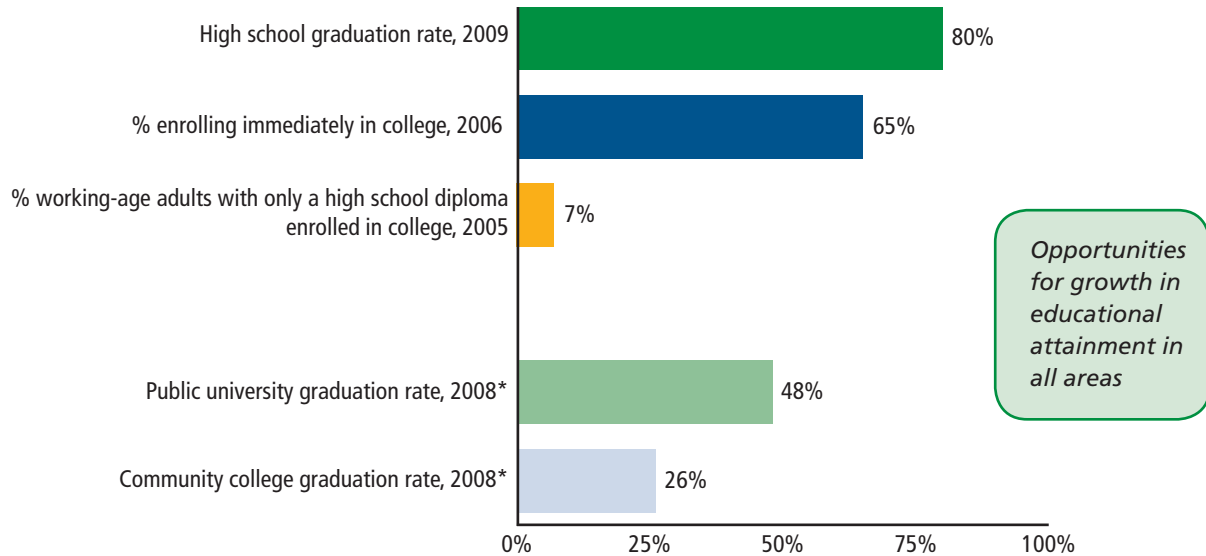


Sources: Bureau of Economic Analysis; National Center for Education Statistics

- As shown in the following chart, there are opportunities for improving educational attainment in Maine both among traditional-age students and adult learners:
 - 20% of students entering Maine high schools do not graduate within four years;
 - 35% of high school graduates do not enroll immediately in college;
 - 93% of working-age adults with only a high school diploma are not enrolled in any post-secondary education;
 - Among all entering students, 52% of those at public universities and 74% at community colleges do not complete a degree within 150% of normal program time at their initial institution.³

³ These figures include part-time students, who are unlikely to complete degrees within this timeframe.

COLLEGE PREPARATION, PARTICIPATION AND COMPLETION IN MAINE



*Graduation within 150% of normal program time (3 years for associate degrees and 6 years for baccalaureate degrees); does not include students who transfer and graduate from another institution.

Sources: Maine Department of Education, National Center for Higher Education Management Systems, Systems, National Center for Education Statistics—IPEDS Data Center

Residents of other states can also contribute to Maine’s educational attainment, particularly if they come to Maine for college. Students who move are more likely to stay in the state where they attend college than the state where they attended high school. At this time, however, Maine is a net exporter of college students. In 2006, roughly 4,200 Maine students left the state for college, while only 3,200 students from other states came to Maine for college (NCES).

Maine Government's Role in Higher Education

Maine government plays a number of important roles in public higher education policy, primarily oversight and funding. The principal focus of the Maine Department of Education is K-12 public education, but it has one staff position devoted to postsecondary education. DOE's primary responsibilities for higher education, together with the State Board of Education, are to authorize Maine postsecondary institutions to grant degrees and to oversee teacher certification program approval and renewal.

The Governor of Maine appoints, and the Legislature's Education and Cultural Affairs Committee and full Senate approve, the members of the Boards of Trustees of the Maine Community College System, the University of Maine System, and Maine Maritime Academy. The state provides budget appropriations to each of these systems/institutions in accordance with the following statutory guidance:

- To support financially the programs of public higher education institutions through appropriations, grants and loans, based on comprehensive plans and budgets, both short-term and long-term; and
- To assign a high priority in the allocation of public funds to the development of services, programs and institutions designed to provide opportunities for those who do not now share equitably in the advantages of higher education.

The Governor and the Legislature also periodically put forward bond issues for funding higher education capital expenses, based in part on requests from the public higher education systems.

Maine's Public Higher Education Systems

The Maine Community College System (MCCS) is made up of seven colleges. Its mission is to provide associate degree, diploma and certificate programs directed at the educational, occupational, technical and transfer needs of Maine citizens and the workforce needs of Maine employers. Its primary goals are to create an educated, skilled and adaptable labor force which is responsive to the changing needs of Maine's economy and to promote local, regional and statewide economic development. From 2001 to 2008, MCCS enrollment grew by 68% to 14,740 students.

The University of Maine System (UMS) is comprised of seven public universities with the common purpose of providing first-rate higher education at a reasonable cost in order to improve the quality of life for the citizens of Maine. The System carries out a three-part mission: teaching, research, and public service. It extends its mission as a major resource for the state, linking economic growth, the education of Maine people, and the application of research and scholarship. UMS enrollment grew by 1.5% between 2001 and 2008, to 33,451 students.

ENROLLMENT AT MAINE COLLEGES AND UNIVERSITIES

	2001		2008		% Change, 2001-2008
	Part-time	Full-time	Part-time	Full-time	
Maine Community College System	4,974	3,796	7,967	6,773	68%
	8,770		14,740		
University of Maine System	14,082	18,873	11,915	21,536	2%
	32,955		33,451		
Maine Maritime Academy	19	708	24	869	23%
	727		893		
Private Colleges	6,208	11,888	4,223	15,100	7%
	18,096		19,323		
TOTAL	25,283	35,265	24,129	44,278	13%
	60,548		68,407		

Source: National Center for Education Statistics

Maine also has nine UMS higher education outreach centers and eight MCCS off-campus centers offering courses on-site and online. Most of these centers are located in rural areas, and six are co-located. A new center in Brunswick will offer engineering degrees from associate through master's level along with other programs involving MCCS/UMS partnerships.

Maine Maritime Academy is a stand-alone public institution offering associate, baccalaureate and graduate degrees. The academic focus of Maine Maritime is in maritime, engineering, engineering technology, marine science, and logistics fields.

There are 17 private institutions in Maine that are authorized to grant postsecondary degrees. As with the public higher education systems, policy and administrative oversight is vested in these institutions' respective boards of trustees.

Enrollment in Maine colleges and universities totaled 68,407 students in 2008, up 13% since 2001. Maine public and private institutions awarded more than 11,400 associate, baccalaureate, and graduate degrees in 2008. Data are not currently available on postsecondary certificates.

I Aligning Higher Education with Workforce Needs

Issue Overview

An educated workforce is strongly correlated with economic vitality, just as the supply of workers with the necessary knowledge and skills is a primary factor in employer decisions about where to locate. There is strong evidence that Maine employers need workers with education beyond high school, and that this demand is increasing. State leadership can help to align postsecondary education and economic development efforts at the state level, while also making choices that account for the economic strengths and weaknesses among Maine’s regions.

Policy Question

What public policy approaches will ensure that Maine higher education best serves workforce needs?

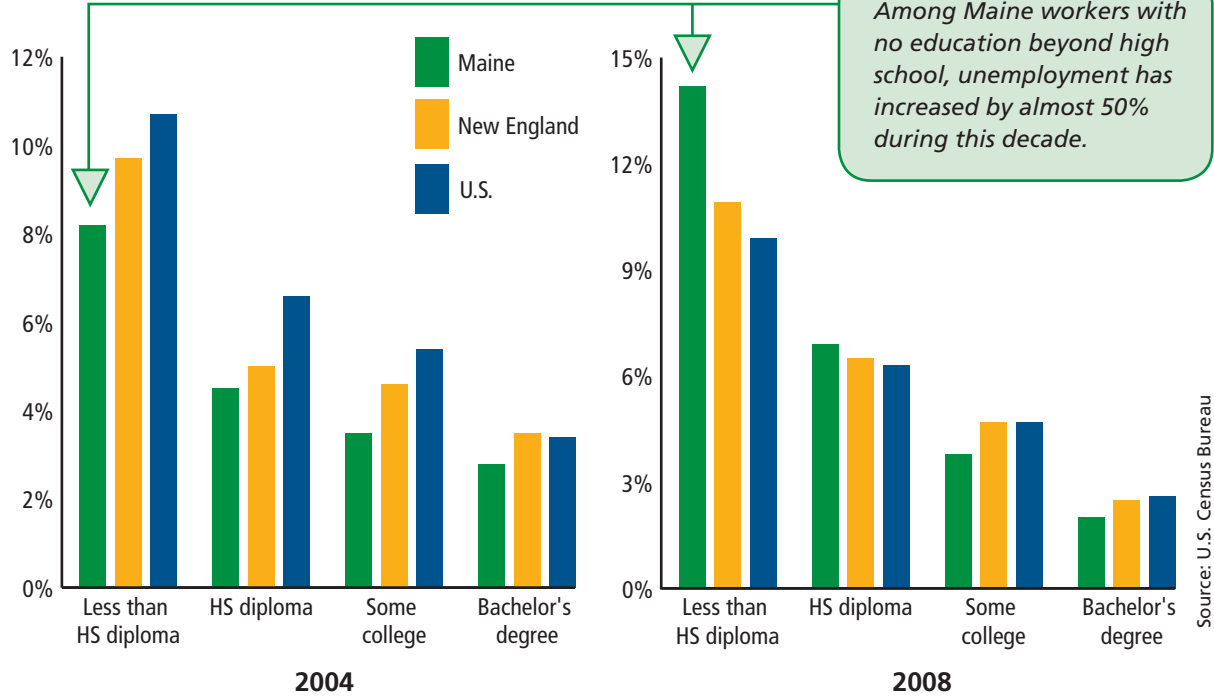
Key Data

Employer Needs

Employer demand for workers with lower levels of education has dropped dramatically, and this trend is projected to continue.

- **Unemployment among Maine workers with a high school diploma or less has risen dramatically during this decade.** The unemployment rate is a key economic indicator and a measure of employer demand. Overall, unemployment in Maine is lower than the U.S. and New England averages. This used to be true for workers at all levels of education, but in the past several years there has been a dramatic shift. As shown in the following chart, unemployment among Maine workers with a high school diploma or less has risen dramatically, surpassing the New England and U.S. averages. Maine workers with at least some college have experienced much smaller increases in unemployment, and still have lower unemployment rates than their New England and U.S. counterparts. This is a clear sign of flagging demand—more pronounced in Maine than in the rest of the region and in the nation—for workers with no postsecondary education.

UNEMPLOYMENT RATES BY EDUCATION LEVEL



Source: US Census Bureau

- **The majority of projected job vacancies in Maine over the coming decade—59%—will require postsecondary credentials.** The occupations with the largest numbers of jobs for workers with education beyond high school are office and administrative support, education, sales and healthcare practitioners (see table below).

TOP OCCUPATIONS IN MAINE REQUIRING POSTSECONDARY EDUCATION, 2018 IN THOUSANDS OF JOBS

Occupation	High School Graduates	Some College	Associate Degree Or More
Sales and Office Support	69	21	79
Managerial and Professional Office	14	9	48
Healthcare	13	15	41
Education	3	3	40
Blue Collar	84	12	38
Community Services and Arts	7	5	21
Food and Personal Services	52	6	19
Science, Technology, Engineering and Mathematics (STEM)	1	2	14

Source: Carnevale, Smith & Strohl, Georgetown University Center on Education and the Workforce

II Financial Access to College

Issue Overview

In the past twenty years, the cost of attending college has risen steadily, with the sharpest increase occurring over the past decade. Family incomes and financial aid for college have not kept pace. As a result, unmet financial need for college has grown, especially for low-income students. College is now significantly less affordable for these students, creating a financial barrier to college enrollment and persistence. Financial access to college for all potential students is a critical need in Maine.

Policy Question

What public policy changes will allow more potential students with financial need to go to college?

Key Data

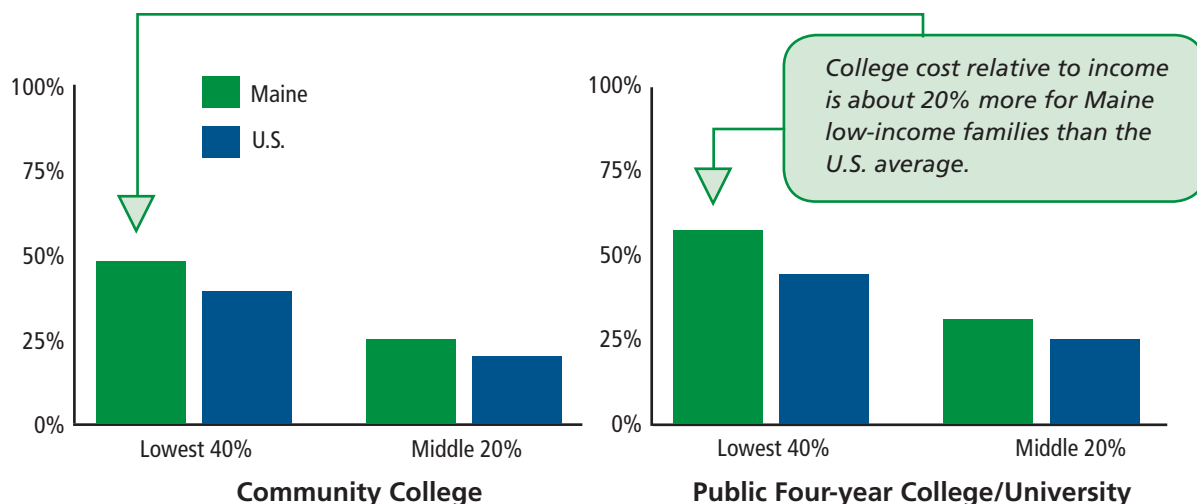
Cost of college

- **In the past twenty years, college costs nationally have increased at a rate four times faster than the consumer price index, far outpacing even the growth of medical care costs (NCPPE).** On average, the cost of college⁴ has increased by 38% in Maine over the past decade alone, compared with a 62% increase in New England and 66% in the U.S. (NCES). College costs vary widely by type of institution and even within the institutional categories. For example, the cost of two-year college in Maine has increased by 16% in the past decade, compared with a 63% increase for public four-year institutions and 34% at private four-year colleges. The figures cited here are for full-time undergraduate students.
- **For low- and middle-income Maine families, like in the rest of New England, college costs more relative to income than for families in other parts of the nation.** College costs represent roughly twice the share of annual income for lower income families than for middle income families.⁵ The cost of community college—the most affordable higher education option—equals about one-half of family income for low-income Maine families, and one-quarter of income for middle-income families (see the following charts).

⁴ The direct cost of attending college includes tuition and fees, books and supplies, transportation, and room and board. There are also opportunity costs associated with going to college, primarily lost income during time spent attending classes and studying.

⁵ Net college cost is the cost to students of tuition, fees, room and board minus financial aid. Because financial aid varies based on demonstrated financial need, the net cost of college varies, primarily depending on a student's family income.

PERCENTAGE OF FAMILY INCOME NEEDED TO PAY NET COLLEGE COST, 2007-2008



Source: National Center for Public Policy and Higher Education

Financial aid

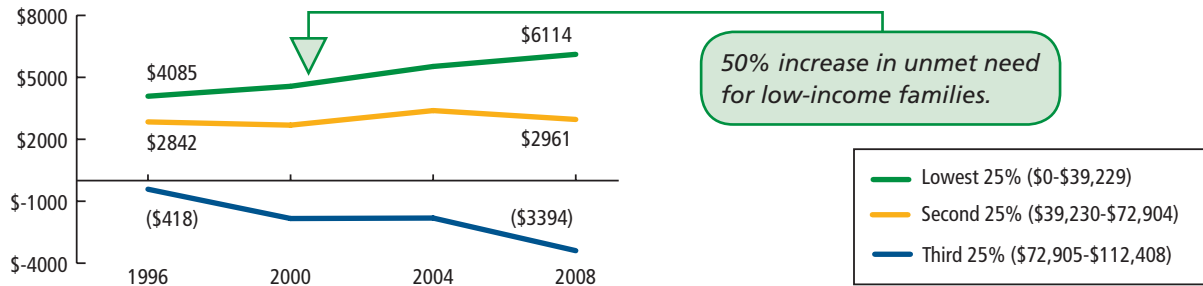
- **Financial aid⁶ has increased, but not fast enough to keep pace with college costs.** Nationally, grant aid to undergraduates grew by 40% per full-time equivalent student over the past decade, while federal loans grew by 49% (College Board). Comprehensive state-specific data are not available.
- **Unmet financial need for college is on the rise for lower-income families.⁷** Total unmet financial need among all Maine undergraduate students five years ago was estimated at \$117.4 million—or \$1,692 per student—for one year of college.⁸ Nationally, unmet need has increased by 50% since 1996 for families with the lowest incomes. Families in the top half of the income distribution do not have unmet need, on average. Ability to pay for college among these families has grown due to increases in merit-based aid from institutions and faster-than-average income growth in the top half of the income distribution (see the following chart).

⁶ Financial aid to students comes from the federal and state governments and from postsecondary institutions. The primary forms are grants—preferable for students because they are subsidies that do not require repayment—and loans.

⁷ Any part of the cost of attending college that is left over after crediting family contribution and total financial aid is considered unmet financial need.

⁸ The most recent state-level estimates of average unmet need are from 2004, so the chart shows only national averages.

TREND IN UNMET FINANCIAL NEED FOR COLLEGE, BY FAMILY INCOME (U.S.)



Source: *Postsecondary Education Opportunity*

- Students graduating from four-year colleges in Maine have a disproportionate amount of student debt compared with their peers in other states.** Among students graduating from Maine four-year colleges in 2008, the average student loan burden was \$24,916, the tenth highest in the U.S. More than six out of ten (63%) Maine students graduated with debt, ranking Maine 17th of the fifty states (Project on Student Debt).

III State Support for Higher Education Institutions

Issue Overview

State funds are a primary source of support for public higher education. The share of higher education costs borne by students and families (through tuition and fees) increases when state support declines, and this burden falls disproportionately on those with lower incomes. Meanwhile, Maine's population is aging, and the number of traditional-age students is projected to decline. State funding allocations and financial oversight of public higher education systems are critical policy issues in Maine's effort to accelerate the increase in educational attainment.

Policy Question

Given demographic trends, what public policy decisions will provide sufficient financial support for higher education in Maine?

Key Data

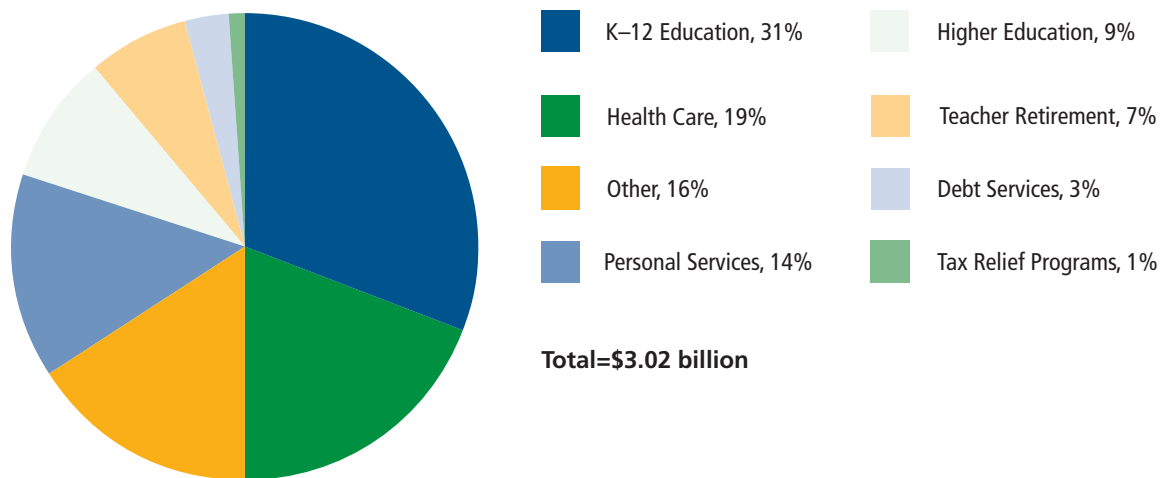
State Support for Postsecondary Education

The state budget—and, more specifically, decisions about how the state spends revenues—is a key indicator both of state policy priorities and of constraints on its capacity.

- **Just under 10% of expenditures from Maine's General Fund go to public higher education.** In the fiscal year 2009 state budget, higher education spending amounted to 9% of general fund expenditures, and this share is projected to remain the same for FY2010 and FY2011⁹ (Maine Legislature). In the latest state budget cycle, cuts to higher education were not as great as in several other areas. The national and New England averages for higher education expenditures as a percentage of state budgets are slightly higher than in Maine, at 10.4% and 9.5%, respectively (Maine Compact, 2010).

⁹ Maine's General Fund, the principal operating fund of Maine state government, was \$3.02 billion in fiscal year 2009, and is projected to decrease to \$2.93 billion, then \$2.89 billion in the two subsequent fiscal years.

MAINE GENERAL FUND EXPENDITURES, FY2009



Source: Maine Legislature, Office of Fiscal and Program Review

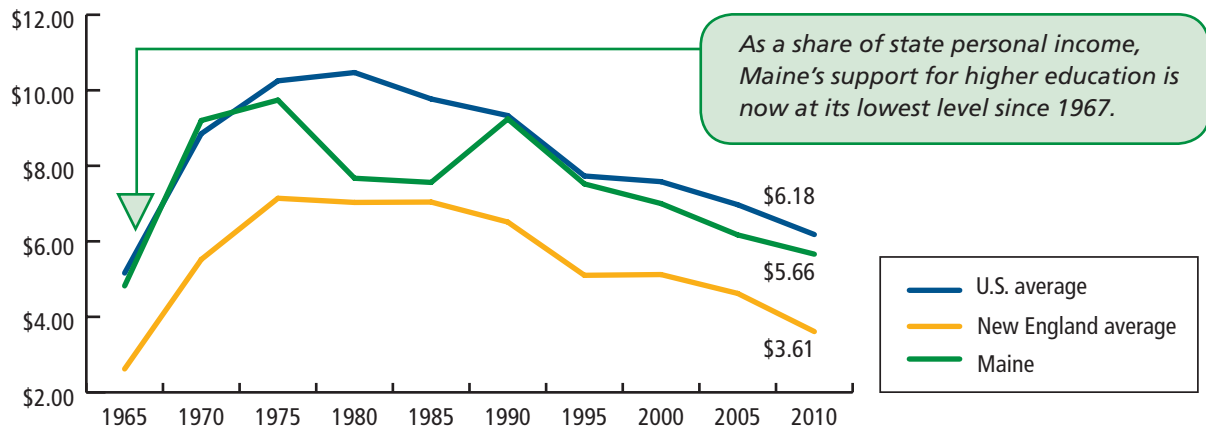
General fund appropriations for higher education in FY2009 totaled \$252.2 million. Of this, 77% went to the University of Maine System, 20% went to the Maine Community College System, and 3% went to Maine Maritime Academy. This does not include \$12 million appropriated to the Finance Authority of Maine for the Maine State Grant Program (financial aid grants to students).

Expenses per student—the costs to the institution of educating a full-time equivalent student—at Maine’s public universities are lower than the national average, at \$12,938 compared with \$15,618.¹⁰ The student share of these costs, or the portion covered by tuition, is 56% in Maine, higher than the national average of 51% (Delta Cost Project). Compared with other states, then, Maine is a relatively low-spending state with a low to moderate rate of subsidy for its public university students.

- **Relative to personal income, Maine’s fiscal support for higher education has dropped by 40% since 1990.** Dividing total state expenditures on higher education operations by state personal income allows for state and national comparisons by controlling for population size and relative wealth among states. These data are also available going back to 1961, unlike many other sources. By this measure, Maine’s fiscal support for higher education in 2010 reached its lowest level since 1967. Maine now ranks 29th of the 50 states, spending \$5.66 for every \$1,000 in personal income, compared with a national average of \$6.18 (see following chart).

¹⁰ Education and related expenses per full-time equivalent student at public research institutions, 2008

STATE FISCAL SUPPORT FOR HIGHER EDUCATION OPERATING EXPENSES PER \$1,000 OF PERSONAL INCOME¹¹



Source: Postsecondary Education Opportunity calculations of State Higher Education Executive Officers and U.S. Bureau of Economic Analysis data

- **The capital needs of Maine’s higher education systems are significant.** The data presented above do not address the issue of capital expenses. The University of Maine System currently estimates that it has a capital renewal requirement of \$350 million. The Maine Community College System has capital requirements of over \$174 million combined in the mandatory, essential and long-term categories.

¹¹ This measure divides total state appropriations for higher education operating expenses by total personal income of state residents (a proxy for the state’s tax base).

IV Multiple Higher Education Pathways

Issue Overview

In order to improve educational attainment above the current growth rate, states must find ways to make it easier for both traditional-age students and adults to enter certificate and degree programs and successfully complete those programs in a reasonable amount of time. Providing potential students with multiple pathways—the entrance points to postsecondary education and the routes to timely completion—best suited to their circumstances is critical if Maine is to accelerate the increase in educational attainment. Improving college readiness is a key component in this effort.

Policy Question

How can public policy strengthen multiple pathways to postsecondary education and training for both traditional-age students and adult learners?

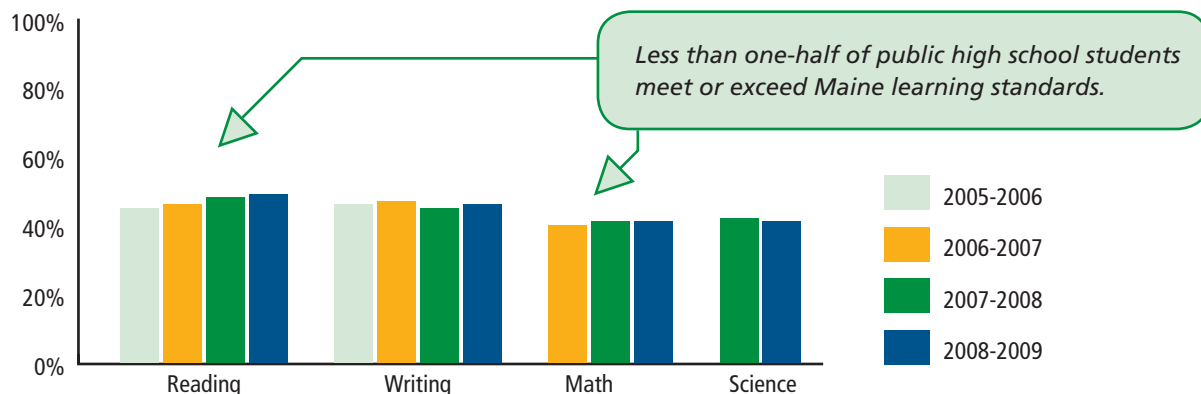
Key Data

Most available data address the traditional pathways of high school graduation or its equivalent, then college matriculation, persistence, and graduation. Public policy can address these traditional pathways, and identify and support alternatives, such as models described in the Appendix.

Traditional-age students

- **Maine’s public high school graduation rate has been 80% or higher for the past four years.** The Maine Department of Education recently released new data on high school graduation rates using a new methodology that will enable comparison with other states going forward. These data show that 84% of students who entered high school four years earlier—adjusting for transfers in and out—graduated in 2006, 82% in 2007, 84% in 2008, and 80% in 2009 (Maine DOE).
- **A minority of Maine’s high school students demonstrate academic readiness for college.**
 - Since Maine adopted the College Board’s SAT as its assessment of high school learning, fewer than half of Maine 11th graders have met or exceeded the state learning standard each year in reading, writing, math, and science (see chart below).

PROPORTION OF MAINE 11TH GRADERS MEETING OR EXCEEDING STATE LEARNING STANDARDS



Source: Maine Department of Education, Maine High School Assessment
(Data are not available for all years in math and science.)

- 47% of first-time students entering MCCS and 25% of students entering UMS take at least one remedial college course,¹² meaning that they are not academically prepared for college-level work in at least one subject. Students who take remedial courses are less likely than those who do not require them to persist in college and complete degrees.
- **Nearly two in three graduating Maine high school students (65%) enroll directly in college, placing Maine between the New England average of 68% and the national average of 62% (NCHEMS).**
- **College persistence and degree completion rates in Maine, while comparable to regional and national averages, show room for improvement.**
 - About three in four Maine students entering college (74.8%) return to college the next year. This is just below the U.S. average of 76.5% (NCHEMS).
 - 26% and 48% of students entering MCCS and UMS institutions, respectively, complete a degree within 150% of normal program time—three years for an associate degree or six years for a baccalaureate degree¹³ (National Center for Educational Statistics—IPEDS Data Center). While the New England average is slightly higher than Maine’s at public four-year institutions, it is significantly lower for community colleges. The issue of low graduation rates is prevalent at public postsecondary institutions nationwide.

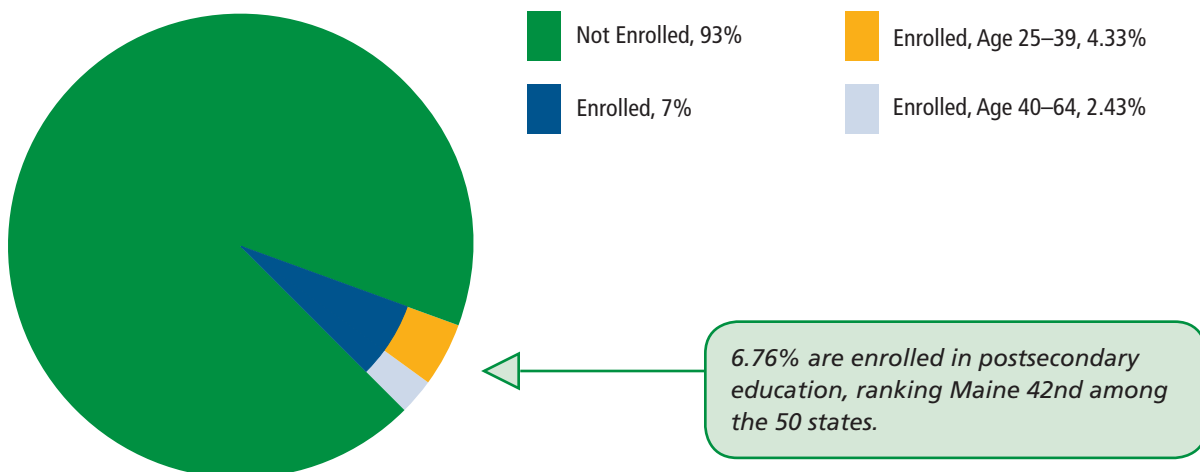
¹² Many postsecondary institutions administer entrance tests, particularly in English and math. Students who do not meet cutoff scores signaling college readiness must first take remedial courses—not for credit towards a degree, but usually for full tuition—before they can enroll in courses that count toward a degree. The MCCS figure, from 2009, is slightly higher than the national rate of 43% of community college students. The UMS figure is from 2007, and is slightly below the national rate of 28% of entering public university students taking at least one remedial course.

¹³ These figures understate actual graduation because they do not include students who transfer to another institution and graduate. They also include part-time students—including working adults—who by definition will not complete degrees within those timeframes. A national effort is underway to develop college completion measures that are more appropriate for community colleges.

Adult learners

- **Maine is a leader nationally in awarding general equivalency diplomas (GEDs) to young adults who did not complete high school.** In 2008, nearly 9% of Maine residents ages 18 to 24 without a high school diploma earned a GED, double the national average of 4.3%. Among Mainers ages 25 to 44 without a high school diploma, 1.6% earned GEDs, compared with a national average of 0.87%.
- **Maine has 250,000 working-age adults (25-64) with only a high school diploma or its equivalent.** While this population represents a promising resource for boosting Maine’s educational attainment, adults—particularly those who are employed—face unique challenges to pursuing postsecondary education. In 2005, less than 7% of Maine’s working age adults with only a high school diploma were enrolled in postsecondary education (see chart below), placing Maine below the national average of 10%.

POSTSECONDARY ENROLLMENT AMONG MAINE ADULTS WITH ONLY A HIGH SCHOOL DIPLOMA, 2005



Source: National Center for Higher Education Management Systems

Appendix: Promising Practices

There are numerous policies, practices and programs in Maine that address the policy issues described in this paper. What follows is a selection, while not exhaustive, that introduces some of them.

Aligning Higher Education with Workforce Needs

Maine Community College System (MCCS) Business and Education Partnerships

MCCS has a long history of close ties to the business community and increasing collaboration with the University of Maine System.

- At each MCCS campus, each program works with its own Advisory Committee—including members from related industries—that advises program faculty and college leaders about the program content needed to meet the requirements of employers in that region. These Committees and the MCCS Board of Trustees regularly review programs to assure that they are providing students with skills that lead to employability. These reviews result in program modification as new technologies and knowledge become available. This process has led the colleges to discontinue 42 programs and create 75 new programs.
- The Maine business community contributes a significant amount of equipment, material and funds to the community colleges.

MCCS Rural Initiative

In 2008, after discussions with local businesses and community leaders in all 16 counties, the MCCS raised \$6.5 million, without additional State funds, to bring occupational degree programs to rural areas on an intermittent basis. Components also include a scholarship endowment for rural students, expanded distance learning options, and expanded access to MCCS workforce training resources for small rural business.

- Using distance learning and direct delivery, this program has introduced six health care programs in rural areas around the state and expanded access to non-health care courses as well.
- In two years, the initiative served 925 students in 175 rural Maine communities.
- The Initiative is funded through FY11 and the MCCS intends to seek resources to continue it (MCCS).

University of Maine System (UMS) STEM Initiative

UMS reports that enrollments are declining in core science, technology, engineering and mathematics (STEM) disciplines such as computer information systems and engineering. The Chancellor is supporting a system-wide STEM initiative aimed at inventorying and assessing all STEM programs; initiating work in K-12 schools to increase student interest and awareness of STEM fields; and developing external partnerships to strengthen STEM in Maine (UMS 2010).

Career Pathways approach

At least eight states—including Maine—are taking a career pathways approach to link economic development, education and workforce training. Ideally, career pathways allow students—often while they are working—to advance in a given industry or occupation, and provide a framework for connecting adult education, training and postsecondary education and linking them with employer needs (Baider).

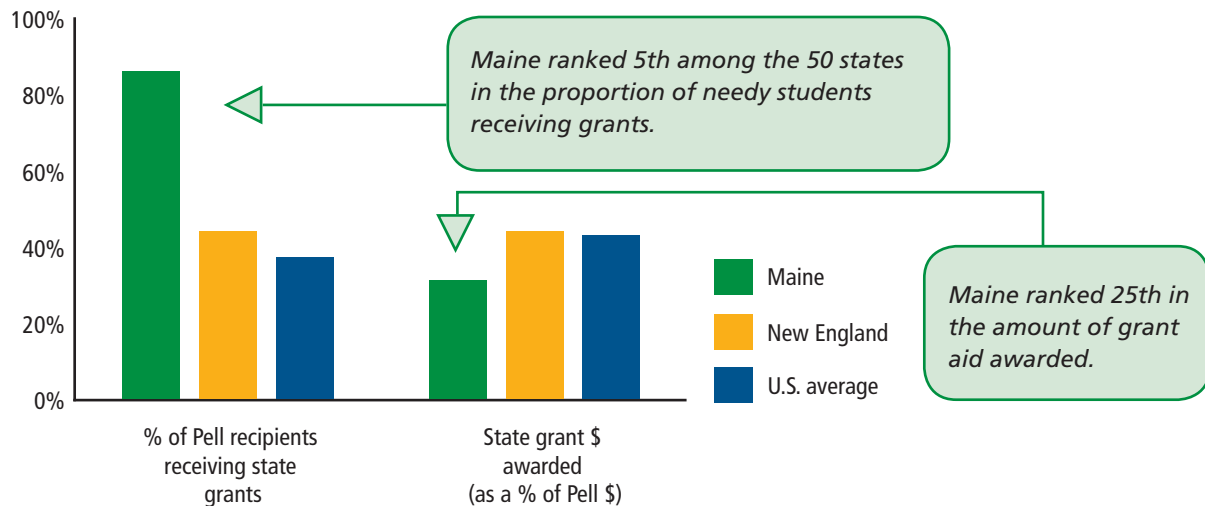
Financial Access to College

Maine's need-based grant program

The Maine State Grant Program is administered by the Finance Authority of Maine (FAME), and funded with a combination of state budget appropriations and proceeds from administering *Next-Gen* college savings accounts. Maine residents enrolling in college at least half-time may be eligible. Maine State Grants range from \$250 to \$1,250 per year, based on financial need, the type of post-secondary institution, and whether students are attending college in Maine or another state.

- The Maine State Grant is targeted to reach a large proportion of needy students in the state, but the level of funding is low compared with other states and in relation to unmet need. In 2007-2008, more than four in five Maine resident Pell grant recipients (86%) also received a Maine State Grant. In terms of grant dollars, however, Maine awarded the equivalent of only 31% of Pell grant dollars to state resident Pell recipients.

STATE NEED-BASED GRANT COVERAGE OF RESIDENTS RECEIVING FEDERAL PELL GRANTS, 2007-2008



Source: *Postsecondary Education Opportunity*

- Both total funds and the number of students awarded Maine state grants have declined in the past several years, due to state budget cuts. In 2009-2010, Maine State grants totaled \$14.0 million to 18,039 students, and in 2010-2011, FAME is projecting \$16.0 Million in grants to 17,253 students. Despite the projected increase for the next academic year, Maine State Grant funds will still be down by 10% from the 2007-2008 total of \$17.9 million.

College savings plan grants

Maine's state-sponsored college savings plan, *NextGen*, offers families tax-deferred college savings accounts. The Harold Alfond College Challenge provides a one-time \$500 grant to every Maine newborn and newly-adopted baby whose parent opens a *NextGen* account in the child's name. In addition to helping families start saving for college at the outset, the accounts supply a vehicle for promoting financial literacy and education about the importance of saving for college. Additional information on these topics—as well as information on the value of higher education—is included in quarterly mailings to account holders.

MCCS tuition freeze

The Maine Community College System has a student population for whom financial access to college is a challenge; 76% of full-time students receive some form of financial aid. To help all students obtain the education so important to them and to Maine, MCCS has frozen its tuition cost in seven of the past 12 years, and now has the lowest tuition among public community colleges in New England.

State Support for Higher Education Institutions

UMS Financial and Performance Assessment Process

In 2009, the University of Maine System undertook a public assessment of its finances and performance. The initiative was driven by a “structural financial gap.” UMS projected that growth in expenses would exceed growth in revenues, resulting in annual shortfall by fiscal year 2013 of \$42.8 million. A governance task force issued a report in July 2009 stating that student success is the primary test of the System's success. The report laid out a plan to engage educational institutions, state leadership, and the private and non-profit sectors in generating a shared set of priorities (University of Maine System). Among other key principles, the report recommended that UMS must:

- Align the missions and resources of the system's multiple institutions with the financial realities facing Maine students, families and taxpayers.
- Increase the student pool, even as the traditional college-age cohort shrinks, by increasing the participation rates in higher education of youth and adults and graduating more students.
- Respond to Maine's regional differences in educational needs, culture, and economic conditions.
- Support the creation of a seamless education system (pre-school through graduate education and lifelong learning).
- Align financing, including allocation of State General Fund appropriations, tuition policy, and student aid policy.

Multiple Pathways to Higher Education

Maine has a number of promising newer models for building multiple pathways to college, including an experiential learning high school and a state high school diploma option for traditional-age students. Prior learning assessment—which can assign college credit for adults' life and work experience—is also gaining attention.

Early College programs

Early college, or dual enrollment, is one strategy to address college readiness among traditional-age students. Policy support at the state level has been an important factor in the development of early college programs in Maine that provide opportunities for high school students to take college courses—often at no cost or low cost—for dual high school and college credit. One study found that four in five students (80%) who took an early college class enrolled in college within one year after graduation, compared with a 60% average among their fellow graduates (Mitchell Institute). Targeting underperforming students, those who would be first-generation college students, and those who face financial barriers to college has proven particularly effective. Growth in the number of early college opportunities has tailed off in the past several years, and boosting state-level support could ensure that early college is available to more students.

- The state of Maine, together with local school districts, MCCS and UMS, funds the **Aspirations Program**, which pays tuition and fees for early college courses. In 2008-2009, 1,521 students at 109 of Maine's 130 public high schools took early college courses funded by Aspirations.
- MCCS offers 500 tuition-free early college courses to high school juniors and seniors each year through its **On Course for College** program.
- University of Maine developed **Academ-e**, a distance early college program that makes courses accessible to students without a nearby college campus. In four years, Academe-e has offered a total of 69 course sections to about 300 high school students each year, for a total of nearly 1,200 students served.

Jobs for Maine's Graduates (JMG)

JMG is a non-profit organization that partners with schools to serve middle and high school students at risk of disengaging from or dropping out of school. The program connects students with employers and community-based organizations with the goal of helping them develop the skills and motivation needed to succeed in higher education and the workforce.

- The JMG program teaches core competencies in six areas: personal, leadership, communication, job attainment, job success and career development skills.
- JMG serves more than 4,000 students each year on a statewide basis, and is partnering with public school districts to create system-wide strategies for student-centered education.
- JMG participants are more likely than their peers to graduate from high school on time, and six years after high school, earn more than other Maine adults their age (JMG).

College Transitions programs

Promising initiatives in Maine explicitly link students with college preparation and transition support.

- **College Transitions** is administered by the Maine Department of Education and offered through local adult education programs. The program's goal is to provide high-quality, cost-effective and accessible pathways to postsecondary education for adults. A 2008 evaluation found that the College Transitions program is creating a new stream of college access for Maine adults by reaching those who are potential first-generation college students and

improving their Accuplacer (MCCS placement test) scores. State policy can further support this work by addressing admissions and dual/co-enrollment policies at postsecondary institutions and by providing need-based financial aid to part-time students.

- For traditional-age students undecided about college, MCCS offers **Early College for ME**, which begins in the junior year of high school and continues through community college enrollment. MCCS provides support and advising on college admissions and financial aid; early college courses for seniors; and scholarships of up to \$2,000 for a two-year MCCS program of study. Early College for ME is offered in 74 Maine public high schools or Career and Technical Education (CTE) centers, and has served more than 4,370 students since 2003.

Maine Employers' Initiative (MEI)

MEI works to encourage and assist Maine employers in supporting their workers' pursuit of postsecondary education. Housed at the non-profit Maine Development Foundation, MEI works with Maine employers that commit to take "one more step" to promote education and training, with the eventual goal of helping more Maine workers earn postsecondary degrees and certificates.

- More than 170 Maine employers have worked with MEI, and 100 formally committed to the program in its first three years.
- Two-thirds of participants report that employees have enrolled in education or training as a result of their extra step. Overall, participating employers report a 25% increase in the number of workers studying for a degree or certificate as a result of their commitment to MEI.

Many Flags/One Campus

Many Flags/One Campus is a proposed project that leaders in Midcoast Maine have been working on for seven years. Many Flags is a blended high school/college model that would co-locate a regional high school, a career and technical education high school and a higher education center with MCCS and UMS presence on one campus in Knox County. The project's goal is to balance career and technical education with traditional academic education on an integrated campus for both high schools students and adults. The Many Flags proposal recently received the Department of Education's highest score among integrated grade 9-16 campus models. Assuming approval by the State Board of Education, Many Flags will be the first of these projects in line when state funding for school construction becomes available (Many Flags/One Campus).

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