

College Participation Rates of Maine's Recent High School Graduates:

Examining the Claims



David L. Silvernail

James E. Sloan

Amy F. Johnson

Center for Education Policy, Applied Research and Evaluation

University of Southern Maine

March 2013

Research Funded by U. S. Department of Education, 2009 Statewide Longitudinal Data System Recovery Act Grant, CFDA#84.384A.



UNIVERSITY OF
SOUTHERN MAINE
Center for Education Policy,
Applied Research, and
Evaluation

Published by the Maine Education Policy Research Institute (MEPRI) an institute in the Center for Education Policy, Applied Research, and Evaluation (CEPARE) in the School of Education and Human Development, University of Southern Maine.

CEPARE provides assistance to school districts, agencies, organizations, and university faculty by conducting research, evaluation, and policy studies.

In addition, CEPARE co-directs the Maine Education Policy Research Institute (MEPRI), an institute jointly funded by the Maine State Legislature and the University of Maine System. This institute was established to conduct studies on Maine education policy and the Maine public education system for the Maine Legislature.

Statements and opinions by the authors do not necessarily reflect a position or policy of the Maine Education Policy Research Institute, nor any of its members, and no official endorsement by them should be inferred.

The University of Southern Maine does not discriminate on the basis of race, color, religion, sex, sexual orientation, national origin or citizenship status, age, disability, or veteran's status and shall comply with Section 504, Title IX, and the A.D.A in employment, education, and in all other areas of the University. The University provides reasonable accommodations to qualified individuals with disabilities upon request.

This study was funded by the U. S. Department of Education through the 2009 Statewide Longitudinal Data System Recovery Act Grant.

Flickr photo courtesy of Braxton \$DBS3\$.

Copyright © 2013, Center for Education Policy, Applied Research, & Evaluation.

College Participation Rates of Maine’s Recent High School Graduates: Examining the Claims

David L Silvernail

James E Sloan

Amy F Johnson

Introduction

In recent years the topic of college and career readiness has been getting a great deal of attention nationwide. The same is true here in Maine. Many organizations and policy makers have called upon Maine schools and colleges to significantly improve the college and career readiness of our high school graduates.

Clearly, it is important that Maine better prepare its youth for education and careers beyond high school. According to the U.S. Census Bureau, on average, high school graduates earn 28% more per year than high school dropouts (NCES; 2011), and college graduates earn over 74% more each year than high school graduates (Carnevale, Rose, Cheah; 2012). The unemployment rate for high school dropouts is one-third higher than for high school graduates, and almost triple the level for college graduates with a Bachelor’s degree or higher (Alliance for Excellent Education; 2009). Over a lifetime it is estimated that a college graduate earns over \$ 1 million more than a high school graduate (Northeastern University; 2009).

According to the U. S. Department of Labor, over 90% of the fastest growing jobs in the future will require some type of post-secondary education or training (US Department of Labor; 2011). The Maine Department of Labor reported that, “as the mix of jobs increasingly shifts toward managerial, professional, and technical occupations, the education and training requirements of the labor force are rising because those occupations generally require some form of post-secondary education or training” (Maine Department of Labor; 2010). By one estimate, the number of jobs in Maine requiring some type of post-secondary education or training will increase by 15,000 in the current decade (Carnevale, Smith, Strohl; 2010).

How well is Maine doing in preparing our youth to be college and career ready? Over the course of the last two decades several claims have been made about Maine students’ enrollment and performance in college, and they have been repeated so often, they are now assumed to be true – whether or not they have been supported by evidence. Some of these claims are:

1. Too few of Maine's high school graduates go on to college.
2. Most higher achieving students leave Maine to go to college.
3. Too many college freshmen have to take remedial courses.
4. Many students who go on to college drop out at the end of their first year.
5. College students who have to take remedial courses drop out of college.
6. Only students who come from more affluent homes are successful in college.

Are these claims accurate? To answer these questions, the Maine Education Policy Research Institute (MEPRI), a non-partisan research institute funded by the Maine Legislature and the University of Maine System, has begun to examine data related to the claims above. As part of the Maine Department of Education's development of a state longitudinal data system, MEPRI has been conducting research into college readiness.

What follows are the findings from a preliminary analysis of the performance and characteristics of a recent class of Maine high school graduates who have enrolled in college the fall after high school graduation. To examine Claims 1 and 2, we used data provided by the National Student Clearinghouse (NCS) on the cohort of students who graduated high school in Spring 2010 (2010 NCSC). The NCS tracks approximately 90% of high school graduates who enroll in a United States college or university each year. However, the data available from NCS is limited. Thus, to examine Claims 3-6 we limited our analysis to high school graduates enrolled as fulltime students in a University of Maine System (UMS) university in Fall 2010. The University of Maine System data provides more detailed information on the high school students and their high school careers, and their course taking patterns in the university; both of these areas are targeted for further analysis in future studies.

With these data sources we are able to examine the conventional wisdom in light of empirical evidence. We now turn our attention to those above claims.

Examining the Claims

Claim # 1: Too few of Maine's high school graduates go on to college.

How many of Maine's high school graduates enroll in a university or college either as part time or fulltime students in the fall after their high school graduation? Using NSC data, Table 1 reports the number and percent of the 2010 Maine high school graduating class who enrolled in a college or university anywhere in the country in the fall after high school graduation. As shown in the table, 8,293 students of the 2010 Maine high school graduates

were enrolled in the fall of 2010 in a post-secondary institution which is a member of the National Student Clearinghouse (NSC), either at an in-state or out-of-state institution. As mentioned above, over 90% of the approved higher education institutions nationwide are members of NSC. In Maine, all but two accredited institutions participate in the NCS. These two institutions enrolled approximately 100 students directly from high school; less than 1% of Maine’s 2010 graduating class. Thus, while the NSC data system accounts for most higher education enrollments, some of the high school graduates who enrolled in a higher education institution are not included in this study.

Table 1: Fall 2010 Enrollment Status of 2010 Maine High School Graduates

Enrollment Status	Full Time	Part Time	Total	
Enrolled (NSC)	7,488	805	8,293	59%
Not Enrolled (NSC)			5,821	41%
Maine 2010 HS Graduates			14,114	100%

Recognizing this limitation in the data, the information provided in the table indicates that approximately 6 out of 10 high school graduates enrolled in a college or university, and that 90% of those who started college enrolled fulltime. Approximately 40% did not enroll in college, a percent that has been fairly consistent over the last two decades. As noted earlier, the U.S. Department of Labor reports that over 90% of the fastest growing jobs will require some type of post-secondary education or training. But not all that education and training has to result in a two-year or four-year college degree. Some of those jobs may only require a certificate or similar program, which are not captured in the NSC data. Thus, one might reasonably conclude that there is some truth in this first claim that too few of Maine’s high school graduates are enrolling in college, but further analysis is needed before one may conclude this with a great deal of certainty.

Claim # 2: Most higher achieving students leave Maine to go to college.

In exploring this claim it is important to first get an idea of how many of Maine’s high school graduates leave the state to attend a college or university, either as part time or fulltime students. Table 2 on the next page provides this information. Approximately 30% of the 2010

high school graduates who enrolled in a college or university enrolled in an out of state institution

Table 2: Type of Institution attended by 2010 Maine High School Graduates

Type of Institution	Full Time	Part Time	Total	
University of Maine System	2,462	205	2,667	32%
Maine Community Colleges	1,364	520	1,884	23%
Other Maine Public	141	1	142	2%
Maine Private	1,111	7	1,118	13%
Out of State Public	681	45	726	9%
Out of State Private	1,729	27	1,756	21%
All Institutions (NSC)	7,488	805	8,293	100%

(either an out of state public or private institution). 70% percent enrolled in an in-state post-secondary institution. Approximately one-third of the high school graduates enrolled in a University of Maine System campus, and approximately one-quarter enrolled in a Maine Community College.

What is the academic performance of Maine’s high school graduates who leave the state to attend a college or university in comparison to those who attend a UMS university? To answer this question we have to rely on Maine students’ 11th grade test performance, and the National Student Clearinghouse data. All Maine 11th graders take the Maine High School Assessment (MHSA), a version of the SAT modified to more closely measure students achievement of Maine’s Learning Results. The NSC data is used to track those Maine students who attend an out-of-state higher education institution.

Table 3 reports the MHSA scores for 2010 high school graduates. MHSA scores may range from 1100-1180, and the data in the table indicates that the average composite MHSA of those students choosing to attend an out-of-state institution are 4 points higher than those students who chose to attend a University of Maine System institution (1149.5 vs. 1145.5). Thus, the average academic performance of students who leave Maine to go to college is only slightly higher than those who attended a UMS institution. The one exception is in the case of community college students. Those who chose to attend a Maine community college did have

Table 3: MHSAs (modified SAT) Scores for the 2010 Cohort of High School Graduates

Fall 2010 Status	Mean MHSAs Scale Score				Composite
	Math	Reading	Science	Writing	
Not enrolled	1137	1136	1137	1134	1136.0
Public In State - UM System	1145	1147	1144	1146	1145.5
Public In State - Community College	1138	1137	1138	1136	1137.3
Public In State - Other	1146	1145	1148	1144	1145.8
Private In State	1145	1146	1143	1145	1144.8
Total In State Averages	1143.5	1143.8	1143.3	1142.8	1143.4
Public Out of State	1147	1149	1145	1148	1147.3
Private Out of State	1151	1154	1149	1153	1151.8
Total Out of State Averages	1149.0	1151.5	1147.0	1150.5	1149.5
Overall Average	1142	1142	1141	1141	1141.5

academic performance scores substantially lower than students who attended college outside of Maine.

Of some additional interest is the information on the performance of out-of-state students who enrolled in a UMS university. In this case, we may examine traditional SAT scores because the UMS collects these score at admission time. Table 4 reports the average SAT scores for UMS 2010 new fulltime students based on if they attended an in-state or out-of-state high school.

Table 4: SAT Scores and HS GPA By High School Location, for Fall 2010 Full Time UMS Students

SAT subject	Number of Students			Mean Score		
	High School Location			High School Location		
	Maine	Out of State	Total	Maine	Out of State	Total
SAT Math	2647	550	3197	506.71	533.18	511.27
SAT Verbal	2647	550	3197	510.72	529.40	513.93
SAT Writing	2646	550	3196	499.30	518.11	502.54
SAT MCSS	2149	516	2665	50.23	51.71	50.52
High School GPA	2590	542	3132	3.07	3.01	3.06

Of particular note is the finding that the SAT scores for out-of-state 2010 high graduates who enroll in a UMS university are anywhere from approximately 18-27 points higher than the SAT scores for Maine high school graduates enrolling in the university system. So in terms of

this claim, the evidence suggest that, in fact, recent Maine high school graduates who chose to attend an out-of-state college or university have slightly higher achievement scores, but not substantially higher scores. At the same time recent high school graduates from other states who choose to attend a UMS institution have higher SAT scores than their Maine counterparts, indicating that the trend works in both directions.

Claim 3: Too many college freshmen have to take remedial courses.

Table 5 reports the number and percent of the 2010 new college student cohort who were fulltime students taking one or more remedial mathematics or English courses at one of the seven UMS campuses. We have to limit our analysis to UMS institutions because the National Student Clearinghouse does not provide remedial course taking patterns for Maine students who are enrolled in an out-of-state institution. But even with this limitation, two pieces of evidence stand out in the table.

Table 5: Remedial Course Taking Percentages by UMS Institution

UMS Institution	Students Taking Remedial Math or English Courses			
	No Remedial		Remedial	
	Count	% Within Institution	Count	% Within Institution
UMaine - Augusta	153	77.7%	44	22.3%
UMaine - Farmington	393	92.0%	34	8.0%
UMaine – Fort Kent	94	81.0%	22	19.0%
UMaine – Machias	54	74.0%	19	26.0%
University of Maine	1306	99.3%	9	.7%
University of Southern Maine	541	86.6%	84	13.4%
UMaine Presque Isle	111	72.5%	42	27.5%
Total	2652	91.3%	254	8.7%

First, the overall remedial rate is less than 9%, a percentage considerably less than what it is often thought to be. In part, this lower percent may be a reflection of the students we focused on in this analysis. We examined the remedial course taking patterns of first time, fulltime freshmen. The rate may be higher for part time students, and it is known to be higher for students who delayed enrolling in a college or university after graduating from high school.

Second, remedial course taking rates vary widely across UMS institutions. The University of Maine rate is less than 1%, whereas the University of Maine at Presque Isle is over 27%. In all likelihood, these differences reflect difference in applicant pools and admission policies. Methods for determining remedial course placement all vary across Maine universities. Nevertheless, the rate of remedial course taking for fulltime first year students directly from high school is under 9%. One can argue that any percentage of remedial course taking is too high, but the data here suggests that the rate is low for at least one segment of Maine students attending one of the UMS institutions.

Remedial course rates in community colleges are higher than in 4-year institutions. Future research will attempt to replicate this analysis with community college data in order to gain a more complete understanding of the readiness landscape in Maine.

Claim 4: Many students who go to college drop out at the end of the first year.

Table 6 reports student persistency in university attendance into the second year. The data reveals that by the beginning of the second year approximately 16% of the original cohort of fulltime students have dropped out of college. In contrast, over 84% of the students returned to a university beginning in the second year. This persistency rate is approximately 10-20 percent higher than similar institutions nationwide (ACT; 2012).

Thus, the data for the UMS institutions indicate that a very large majority of fulltime first year college students do not drop out of college after the first year. The percentage is different for different types of college students, but the national data indicates that Maine’s performance is considerably higher than comparable institutions across the country.

Table 6: Second Year Persistency of Fall 2010 Freshmen

Status Fall 2011	Frequency	Percent
Dropout	428	15.8
Transfer out of state	29	1.1
Transfer in state	227	8.4
Continuing in UMS institution	2017	74.7

Claim 5: College students who have to take remedial courses drop out of college.

Table 7 reports the first year dropout rates for those fulltime students who had to take at least one remedial course in their freshmen year as compared to those who did not have to take a remedial course. The numbers and percentages are slightly different than the totals in Table 6 because of missing data points, but the data do indicate that the dropout rate is higher for those students who had to take a remedial course than those who did not take a similar course (Approximately 24% vs. 16%). However, it is smaller than what is often assumed to be the case.

Table 7: Second Year Persistency of Remedial Course Takers

Status Fall 2011	Percent Remedial Math or English		
	No Rem.	Remed.	Total
Dropout	16.3%	23.7%	17.0%
Transfer out of state	1.1%	.8%	1.1%
Transfer in state	8.5%	10.6%	8.7%
Continuing in UMS institution	74.1%	64.9%	73.3%

The dropout rate is approximately 7.5% higher for remedial course takers, but the persistency rates for these remedial course takers is still above 76%, a percentage above the national level for all college students. The dropout rate may in fact be higher in later years of a college career, but the evidence here suggest that the claim may well be open to question.

Claim 6: Only students who come from more affluent homes are successful in college.

To examine this claim required determining what being successful in college means. Success in four-year colleges and universities is most often defined in terms of graduating with a degree in 4-6 years. But research has also shown that a high percentage of college students who successfully complete their first year of college and return for a second year do go on to earn a college degree later. Given this research, we examined what we deemed as being successful in college. We defined success as any student who had earned at least 24 credit hours in the first year, with a grade point average of 2.0 or higher (C average or higher), and

returning fulltime for the third semester (i.e., second year) of college. Other definitions of success could have been used.

Table 8: Successful Rates for UMS Students Success

	Number of Students	Percent
Maine Students	2697	100%
Not persisting or not success	1136	42%
Persisting and success	1561	58%

Table 8 presents the results of this analysis, and the data indicates that approximately 58% of the fulltime students were classified as successful by the definition of success used in this study. That is to say, 58% of the students had earned at least 24 credit hours in their first year, had a grade point average of at least 2.0, and had returned fulltime for the first semester of their second year of college. Forty-two percent (42%) of the students were classified as not persisting or not being successful, meaning they may have dropped out of college, or were still enrolled in college but had not earned 24 credits or maintained a 2.0 grade average.

What about the success rate for students coming from less affluent homes? How do they fare? For purposes of this study, students who were eligible for free or reduced-price lunches in grade 11 were considered as coming from less affluent homes. Table 9 presents the data on the success rates of these students. While approximately 60% of the students coming from less impoverished homes were succeeding, approximately 47% of the students coming from less affluent homes were also succeeding by the definition used in this study. Thus, this claim may be deemed to be at least partially accurate. It is true that on the whole students from more affluent homes are more likely to be successful in college, but it is also important to recognize that approximately one half of the students from less affluent home are also successful in college.

Table 9: Success Rates of Economic Disadvantaged Students

Economic Status	Frequency		Percent	
	Not Persisting or not Success	Persisting and Success	Not Persisting or not Success	Persisting and Success
Not Disadvantaged	812	1240	40%	60%
Disadvantaged	279	248	53%	47%

Summary

In summary, the findings from this study suggest that many of the claims made about Maine's high school students and their college participation rates are inaccurate, at least for the type of student included in this study. In fact, the findings suggest a somewhat brighter picture than is often painted. A majority of these Maine students go on to college, and a majority of them attend college in Maine. Approximately one-third of the high school graduates choose to attend college outside of Maine, but in terms of high school academic performance these students look similar to those who choose to attend a Maine higher education institution. Fewer of these students drop out of college, compared to the national norms, and approximately one-half are considered as being successful in college by their second year in college, and very likely to earn a college degree in 4-6 years. The picture is by no means complete. The data for the other types of students, particularly for those who delay starting college after graduating high school, may present a different picture.

So the findings suggest a somewhat brighter picture than one might expect. The data for other types of students, particularly for those who delay starting college after graduating high school, may present a different picture. But even the picture that surfaces from this current analysis suggests there is still steady work ahead. Most analyses of future employment prospects revealed that a majority of jobs will require some type of post-secondary education, and the data here indicates that too many high school students may not be attending college, and too many may not be successful in college.

References

- ACT (2012). National Collegiate Retention and Persistence to Degree Rates. Iowa City, IA: ACT.
- Alliance for Excellent Education (2009). The High Cost of High School Dropouts. Washington DC: Alliance for Excellent Education.
- Carnevale, A.P., Rose, S. J., & Cheah, B. (2012). The College Payoff: Education, Occupations, Lifetime Earnings. Washington DC: Georgetown University on Education and the Workforce.
- Carnevale, A.P., Smith, N., & Strohl, J. (2010). Help Wanted: Projections of Jobs and Education Requirements Through 2018. Washington DC: Georgetown University on Education and the Workforce.
- Maine Department of Labor (2010). The Maine Labor Market Trends and Issues. Augusta, ME: Center for Workforce Research and Information.
- National Center for Education Statistics (2011). Table 385: Distribution of earnings and median earnings of persons 25 years old or over, by highest level of educational attainment. Washington DC: NCES.
- Northeastern University (2009). Left Behind in America: The Nation's Dropout Crisis. Chicago, IL: Center for Labor Market and Alternative Schools Network.
- Alliance for Excellent Education (2009). The High Cost of High School Dropouts. Washington DC: Alliance for Excellent Education.