

Investing in College Completion

► Research that supports the redeployment of limited resources

States are faced with the difficult challenge of increasing college completion rates at a time of historic budget shortfalls. While most agree that increasing the education level of U.S. citizens is essential to future economic prosperity (and public revenue collection), institutions will need to meet the goal through the more efficient use of existing resources. The push to increase postsecondary productivity has become a national effort led by foundations such as Lumina Foundation of Education and policy think tanks like the Delta Cost Project. These national leaders believe that states can redeploy their limited resources in ways that can result in increased college completion.

This issue of *The Progress of Education Reform* summarizes recent research that may challenge conventional wisdom on how and where public resources for postsecondary education should be dedicated in an effort to increase college completion rates.

What's Inside

- How enrollment increases took colleges by surprise
- Whether a four-year institution or community college is a better value
- How limited resources should be spent to increase completion

Questions to be examined include:

- How did changes in enrollments and the allocation of resources result in declining college completion rates in the United States?
- Does shifting enrollments to community colleges save money in the long run?
- Can investments in student services rather than instruction increase college completion?



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Why Have College Completion Rates Declined?

An Analysis of Changing Student Preparation and Collegiate Resources

John Bound, Michael Lovenheim and Sarah Turner, National Bureau of Economic Research, Working Paper 15566, December, 2009

This research seeks to explain why postsecondary institutions saw a significant increase in enrollments and concurrently saw a decrease in college completion rates between 1970 and 1990. The study examined whether the decline in completion rates was due to the increase in academically underprepared students or to institutional resource factors such as higher student/faculty ratios.

The assumption was that the lower preparation level of students would largely account for the decrease in college completion. However, the research found that it only accounted for about one-third of the decline. Resources dedicated to instruction (as measured by student-faculty ratios) and institutional choice were partly responsible for the decline in completion rates.

Non-selective four-year colleges and community colleges accounted for a disproportionate percentage of the decrease in college completion. At community colleges, the reason for the decline was primarily due to the lower preparation level of new students. At the non-selective four-year colleges, the decline in completion was attributable to higher faculty-student ratios.

The researchers suggest that postsecondary education was ill-prepared for the significant increase in enrollments that occurred between the 1970's and 1990's. As rates of enrollment increased, a disproportionate share of underprepared students enrolled in lower-resourced institutions rather than those better equipped to serve them well. The researchers suggest that further stratification of enrollments in higher education will compromise efforts to increase postsecondary completion rates unless there is greater attention to how resources are deployed at less selective, open access institutions.

Using the Community College to Control College Costs: How Much Cheaper Is It?

Richard M. Romano and Yenni M. Djajalaksana, Cornell Higher Education Research Institute, Working Paper, December, 2008.

Romano and Djajalaksana examine the policy of encouraging students to enroll in community colleges for the first two years of their baccalaureate degree as a cost saving measure in higher education.

The authors take issue with the notion that four-year institutions are more expensive than community colleges by challenging traditional reporting on cost differences between community colleges and four-year institutions in the following ways:

1. Shifting students from four-year institutions to two-year institutions likely would involve students from less selective four-year institutions. The difference in instructional costs is much smaller when you eliminate more expensive and selective institutions from the calculation.
2. Average cost of instruction at four-year institutions typically is calculated for all four years, rather than the first two years of instruction. Upper division instruction at four-year institutions typically is more expensive than in lower division. The cost difference would decline when you consider the instructional costs of the first two years of undergraduate instruction at community colleges and four-year institutions.
3. The difference in cost decreases further when you examine the median cost of instruction across campuses at four-year institutions. Using the mean enables higher cost institutions to skew the results toward a higher cost of instruction.



The researchers conducted a more thorough assessment of the differences in cost between two-year colleges and four-year colleges. Using data from the Delta Cost Project that supplements data collected from the U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS), the study looks at expenditures by institution type between 1987 and 2005.

The researchers identified expenditures funded through tuition, fees and public subsidies that were consistent across two- and four-year institutions. Costs associated with upper-division courses, the increased capital costs at four-year institutions, research, public service expenditures and spending for self-supporting activities like bookstores were all excluded from the analysis.

Once these costs were adjusted, the study found that it was \$1384 more costly to educate a student at a two-year community college than at a four-year college.

The researchers then isolated the differences in the expenditure of public subsidies between the two institution types, but this time they incorporated fixed capital and administrative costs. Considering that an increase in enrollment at community colleges would result in an increase in these expenditures, it made sense to the researchers to include this data into the analysis. The results show that when you focus on the expenditure of public subsidies, community colleges would cost the state over \$4000 more for every full-time equivalent student per year than a four-year institution.

The researchers explain that the factors contributing to higher costs at community colleges could include small class sizes for remedial instruction and expensive vocational and technical programs. Lower costs at four-year schools could be due to larger class sizes and the use of graduate students to provide instruction.

The researchers admit that the cost of four-year colleges would increase if the analysis incorporated the costs of graduate education, which make inexpensive teaching assistant positions possible. Another mitigating factor might be tuition policies that are differentiated for upper- and lower-division courses, allowing for greater consistency in public investments for all courses. Conversely, costs at two-year institutions could increase as students encounter difficulties in transferring their community college credits to a four-year institution.

While these factors would likely impact the final analysis, the researchers contend that *policy makers should not be quick to assume that encouraging students to complete their first two years of college at a community college will result in the cost savings that might motivate such a policy direction.*

ECS Resources

Recent Policies on Postsecondary Completion in the ECS Policy Database

This includes legislation recently adopted by state legislatures on increasing college completion.

http://www.ecs.org/rs/SearchEngine/SearchResults.aspx?faq_id=a0870000005PCTdAAG

Getting Past Go: Rebuilding the Remedial Education Bridge to College Success

This paper is a policy framework on how states can better leverage their investments in remedial education to increase student success.

<http://www.gettingpastgo.org/docs/GPGpaper.pdf>

Other Resources

Delta Cost Project

The Delta Cost Project, which is led by Jane Wellman, is a preeminent source on how states can increase the productivity of their postsecondary systems through more effective and efficient use of public resources.

<http://www.deltacostproject.org/>

Lumina Foundation for Education's Making Opportunity Affordable Project

Making Opportunity Affordable has provided grants to states on how they can increase the productivity of their postsecondary systems through the implementation of cost effective strategies that reduce costs and increase student success.

http://www.luminafoundation.org/our_work/college_productivity/productivity.html

Complete College America

Complete College America is working with 22 states to increase their college attainment rates to 60% of their adult population by 2020.

<http://www.completecollege.org/>



Do Expenditures Other Than Instructional Expenditures Affect Graduation and Persistence Rates in American Higher Education?

Douglas A. Webber and Ronald G. Ehrenberg, National Bureau of Economic Research, Working Paper 15216, August, 2009.

As postsecondary institutions, particularly non-selective four-year institutions and community colleges, experience significant increases in enrollment among students who are not academically prepared for college-level courses, there is a need to examine whether institutions can more effectively deploy their limited resources to meet their needs. Webber and Ehrenberg explored this issue as they examined whether shifting funding away from instruction to student services might lead to an increase in student degree completion.

The researchers disaggregated data on institutional expenditures from the Delta Cost Project and IPEDS from 2002-06. Data from 1160 postsecondary institutions were put into categories such as research, instruction and student services in order to compare how an increase or decrease in spending in any one category might impact student success.

They then developed a model for predicting college graduation rates based on factors known to impact college completion and based on the appropriation of resources that impact those factors. They then simulated the impact that increasing or decreasing funding by \$500 per student in each category had on graduation rates.

The analysis measured the overall impact and the institutional-level impact based on institutional average SAT scores (to reflect academic preparation) and the average federal Pell Grant given to students (to reflect economic status) at the institution.

Not surprisingly, the research found that increases in expenditures on instruction and student services resulted in higher graduation rates. However, the researchers found that the increase in spending on student services had a larger impact than an increase in spending on instruction. In addition, there was a greater impact on student services over instruction at institutions that had lower average SAT scores or had a higher percentage of students receiving Pell grants.

Given that most states will not be able to increase spending in any category without decreasing funding in other categories, the analysis examined the impact of a reallocation of dollars from one category of spending to another. The research found that at institutions with lower than average SAT scores or higher than average Pell eligibility among their students, the reallocation of resources from instruction to student services resulted in a net increase in graduation rates.

“At institutions with lower than average SAT scores or higher than average Pell eligibility among their students, the reallocation of resources from instruction to student services resulted in a net increase in graduation rates.”



This last finding is most significant given the limited resources available for higher education. It suggests that *institutions with high percentages of students who are academically underprepared or are economically disadvantaged should consider investing in student services, even before investing in instruction.*

The researchers are quick to point out that simply reallocating resources will not lead to these outcomes and that strong consideration be given to the student services interventions that positively impact student success.

Policy Implications

As the country perseveres through a dramatic economic recession, states and postsecondary institutions are faced with the dilemma of needing to invest in the economic future of the nation at a time of unprecedented declines in public revenue. The studies we examine in this issue of *The Progress of Education Reform* suggest that as we seek to educate a much larger percentage of our residents, an increasing number will consist of students who have been traditionally underrepresented in higher education, particularly the academically underprepared and financially disadvantaged. While this reality presents enormous challenges for states, these studies suggest that states need to maintain the long view and resist short term fixes, such as shifting remedial education exclusively to community colleges to save money. In addition, the research suggests that a re-examination of how resources are deployed can yield results, even as the prospect for new resources remains grim.

Fortunately, there are many efforts supporting states and postsecondary institutions as they address this critical challenge:

- ▶ The National Center for Academic Transformation has found that the use of faculty-driven processes to incorporate technology into instruction can actually increase student success while decreasing costs.
- ▶ The Delta Cost Project is conducting deep and meaningful state-by-state analysis of how resources are deployed in postsecondary education and how cost efficiencies can be gained through creative reallocation.
- ▶ Lumina Foundation for Education's *Making Opportunity Affordable Project* is funding states to develop innovative strategies to increase college attainment rates by more effective leveraging of state resources.
- ▶ The *Action Analytics Symposium* is promoting data systems that enable institutions to track their progress on agreed upon student success and other postsecondary metrics to develop just-in-time interventions like early alert systems that enable institutions to identify students who are "at-risk" before they drop out or otherwise compromise their chances at success.

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