Improving Higher Education of All Students: Lessons from the United States

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Introduction

Nation-states vary tremendously in terms of their historical, demographic, economic, political, and cultural characteristics and contexts. And they differ in terms of their current levels of educational attainment and the characteristics of their educational systems. Despite the differences, higher education policymakers, college and university leaders, and educational researchers in many nations are asking similar questions about higher education. Among the most important questions are: How can a nation increase its overall level of higher education attainment? And, how can a nation close persisting gaps in attainment that persist across demographic groups?

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For nearly two decades, I have focused my scholarly career on advancing the production of knowledge about how to promote the higher education attainment of students in the United States. My research has focused most specifically on the college- going end of the higher education pipeline, with particular attention to understanding how to improve college access, success, and affordability for students from groups that have been historically underrepresented in higher education.

In recent years, I have learned the additional insights that can be gleaned about these topics by stepping outside of the U.S. context in which I have been embedded to examine fundamental questions about higher education in different national and local contexts. One source of insights about the value of international and comparative research has been the opportunity to co-teach courses on International Higher Education in Ireland, Hungary, and China for students in the University of Pennsylvania's Executive Doctorate program in Higher Education Management. I have also learned the value of comparative and international research through a multi-year collaborative research project conducted with colleagues at Nazarbayev University in Kazakhstan. This research project has focused on understanding the internationalization of higher education in Kazakhstan, with particular attention to participation in and benefits of a government-sponsored student mobility program (Perna, Orosz & Jumakulov, 2015; Perna, Orosz et al., 2015).

I have developed further appreciation for the insights that may be gleaned from comparative research through a multi-year "state review project" that I conducted with my Penn GSE colleague, Professor Joni Finney, and a terrific group of (then) doctoral students: Michael Armijo, Awida Rodriguez, and Jamey Rorison. A primary premise of this working paper is that findings from our examination of the relationship between public policy and higher education attainment in five individual U.S. states (Perna

& Finney, 2014) may have utility for understanding the relationship between public policy and higher education in other nations.

This working paper is organized to addresses the following three questions:

1. Why does the United States need to close gaps in HE attainment?
2. What do we know from research about how to close these gaps in the U.S.?
3. What is role of public policy in closing gaps in attainment in U.S. states?

Why does the United States need to close gaps in higher education attainment?

Closing gaps in educational attainment is one of the most important issues facing the United States and nations across the globe (Acemoglu & Robinson, 2012; Perna, 2015). In the United States, there has been considerable attention to the decline in recent years in the nation's level of higher education attainment relative to that of other nations. The United States ranked above all other OECD nations in the share of 25 to 34 years with a tertiary degree in 2000, but by 2012 a number of other nations ranked higher than the United States on this measure (Cahalan & Perna, 2015). Table 1 shows that, in 2012, 44% of adults in the U.S. age 25 to 45 had a tertiary education, compared with 65.7% in Korea, 58.6% in Japan, 57.3% in Canada, and 57% in the Russian Federation (OECD, 2015).

Higher education attainment is important in the United States, as well as in other nations, because, in our global, technologically-driven economy, available jobs increasingly require some education beyond high school (Carnevale, Smith, & Strohl, 2013). Drawing on data from the Bureau of Labor Statistics and research about the continued "upskilling" of current jobs, Anthony Carnevale and his colleagues project that 65% of jobs in the

U.S. will require education beyond high school by 2020, up from 28% in 1973. At the current rate of degree production, the demand for workers with at least an associate's degree will exceed the supply by 5 million by 2020 (Carnevale et al., 2013).

Available data document the positive relationship in the U.S. between higher education attainment and numerous economic and social outcomes for both individuals who participate in higher education and society more generally (Baum, Ma & Payea, 2013). Individuals who attain higher levels of education average higher earnings and have better working conditions, higher rates of employment, lower rates of unemployment and poverty, better health, and longer life expectancies (Baum et al., 2013; Carnevale et al., 2013). Society also benefits, as with higher educational attainment comes greater economic productivity, less reliance on social welfare programs, greater civic engagement and charitable giving, and higher rates of voting (Baum et al., 2013).

The U.S. cannot achieve the level of educational attainment that is required for workforce readiness or international competitiveness without closing the considerable gaps in higher education attainment that persist across demographic groups (Perna & Finney, 2014). Attention only to the nation's overall higher education attainment masks the considerably lower rates of attainment for students from low-income families, students who are first in their families to attend or complete college, and students from racial and ethnic minority groups. In 2012, college enrollment rates were about 30 percentage points lower for high school graduates from the lowest family income quintile than from the highest (Baum, Ma, & Payea, 2013). When they do enroll, students from low-income families tend to attend less selective postsecondary educational institutions and complete degrees at lower rates (Cahalan & Perna, 2015). In 2013, 77% of dependent students from families in the highest-income quartile had attained a bachelor's

degree, compared with just 9% of dependent students from the lowest family income quartile (Cahalan & Perna, 2015).

Closing gaps in higher education attainment across racial/ethnic groups is also important in the U.S., given the changing racial/ethnic characteristics of the population. Hispanics are among the fastest growing racial/ethnic groups (Western Interstate Commission on Higher Education, 2012), but currently average among the lowest levels of higher education attainment. Over the past decade, higher education attainment has increased regardless of racial/ethnic group (National Center for Education Statistics, 2013). But, despite this progress, considerable gaps remain. In 2012, among adults age 25 to 29, only 15% of Hispanics and 23% of Blacks age 25 to 29 held at least a bachelor's degree, compared with 40% of Whites and 60% of Asians (National Center for Education Statistics, 2013). Higher education attainment is even lower for males than females within each racial/ethnic group. In 2012, only 19% of Black men (and 27% of Black women) and 12% of Hispanic men (and 17% of Hispanic women) age 25 to 29 had attained at least a bachelor's degree (National Center for Education Statistics, 2013). Representation of Hispanics among U.S. public high school students (grades 9 to 12) increased from 17% in 2005-06 to 21% in 2010-11, and is projected to increase to 27% in 2020-21 and 28% in 2027-28 (WICHE, 2012). At the same time, the representation of Whites among U.S. public high school students enrolled in grades 9 to 12 declined from 60% in 2005-06 to 56% in 2010-11, and is projected to continue to decline reaching 48% by 2024-25 (WICHE, 2012).

What do we know about how to improve higher education outcomes?

Especially over the past two decades, considerable research has been conducted on how to improve college access, persistence, and attainment in the United States (Perna & Jones, 2013). Drawing from the economic

theory of human capital and sociological theories of social and cultural capital, my program of research on these topics has included: statistical analyses of how students of different groups make decisions about whether to attend college (e.g., Perna, 2000), in particular types of high schools (Perna & Titus, 2005), and in particular states (Perna & Titus, 2004); studies of the effects on college-related outcomes of particular policies and programs such as student financial aid (e.g., Perna, 2010) and the International Baccalaureate Diploma Program (Perna, May et al., 2015); and case studies that probe the forces that influence college-going decisions within particular high schools (Perna et al., 2008; Perna & Thomas, 2009) and states (Perna & Finney, 2014).

No single study provides the answer to the question: How do we close gaps in higher education attainment? But, together, available research has generated considerable improvements in our knowledge of underlying college-going processes and the most effective policies and practices (Perna, 2006; Perna & Jones, 2013).

One insight from available research is that higher education attainment is the result of a longitudinal and cumulative process (Perna & Thomas, 2008). The educational attainment process arguably begins at birth, given the many ways that educational opportunity and advantage are structured into society. At a minimum, higher education attainment requires aspiring to attend college, academically preparing for college, applying for admission and financial aid, enrolling, accumulating credits and engaging in college activities, and persisting through program completion.

The many steps along the higher-education-attainment pathway offer multiple points for policy and programmatic intervention. A review of available data illustrates gaps across demographic groups in the U.S. in each intermediate milestones. For instance, although postsecondary enrollment rates of recent high school graduates have generally increased

over the past 25 years regardless of family income, the gap in enrollment rates remains substantial. Postsecondary enrollment rates were about 30 percentage points lower for recent high school graduates in the lowest rather than the highest family income quintile in 2012 (52% versus 82%), compared with 36 percentage points in 1987 (37% versus 73%, Baum, Ma & Payea, 2013). Only 26% of students in the lowest family income quartile who first enrolled in college in 2003-04 and were financially dependent on their parents earned a bachelor's degree within five years, compared with 58% of those in the highest family income quartile (Baum, Ma & Payea, 2013).

Human capital theory assumes that individuals make college-related decisions based on a comparison of the costs with the benefits. A review of available research illustrates that, consistent with the tenets of human capital theory, the primary predictors of college access and success are: academic preparation; financial resources; and information about college and ways to navigate college-related processes (Perna, 2006). Consistent with sociological perspectives, research also demonstrates that college-related decisions are not made in a vacuum. Instead, these decisions are influenced by the contexts in which students are embedded. Relevant contexts include a student's family, high school, and the state and nation in which a student lives, and are influenced by policies and practices of K-12 schools, colleges and universities, and state and federal governments (Perna, 2006).

For instance, whether a student aspires to attend college and knows how to acquire information about the college-going process is influenced by the knowledge and experiences of other members of their family, the college-going norms of the communities in which an individual lives, and the perceived value that employers place on college-educated workers. Whether an individual is academically prepared for college is influenced by the college-related resources and the college-going culture of the high

school a student attends. Academic readiness is also influenced by state policies that determine academic requirements for graduating from high school. Whether an individual persists in college to finish a degree program is influenced by the institutional resources available to promote academic and social success and opportunity. Whether an individual has the financial resources to pay the costs of higher education depends on his/her family's income and savings, the tuition charged by higher education institutions, and federal and state policies and institutional practices pertaining to student financial aid. In short, although student agency influences college-related outcomes, more important are the structures and systems that promote higher education opportunity for some but limit higher education opportunity for others (Perna & Jones, 2013).

What is the role of public policy in closing gaps in attainment?

Public policy is one mechanism for addressing structural inequality and encouraging higher education attainment for all students (Perna & Finney, 2014). In the U.S., the federal government and state governments create and fund public policies that increase the demand for, and supply of, higher education. Government intervention in the higher education market is justified, given the public benefits of higher education and the societal value of creating a more level playing field for higher education opportunity (Perna & Finney, 2014).

In the U.S. the federal government influences higher education attainment primarily through the student financial aid and other programs that are authorized under Title IV of the Higher Education of 1965 (Perna & Finney, 2014). In 2013-14, undergraduates nationwide received $184.5 billion in student financial aid from all sources, including tax credits (College Board, 2015). About two-thirds of all aid received by undergraduates is from programs authorized by the federal government,

including federal loans and federal tax credits and deductions. About 18% of all aid dollars received by undergraduates in 2013-14 was in form of federal Pell Grants (College Board, 2015). As aid that is awarded to financially needed students and does not need to be repaid, Pell Grants are particularly important for improving college affordability for students from low-income families.

The federal government's role not withstanding, individual U.S.-states have the primary responsibility for the policies and structures that will increase higher education attainment and close gaps in attainment across groups (Perna & Finney, 2014). To improve understanding of the role of state public policy in improving higher education attainment and closing gaps in higher education attainment across groups, Joni Finney and I (with assistance from Michael Armijo, Awilda Rodriguez, and Jamey Rorison) conducted case studies of five U.S. states: Georgia, Illinois, Maryland, Texas, and Washington. Consistent with traditional case study approaches, we collected and analyzed, for each of the five states, data from multiple sources including documents, reports, databases, and interviews. We spent several days in each state, interviewing state political leaders as well as leaders of state higher education associations, colleges and universities, K-12 and P-16 agencies, and business and philanthropic organizations. We produced a case study report for each state and then conducted cross-case analysis to identify cross-cutting themes. (For more information on the methods used, see Perna & Finney, 2014). No five states can be representative of all 50 states, given the great variation across U.S. states on many different dimensions. For instance, Table 2 shows that the share of adults age 25 to 34 with least an associate's degree varies dramatically across the 50 U.S. states. Only about a third of adults age 25 to 34 in 2012 had attained at least an associate's degree in Oklahoma, Mississippi, West Virginia, New Mexico, Louisiana, Alaska, Arkansas, and Nevada. At the same time, more than 50% of adults age 25 to 34 had attained at least an

associate's degree in Massachusetts, Minnesota, Iowa, and New York (National Center for Higher Education Management Systems, n.d.).

We purposively selected the five states to represent differences in higher education attainment. Table 2 shows that higher education attainment is above the U.S. average in Maryland, Washington, and Illinois, and below the national average in Texas and Georgia (National Center for Higher Education Management Systems, n.d.). As described more completely in Perna and Finney (2014), the five states also vary in terms of numerous other dimensions, including the demographic characteristics of their populations and the characteristics of their state's higher education systems.

As might be expected given the many variations among the five states, a unique individual state "story" emerged for each of the five states (Perna & Finney, 2014). The chapter headings for each state provide an indication of the differences across states. We found policies that are "perpetuating disparity" in higher education attainment in Georgia especially between the large African American and White populations; "hard choices ahead" in Texas, as the state tries to both increase attainment and improve the stature of its research universities with finite fiscal resources; "a story of decline" in indicators of higher education performance in Illinois following changes in state governance mechanisms; a "state policy leadership vacuum" in Washington as the state needs to increase bachelor's degree production, and "much accomplished but much at stake" in Maryland, a state with above-average attainment but considerable gaps in higher education outcomes across demographic groups.

Despite the uniqueness of each state story, we also found common themes that describe the relationship between state policy and higher education attainment across the states (Perna & Finney, 2014). At the foundation of the conceptual model that emerged from our analyses is the centrality of the state "context." The relationship between state public policy and higher

education attainment depends on a state's historical, demographic, political, economic, and cultural characteristics, as well as the characteristics of the higher education institutions, structures, and policies that are currently in place.

Given the many differences across states, we do not identify any single policy that influences higher education attainment. Instead, we identify three categories of policies that seem to matter: policies that strategically use available fiscal resources to ensure college affordability (e.g., state appropriations to higher education institutions, tuition setting policies, and student financial aid policies); policies that ensure the smooth academic movement of students from K12 to higher education and transfer across higher education institutions; and policies that match the availability of high-quality higher education options to the educational needs of the local population. Our findings also signal the importance of state policy leadership and steering of higher education toward raising higher education attainment and closing gaps in attainment, orienting public policies explicitly toward improving equity, and continually monitoring and assessing the effectiveness of public policies in improving attainment and making necessary adjustments (Perna & Finney, 2014).

Conclusions

Despite the countless differences, many nations are grappling with the questions: How can a nation increase its overall level of higher education attainment? And, how can a nation close persisting gaps in attainment across demographic groups? This paper seeks to inform understanding of these questions by providing an overview of related data and research on higher education in the United States.

This paper suggests the utility of drawing comparisons not just between the United States and other nations, but also between individual U.S. states and other nations. Individual U.S. states vary considerably in terms of their higher education attainment, structures, and policies (Perna & Finney, 2014). Individual U.S. may also be an appropriate unit for comparison because of their size. At more than 312 million in 2012, the total population of the United States is considerably larger than the population of other OCED nations; the populations of individual U.S. states are more similar in magnitude to the populations of OECD nations. In 2015, the populations of individual U.S. states ranged from a low of about 586,000 in Wyoming to more than 39.1 million in California (U.S. Census Bureau, 2015), whereas the populations of OECD nations (excluding the U.S.) ranged from a low of about 320,000 in Iceland and 525,000 in Luxembourg, to about 115.7 million in Mexico and 127.8 million in Japan (OECD.stat, n.d.). Comparative and international higher education research can be an important potential source of new understandings about how to productively raise higher education attainment and close gaps in attainment across groups. This paper focuses on identifying insights that have emerged from research about how to promote higher education attainment in the United States. Certainly the United States, and individual states within the U.S., would also benefit from knowing more about the forces and policies that contribute to higher education attainment for different demographic groups in other nations. Despite variations across and within national contexts in countless important dimensions, we can learn much from each other.

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Table 1. Educational Attainment in OECD Nations, 2012

Nation	Percent 25 to 34 with Tertiary Education, 2012	Total Population, 2012
OECD Average	**39.7**	
Korea	65.7	50,004,441
Japan	58.6	127,799,000
Canada	57.3	34,492,646
Russia	57.0	
Luxembourg	49.9	524,853
Ireland	49.2	4,582,769
United Kingdom	47.9	63,256,154
Australia	47.2	22,683,573
New Zealand	46.9	4,433,100
Norway	45.0	4,985,870
Israel	44.5	
United States	44.0	312,232,049
Sweden	43.5	9,482,855
Belgium	43.0	11,035,958
France	42.9	65,394,283
Netherlands	41.3	16,730,348
Poland	40.8	38,538,447
Switzerland	40.6	7,954,662
Denmark	40.2	5,580,516
Estonia	39.8	
Finland	39.7	5,401,267
Spain	39.3	46,818,221
Latvia	38.7	
Iceland	38.4	319,575
Slovenia	35.3	
Greece	34.7	11,290,067
Hungary	30.4	9,957,731
Germany	29.0	81,843,743
Portugal	28.3	10,542,398
Czech Republic	27.8	10,505,445
Slovak Republic	27.0	5,404,322
Mexico	24.1	115,682,868
Austria	23.0	8,443,018
Italy	22.3	60,820,696
Turkey	21.0	74,724,269
Brazil	14.5	

Source: OECD (2015), OECD.stat (n.d.).

Table 2. Percent of adults age 25 to 34 with at least an associate's degree by U.S. state, 2012

State	Percent	State	Percent
Nation	**41.1%**		
Massachusetts	55.2%	California	39.9%
Minnesota	52.2%	Montana	39.7%
Iowa	51.0%	Oregon	39.4%
New York	50.9%	North Carolina	38.7%
Nebraska	49.4%	Michigan	38.2%
New Hampshire	49.2%	Maine	38.1%
New Jersey	48.8%	Indiana	37.9%
North Dakota	48.1%	Florida	37.8%
Virginia	46.9%	South Carolina	36.5%
Colorado	46.7%	Idaho	36.1%
Illinois	46.5%	Georgia	35.7%
Connecticut	46.5%	Tennessee	35.4%
Maryland	46.0%	Alabama	34.7%
Pennsylvania	45.7%	Arizona	34.6%
Wisconsin	43.7%	Wyoming	34.4%
Washington	43.1%	Texas	34.2%
Rhode Island	43.1%	Kentucky	34.0%
Vermont	43.0%	Oklahoma	33.7%
Delaware	41.7%	Mississippi	33.3%
Kansas	41.3%	West Virginia	32.9%
Utah	41.2%	New Mexico	32.3%
South Dakota	40.7%	Louisiana	32.2%
Missouri	40.5%	Alaska	31.2%
Ohio	40.2%	Arkansas	31.0%
Hawaii	40.0%	Nevada	30.1%

Source: National Center for Higher Education Management Systems (NCHEMS)

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