



JAMES A. BAKER III INSTITUTE FOR PUBLIC POLICY
RICE UNIVERSITY

US-MEXICO ACADEMIC MOBILITY: TRENDS, CHALLENGES, AND OPPORTUNITIES

BY

DAVID VASSAR, PH.D.

CONTRIBUTING EXPERT, LATIN AMERICA INITIATIVE
JAMES A. BAKER III INSTITUTE FOR PUBLIC POLICY
RICE UNIVERSITY

AND

BEVERLY BARRETT, PH.D.

LECTURER
BAUER COLLEGE OF BUSINESS
UNIVERSITY OF HOUSTON

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Abstract

Through both a qualitative and quantitative study of US-Mexico academic mobility as well as a comparative analysis of academic mobility globally, this study highlights areas where the US-Mexico higher education mobility framework is strong and others where there is much to improve. We argue for the importance of increasing mobility of higher education actors as well as for a set of transformative policy measures for our region's higher education system. Together, these actions will both increase the region's research capacity and provide a stronger pool of human capital. Government, industry, and other private partners must work together with higher education institutions to reverse the region's downward trend of academic mobility. Collectively, leadership from within the higher education community—including universities, colleges, and junior colleges—along with partners in industry, government, and the philanthropic community must create a framework for higher education mobility that is voluntary and flexible over time and that incentivizes investments that support long-term bilateral engagement. We must also identify strategic academic fields and then build higher education clusters around these fields. Implementation of these measures will require long-term infrastructure for policy articulation, institutional coordination, and financial sustainability. Finally, a bold rethinking of academic accreditation and licensing of professionals in strategic technical fields will be crucial to the continued competitiveness of the region.

The United States and Mexico are neighbors, economic partners, often political allies, and sometimes competitors for talent, capital, and technologies. Just last year, the Obama and Peña Nieto administrations reaffirmed the strategic importance of the bilateral relationship by launching two significant initiatives: the High Level Economic Dialogue, a cabinet-level vehicle for deeper engagement on economic issues, and the Bilateral Forum on Higher Education, Innovation, and Research (commonly known by its acronym in Spanish, FOBESII),¹ a parallel effort to increase academic and scholarly exchange and innovation between the two countries. In the context of these two bilateral initiatives, a key factor for success is the two governments'

¹ FOBESII is an initiative inaugurated by Presidents Peña Nieto and Obama, but driven by the US Department of State and the Mexican Ministry of Foreign Affairs. Since January 2014, these entities have convened six binational working groups made up of representatives from universities, industry, government, and the nonprofit sector to address the following topics: 1) promoting student exchange, 2) workforce development, 3) special potential of the border, 4) language acquisition, 5) student mobility, and 6) research and innovation.

ability, in cooperation with nongovernmental actors, to provide a framework that will generate and sustain the meaningful exchange of students, faculty, and staff among higher education institutions.

Academic mobility promotes increased understanding of culture and language, deeper knowledge of educational and research practices and technologies, and insight into the key lines of inquiry that drive research and innovation. The impact of significant increases in these exchanges and the educational and social integration that they would generate could create the potential for increased economic integration through expanded connectivity and the consistent, quality preparation of human capital across the region.

Figure 1. The United States' Top Trading Partners, 2013

Rank	Country	Exports	Imports	Total Trade
1	Canada	300.3	332.1	632.4
2	China	122	440.4	562.4
3	Mexico	226.2	280.5	506.6
4	Japan	65.1	138.5	203.7
5	Germany	47.4	114.6	162.1
6	South Korea	41.6	62.2	103.8
7	United Kingdom	47.4	52.6	100
8	France	32	45.3	77.3
9	Brazil	44.1	27.6	71.7
10	Saudi Arabia	19	51.8	70.8
11	India	21.9	41.8	63.7
12	Taiwan	25.6	37.9	63.6
13	Netherlands	42.7	19.2	61.9
14	Switzerland	27	28.3	55.2
15	Italy	16.5	38.7	55.2

Source: <http://www.census.gov/foreign-trade/statistics/highlights/top/top1312yr.html>.

Figure 2. Academic Exchange with the United States, 2013

Rank	Country	Top Place of Origin	Leading Destinations	Total Exchange
1	China	235,597	14,887	250,484
2	India	96,754	4,593	101,347
3	South Korea	70,627	2,695	73,322
4	Saudi Arabia	44,566	25	44,591
5	United Kingdom	9,467	34,660	44,127
6	Italy	4,276	29,645	33,921
7	Spain	5,033	26,480	31,513
8	Canada	27,357	1,639	28,996
9	France	8,297	17,168	25,465
10	Japan	19,568	5,283	24,851
11	Taiwan	21,867	820	22,687
12	Germany	9,819	9,370	19,189
13	Mexico	14,199	3,815	18,014
14	Vietnam	16,098	878	16,976
15	Brazil	10,868	4,060	14,928

Source: IIE Open Doors, 2013.

The levels of academic mobility between the United States and Mexico are low when compared to those between other important trading partners of either country (see Figure 1 and Figure 2). Without significant increases in mobility between the United States and Mexico, any distinctive economic dynamism founded in the development of human capital is unlikely. Yet a set of bilateral actions could reverse this trend and set a course for increased economic integration based on a bilateral framework for academic mobility and improved collaboration in education, training, research, and innovation.

This study provides a context for US-Mexico academic mobility through a comparative analysis of other regions that have confronted similar challenges with varying degrees of success. Additionally, it provides policy recommendations for decision-makers and practitioners with influence within the higher education bilateral community.

Current Context of US-Mexico Higher Education Mobility

Until the creation of FOBESII, governmental cooperation between the United States and Mexico remained on the discursive, or largely rhetorical, level, with the exception of the Fulbright-Robles fellowship program and some development-oriented funding historically provided by the United States Agency for International Development (USAID). Over the last decade, the number of students going from the United States to Mexico has fallen from 10,022 in 2005 to 3,815 in 2013 (IIE 2013a).² In the same period, the number of students from Mexico to the United States has remained steady at approximately 14,000 annually.

Bilateral mobility of higher education and bilateral research complement the North American idea that advocates a regional approach to development and growth (Pastor 2011, 165). The United States and Canada, unlike the United States and Mexico, have already aligned their higher education systems in degree structure and accreditation. American and Canadian universities are members in the American Association of Universities (AAU), in which there are no member institutions from Mexico. Importantly, though, the Association for Public and Land Grant Universities (APLU) admitted membership of four Mexican universities for the first time in January of this year.³ This shift in policy by one of the most important voices in US higher education is likely a harbinger of increased interaction between major US and Mexican universities. Both the AAU and the APLU assert leadership, speaking and advocating for the research and educational missions of their members on national and international stages.

² Institute of International Education (IIE), "Open Doors Fact Sheet: Mexico," Open Doors Data, <http://www.iie.org/Research-and-Publications/Open-Doors/Data/Fact-Sheets-by-Country/2013>.

³ See "APLU Welcomes 10 New Member Institutions," January 29, 2014, <https://www.aplu.org/sslpage.aspx?pid=2868>.

There are also administrative and cultural impediments to strengthening the bilateral relationship in higher education. Credit and degree structure—as well as accreditation, ensuring quality—are potential areas for cooperation. Language is a defining aspect of national culture, and foreign language acquisition is a sociocultural structural barrier to overcome. One motivation for students to study abroad is to acquire the foreign language. Demonstrated language ability in English in the United States and in Spanish in Mexico is a requisite for extended periods of study toward degrees. To strengthen trade and investment between the two countries, there is a need for reform to increase flexibility in the bilateral labor market (Studer 2012a, 2012b). Following a period of study abroad in the United States, the knowledge acquired by exchange students may be applied to professional training after graduation through the “optional practical training” (OPT) provision for F-1 (student) visa holders. Reform that advances mutual provision of OPT opportunities for US and Mexican students studying abroad is a key element to improving higher education mobility. Without such opportunities for yearlong, paid internships in the foreign country, we will lack a dynamic and distinctive tool for encouraging exchange between the two countries. As we will find in this study, we are losing the public affairs battle in this challenge, and an opportunity to gain valuable work experience abroad—along with the academic opportunities afforded by our countries’ universities—would provide visibility that may be decisive in determining a student’s decision to study or conduct research abroad.

To provide a comparative context for higher education policy between the United States and Mexico, we now compare global trends in higher education mobility in Europe, South America, and Asia before presenting our research findings.

International Collaboration and Best Practices from Other Regions

The internationalization of higher education has gained pace in recent decades (Spring 2009). The goal for broadened access for higher education attainment works in tandem with the incentives for innovation and internationalization as universities evolve over time (Mazza et al. 2008). Through the voluntary soft, or non-binding, policy initiative of the Bologna Process—a structural and policy reform process in the European Union, which has led to the creation of the integrated European Higher Education Area (EHEA)—Europe has become the most integrated

region in higher education in the world. As central and eastern European countries embraced democracy in the 1990s, the reform of higher education followed the transitions to democratic politics and more market-oriented economies. There is inevitably a tension between national and regional objectives for decisions concerning institutional governance (Curaj et al. 2012), but overall the Bologna Process and the creation of the EHEA has met with strong support and is widely seen as a policy success.

The idea of a “Region of Knowledge” proposed by FOBESII is similar to the notion of a Europe of Knowledge proposed by the European Commission in 1997. The vision of policymakers and education ministers working in partnership at national and international levels over decades in Europe inspired ongoing cooperation in higher education (Corbett 2005). Likewise, cooperation in higher education will strengthen the socioeconomic ties between the United States and Mexico. In Latin America, modernization takes form with a greater emphasis on research and technology (Díaz Villa 2012, 65). US academic institutions have led the world in research and innovation discoveries. As Mexican universities continue to develop this competency, a binational agenda for higher education and research will advance each country toward its national educational and economic development goals.

Global Trends for Higher Education Mobility in Europe, South America, and Southeast Asia

In order to understand the potential of higher education mobility between the United States and Mexico, it is important to examine regional efforts elsewhere in the world. An overview of global trends from Europe, Latin America, and Asia will serve as a point of comparison.

Shared political, economic, and cultural values have resulted in higher education cooperation in the European Higher Education Area (EHEA), the largest academic mobility initiative in the world. The Bologna Process was initiated in 1999 and established the objectives for the EHEA, in which the European Commission is a partner alongside 47 sovereign states. Participation in the trends toward globalization, together with internationalization of universities, is a driver of the Bologna Process (Nokkola 2007, 223). The European Commission plays a central role in

higher education integration. This unique policymaking and policy implementation institution represents the interests of the 28 European Union member states. A facilitating institution for higher education policy, such as the European Commission, has supported the advances in regional integration thus far.

Prior to the Bologna Process, in 1986 the European Community Action Scheme for the Mobility of University Students, known as Erasmus, began to provide resources for higher education mobility for a semester or academic year. The European Commission-funded study abroad program has been among the most lauded policy initiatives of the European Commission. In the EU's 2014–2020 Multiannual Financial Framework, Erasmus is one of the only programs to have received a budget increase. At the end of 2013, director general for education and culture Androulla Vassiliou announced Erasmus+, a program to include countries beyond the EU in the educational exchange beginning in 2014.⁴

The Marie Curie Fellowship Programme, which began in 1996, provides funds from the European Commission to advance mobility for scientific researchers.⁵ The Marie Skłodowska-Curie Action (MSCA) programs are incorporated in the Horizon 2020 framework for the European Research Area (ERA), in which the 28 member states of the European Union participate, and will award approximately €6.16 billion between 2014 and 2020. There are MSCA programs for both early-stage and experienced researchers in fields including medicine, physics, finance, and the social sciences. The MSCA programs advance innovation objectives in the EU and provide knowledge to strengthen the Innovation Union.

These initiatives are intended to strengthen economic growth through mobility by way of discovery and education in higher education and innovation in research. While they differ in terms of policy approaches and programmatic objectives, they are complementary in their purpose to build social cohesion and to drive economic growth in a Europe of Knowledge.

⁴ “The new EU programme for education, training, youth, and sport for 2014-2020,” European Commission Erasmus+, last modified October 16, 2014, http://ec.europa.eu/education/erasmus-plus/index_en.htm.

⁵ “Marie Curie Actions – Research Fellowship Programme,” European Commission Research and Innovation, last modified September 10, 2014, <http://ec.europa.eu/research/mariecurieactions/>.

The number of Erasmus students per year has increased from 3,264 in the initial academic year (1987–1988) to more than 250,000 in the academic year 2011–2012. Other world regions have emulated higher education mobility programs, such as Erasmus and the EHEA. Outcomes thus far provide lessons from which to learn about successes and challenges.

Despite the increased numbers of students studying abroad through Erasmus, there are limitations to international policy coordination through such mechanisms. The EHEA created by the Bologna Process and the ERA both use the open method of coordination (OMC), which is a soft law policy tool to share best practices across participating countries. While soft law has been broadly used since the EU's Treaty of Maastricht, the OMC was introduced with the European Commission's Lisbon Agenda in 2000 to promote cooperation among countries in specific policy areas such as employment, environment, and education policies. There are limits to international cooperation given the nonbinding nature of the OMC, as the lack of an enforcement mechanism presents a challenge to implementation.

Concerns about the OMC's weak mechanism for accountability of national governments are evidence of implementation disconnects between European-level policymaking and institutional implementation. Complexity exists among levels of governance in the implementation of the EHEA and the ERA, and the OMC does not address the local-level coordination necessary among higher education institutions (Veiga and Amaral 2006, 292). Distinct national traditions in higher education and research, such as funding support and quality standards, make consistency a challenge in the application of the OMC. Soft law policies—such as the EHEA, ERA, Lisbon Agenda, and the Europe 2020 economic growth strategy—have weaknesses in policy coordination since there is no governance enforcement (Amaral 2011). The following are some examples of how the international policy convergence as undertaken by the EHEA has been applied to other regional integration schemes.

Since 2011, the Pacific Alliance—a trading bloc of which Mexico is a member with Chile, Colombia, Peru, and soon Costa Rica—has begun deliberations on expanding cooperation in higher education. This cooperation would facilitate the external orientation of Mexico's higher education institutions. Among early agreements have been ones to “create a joint university

system where, much like in Europe, students will be able to get credits for their studies in any of the bloc's member countries" (Oppenheimer 2012). Mutual credit recognition, the basic attribute of any serious academic cooperation initiative, would underpin the Pacific Alliance's higher education framework.

In the 1990s, with the creation of Mercosur in South America,⁶ there were also efforts to cooperate in higher education in the region through Mercosur Educativo. Since its founding in 1991 with the Treaty of Asunción, Mercosur has not experienced the deepening of economic integration on par with the EU. However, even prior to the launch of the Bologna Process in 1999, there were efforts in the 1990s to harmonize higher education systems with Mercosur Educativo (Verger and Hermo 2010, 112). These preliminary efforts, however, did not advance to formal institutions as they did with the Bologna Process.

Southeast Asian countries have also made commitments to advance higher education mobility. In 2005, the Association of Southeast Asian Nations (ASEAN) Education Ministers held the ASEAN Education Ministers' Meetings (ASEM), launching regional higher education cooperation. Similar to the European Association for Quality Assurance (ENQA) and the European Quality Assurance Register for Higher Education (EQAR) for the EHEA, the Asia Pacific Quality Network (APQN) was established to support the ministries of education and other domestic agencies charged with higher education administration. Another pillar of deep higher education cooperation is a joint quality assurance regime that provides mutual assurance of the minimum standards in place at partner institutions. This joint measure is another mechanism for information sharing between member nations' institutions of higher education. In 2012 at the EHEA Ministerial Conference in Bucharest, representatives from ASEAN⁷ were present as observers and participants in the Bologna Policy Forum. They are learning the successes and challenges of the EHEA to apply to policy in their own region.

⁶ Formed in 1991, MERCOSUR is a trading bloc whose member nations include Argentina, Brazil, Paraguay, Uruguay, and Venezuela. Its associated member nations are Bolivia, Chile, Colombia, Ecuador, and Peru.

⁷ Formed in 1967, ASEAN is a trading bloc whose member nations include Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

Most lessons to be learned from other world regions come from the European experiment. The Erasmus program and its centrally funded and administered mobility initiatives have transformed academic mobility in Europe. Closely aligned with the mobility mechanism is the mutual recognition of credits from universities across the region. It is unclear whether or not the administrative structures governed by an open method of coordination have the teeth to fully integrate higher education in the medium term. What is clear, though, is that no other approach would have been possible in the Europe of a decade ago or today. Furthermore, the consolidation of both the ASEAN and the Pacific Alliance blocs make it even more urgent (particularly for the United States) that the United States and Mexico solidify, beyond NAFTA, their regional economic integration, including higher education.

Mobility Survey Instrument and Its Context

In order to study higher education mobility trends and best practices among American and Mexican academic institutions, we developed a survey—the US-Mexico Academic Mobility Survey 2014—as the principal instrument for qualitative evaluation. The survey was sent to approximately 200 US institutions of higher education in the spring of 2014.

The 200 American institutions represent the most active institutions in international education in terms of the number of students they send and receive from around the world, as indicated by their appearance in the Institute for International Education’s (IIE) *Open Doors Report on International Educational Exchange*, which is the gold standard of mobility surveys in the world today. While it only focuses on the US market and its interactions abroad, it is the longest running, has the highest response rate, and is by all accounts the most reliable mobility survey available. *Open Doors* was the reference point for the institutions included in this survey. We have also intentionally avoided duplication of IIE’s efforts by orienting our analysis toward the qualitative attitudes and experiences of those surveyed, rather than replicating the quantitatively oriented report provided by IIE.

Of the roughly 200 surveys fielded in the United States, there was a 10.1 percent response rate. This response rate, while not ideal, does allow us to draw useful qualitative conclusions. The

overall number of Mexican students received by the universities that responded to our survey was, for the 2012–2013 academic year, 1,382 students, which is just under 10 percent (9.7 percent) of the US-bound number of 14,199 presented in IIE’s survey results for the same year (IIE 2013a). Consequently, our sample appears to be an extremely relevant sample to evaluate. On the southbound side of the equation, our respondent institutions are not quite as strong of a sample, as they make up about 300 students studying in Mexico out of the 3,815 reported by IIE *Open Doors* for the 2012–2013 academic year (7.86 percent). This is not a huge difference but is statistically relevant.

The same survey instrument was used with Mexican institutions but translated into Spanish: Cuestionario sobre la Movilidad Académica México-EEUU 2014. In Mexico it was distributed by way of the ANUIES⁸ association, which is the largest association of public and private universities and institutions of higher education in Mexico with 175 member institutions.⁹ The response rate for the Mexican survey was 20 percent. While this is not as strong as we would ideally expect, it is again sufficient to provide important context to our policy recommendations. The response rate in Mexico is higher than in the United States primarily because of our productive partnership with ANUIES and the more centralized nature of both the Mexican university and the Mexican higher educational system.

Beyond the surveys, we also conducted focused interviews with administrators at several of the surveyed institutions in order to provide more depth to the data. These interviews helped to refine some of our recommendations.

Survey Results

The results of this survey give reason for both pessimism and reasonable optimism. The result that tells the starkest story is that of the difference between the most active and the least active institutions on both sides of the border. The most active universities send upward of 100 students and faculty across the border each year, while the least hardly send a handful. This is a striking

⁸ Asociación Nacional de Universidades e Instituciones de Estudios Superiores.

⁹ Asociación Nacional de Universidades e Instituciones de Estudios Superiores, <http://www.anui.es.mx/>.

difference, even considering variation in the size of universities. But the positive piece of this result is that there are several factors that lead to the best results, and these factors are replicable. The factors that have the greatest impact on levels of exchange are 1) information about the foreign higher education system, 2) information about the foreign institution (academic programs, interest in exchange, how to engage), 3) financial support, 4) faculty and student ambivalence toward exchange with foreign partners, and 5) externally influenced factors, such as financial downturns, travel warnings, and perceptions of risk. None of these factors is beyond impact through strategic public policy measures and the implementation of best practice models.

Analysis of Results

Greatest Barriers to Academic Mobility

One of the primary findings of this study is that institutions on both sides of the border simply do not have a deep enough understanding of their counterpart's higher educational system. This became clear when respondents answered the question, "What are the biggest challenges to bilateral collaboration?" Nearly half of the Mexican respondents cited lack of information as a barrier to collaboration. Closely related to this barrier is lack of institutional communication around international collaboration more broadly (related to timeliness of communications and turnover in personnel, for instance) and linguistic difficulties more specifically. As mentioned above, the lack of foreign language skills is a key issue in bilateral interactions among universities. If you add "lack of information" and "lack of language," they make up more than two-thirds of the responses. Clearly, both institutional communication and linguistic understanding are two key barriers for Mexican institutions.

US respondents mentioned that the most important factors precluding more robust collaborations are availability of funding and perceptions of insecurity that many Americans have of Mexico. Our data set tells us the same thing that the larger surveys, like that of IIE, do: US student and faculty mobility to Mexico is in decline. It has not been precipitous over the past four years included in our survey, but, since 2001, the number of US students studying in Mexico has dropped by more than 50 percent (IIE 2013a). This shift in student mobility appears to have much to do with the perceptions of insecurity and violence in Mexico.

Security, however, is of lesser importance to the Mexican respondents who almost exclusively blame the perceptions of insecurity on the US Department of State travel warnings. Like their American counterparts who cite perceptions of insecurity, Mexicans clearly lay the blame for this barrier on the influence of the State Department's advisories to the American public. The implication is that these warnings do not sufficiently communicate the safety of many regions of Mexico. Some respondents from the US survey also suggest that the US media plays a strong role in creating a perception of insecurity in Mexico by privileging stories of egregious violence. Overall, the perception of insecurity in Mexico weighs heavily in the decisions that students, students' parents, university administrators, and faculty members make regarding travel to Mexico.

The third most common, though perhaps the most insidious, response from US institutions was simple disinterest. Despite its proximity, or more likely *because* of it, US students are not typically inclined to choose Mexico as a study abroad destination. Counterintuitively, perhaps, it is the easy access to Mexico (typically visiting one of the popular resort towns on the Caribbean or Pacific coasts) that makes Mexico a less exotic and less attractive destination for study abroad. While in some cases familiarity may breed contempt, in this case it simply breeds apathy. Anecdotally, this is what US international educators say regularly about sending students to Mexico, but our survey confirms these anecdotes across a variety of institutions and geographical locations. Overcoming this barrier will need to be a major goal in any mobility strategy developed for the region.

Thus, we have four major barriers to collaboration that need to be overcome in order to create a region of dynamic mobility: (1) funding, (2) institutional communication, (3) linguistic difficulties, and (4) perceptions of insecurity. All play a role in dampening the flow of students between the two countries and are the largest barriers for the aggressive goals staked out by the Bilateral Forum on Higher Education, Innovation, and Research.

Best Opportunities for Mobility

Respondents to our survey also identified opportunities for bilateral mobility and collaboration. The gap between barriers and opportunities allows policymakers to design mobility strategies to

provide incentives that reduce barriers in order to seize the opportunities. As noted below, respondents suggest that the opportunities that exist are varied and speak to all levels of the higher education value chain, whether it is for institutions offering technical training, liberal arts, or STEM education or a research-oriented education.

Mexican respondents answered the question, “What would you say are the most significant opportunities for US-Mexico higher education collaboration?” with three principal answers: (1) student and faculty exchange programs, (2) joint research collaborations, and (3) though a less common response, the development of joint and double/dual degrees.

US respondents view opportunities differently. Many of them cite specific disciplinary areas, such as business, health, the arts and humanities, and social sciences as the best areas to focus efforts for bilateral higher education mobility. They mention common research and educational interests between US and Mexican institutions in these disciplines as their reason for optimism. We would add that these are also disciplines in which, for the most part, there is little country-specific, highly articulated regulatory oversight, as is the case in many professional degree programs, such as architecture, engineering, law, or medicine. Beyond these disciplines, US respondents also made suggestions similar to Mexican respondents, including general models like student and faculty exchanges as well as joint research initiatives. In general, both Mexican and American respondents are optimistic about opportunities to work together.

Funding Sources

Two things are clear from the survey data. First, there is not enough available funding for US-Mexico mobility or research collaboration. Second, the primary funding model of international mobility and research collaboration includes federal funding through agencies like the US government’s National Science Foundation and National Institutes of Health and Mexico’s National Council on Science and Technology (CONACYT), followed by institutional resources and then private resources, such as foundations, individuals, and corporations. It is clear, though, that the basic support that governmental agencies can provide for research collaboration provides the foundation for many mobility initiatives at partner universities. The examples of unusually

robust mobility initiatives include the University of California San Diego, Oklahoma State University, and Texas A&M University in the United States and the Universidad de Monterrey, Universidad de Guadalajara, and the Universidad Iberoamericana in Mexico. These initiatives are the results of either significant institutional commitment and strategic focus on Mexico or the United States as a partner region, or of significant private philanthropy that adds to institutional and federal funding.

Model Programs from the Region

Among the responses to the survey there emerges a rich variety in the mobility models used and proposed by universities on both sides of the border. These models suggest that—no matter the type of higher education institution—a university, college, or community college can take concrete steps to increase mobility among its students and faculty. Broadly speaking, these model programs leverage structures both within and without the institution to achieve their goals. These approaches to student and faculty mobility are driven by: 1) institutional commitment and priority, 2) center-driven engagement, and 3) consortia networks. Each of these approaches allows for a variety of mobility models, depending upon the institution, the needs of its students, and the natural networks that it may have.

Much of the academic mobility that takes place between the United States and Mexico is the result of individual faculty members who have developed relationships with their counterparts abroad. Over and over again, respondents on both sides of the border show that faculty-to-faculty relationships are key to active mobility. In the end, if faculty members are able to do something together, they will engage graduate and undergraduate students in that relationship, particularly if there are institutional incentives to do so. We found through our survey and interviews that faculty relationships were key components to almost all of the success stories of US-Mexico higher education mobility.

While faculty members are a factor, clear institutional commitment and priority is another engine of successful exchange partnerships. Oklahoma State University (OSU) provides an example of continuous commitment to US-Mexico mobility and is largely a story of institutional action. First

of all, OSU designated Mexico as its first priority in terms of international engagement. This decision was made primarily due to the economic and historical ties Mexico has to the United States. But OSU has also noticed that Mexican students enjoy Oklahoma and the distinctiveness of its culture.

In 2006, OSU opened the Mexico Liaison Office, which has the mission of expanding the number of OSU students participating in educational programs in Mexico, advancing bilateral exchange between the United States and Mexico, and increasing the number of Mexican students attending OSU. By all accounts, it has been successful. In the 2012–2013 academic year, OSU sent 12 students and 48 faculty members to Mexico for study, research, or internships, and received some 300 Mexican students in return, along with more than 60 Mexican scholars. Although the exchange is, predictably, unbalanced, it is robust and shows no signs of slowing. OSU's exchange success is built on seven partnerships, which are broad agreements to cooperate that generate moderate amounts of activity, and two strategic partnerships, which are deep and long-term commitments of time, energy, and other resources. The two strategic partners are the Universidad Popular Autónoma del Estado de Puebla (UPAEP) and the Instituto Tecnológico y de Estudios Superiores de México (ITESM's Chihuahua campus). Both have representation offices on the OSU campus and use this presence to update OSU students on opportunities in Mexico, as well as to encourage further points of contact and collaboration throughout the university. OSU further encourages mobility to Mexico by providing scholarships for students who choose to study in Mexico as well as through dual degree master's programs through which students can obtain a degree at OSU and the partner institution by spending one year in each location. Finally, the commitment of OSU to Mexico is signaled clearly from the top, as the president of OSU visits Mexico at least once a year (Henneberry 2014).

In some ways, the most interesting piece of OSU's story is that its primary funding source for these programs is OSU itself. It does not rely on federal or philanthropic funding, but invests its own money to incentivize participation. This seems to be an anomaly among those universities with strong ties to Mexico but it does show what institutional commitment can do for bilateral mobility.

US-Mexico Academic Mobility

The other frequently mentioned vehicle for student and faculty mobility is the research center. The Center for US-Mexico Studies at the University of California at San Diego is a prime example of the benefit of critical size and visibility of an entity within an institution for the success of bilateral exchange. This center is known for three kinds of mobility: 1) the USMEX Scholars Program Fellowship, 2) scholarly visits for frequent conferences on US-Mexico issues, and 3) student and scholarly mobility related to ongoing research initiatives with Mexican institutions like the National Autonomous University of Mexico (UNAM), the Autonomous Technological Institute of Mexico (ITAM), and the Center for Economic Research and Teaching (CIDE).

When asked what drives the accomplishments of the US-Mexico Center, associate director Melissa Floca emphasized that the key to their success is aligning partnerships with the faculty's scholarly and teaching interests. For USMEX, faculty members are the most important catalysts because they both drive the creation of new and relevant programs and are the principal reason that students choose to study abroad. Research centers, then, are able to pull together resources that allow faculty to be effective actors for academic and scholarly exchange.

Research centers, however, are expensive and incur costs related to infrastructure, personnel, and programming that would not be otherwise incurred. At UCSD, success stems from a diversity of funding sources, including institutional support for administrative costs (i.e., an institutional commitment); private philanthropy for the longer term; higher-impact programs, such as the USMEX Fellows Program; and corporate sponsorship for topical conferences and events. It seems clear that the institutional support of administrative infrastructure is crucial, for without this stability, administrators cannot be effective at fundraising and program building, two key components for a center's success (Floca 2014).

The third model for collaboration is the consortium approach. In today's financial climate most institutions of higher education operate with, at best, guarded financial optimism, and in many cases, with great caution, especially when considering how to do more. In the United States there has rarely, if ever, been greater political and public scrutiny on the mission, the financial model, and the outcomes of higher education institutions. In Mexico, there is great optimism about

growth in some quarters, but there is also great disparity among institutions. Financial considerations almost always restrain international engagement in all but the most well-funded institutions. There is, then, great need for multilateral partnerships that allow institutions to do more together than they can on their own. There are three examples we want to point out briefly below.

First is the Consortium for North American Higher Education Collaboration, or CONAHEC, as it is more often known. Founded in 1994, shortly after NAFTA went into effect, CONAHEC's primary mission is to consolidate in the higher education sector what NAFTA aimed to consolidate in other areas of the North American trading relationship.

Over 170 member institutions have joined the consortium to gain access to a network of like-minded universities and colleges. As its website states, CONAHEC “is the largest and most comprehensive network of institutions from the NAFTA region, offering student exchanges, annual conferences, professional development programs, and direct advice to its members.” In the words of its founding executive director, Francisco Marmolejo, CONAHEC is a “dating service” for universities. Everything that it does aims at providing information about and connections within foreign universities and foreign educational systems, all with the hope of encouraging stronger relationships and interactions among the NAFTA region's higher education institutions. Hosted by the University of Arizona, CONAHEC's leadership team continues to produce compelling meetings and events that bring institutions from the NAFTA region, and beyond, together.

A second example is Programa de Investigación en Migración y Salud (PIMSA), which was started by University of California, Berkeley's Health Initiative for the Americas in collaboration with the California Program on Access to Care and some principal Mexican institutions in 2003. Since then, PIMSA has added participation of the whole University of California system,¹⁰ the California State University system, the University of Arizona, the University of New Mexico, the

¹⁰ The University of California system has been a leader in US-Mexico collaborations and mobility for several decades. It is a powerful consortium on its own, and UC's Institute for Mexico and the United States (UC MEXUS), established in 1980, continues to drive much of the broad-based collaborations that connect California with Mexico. New UC system president Janet Napolitano has made the UC-Mexico relationship a priority under her leadership, so this connectivity will certainly grow in importance.

University of Texas at El Paso, the University of Minnesota, and the State University of New York (SUNY) on the US side and UNAM, Mexican Health Secretariat institutions, and the National Council on Science and Technology (CONACYT) in Mexico. In over a decade, this network of universities and government entities has produced a consistent body of work focused on the health of migrant populations in the United States and Mexico and the policy implications of the research conducted. Over these 10 years, PIMSA has granted over \$3 million in research funds to more than 70 binational projects at more than 30 Mexican and more than 20 US institutions (PIMSA Academic and Financial Report 2012). While this is not a huge sum, as discussed above, these kinds of grants many times provide the basis on which to build the critical size and visibility, which enhances access to additional funding streams. PIMSA is almost certainly the largest binational research consortium active in today's binational landscape.

Third, a smaller and younger organization, the Puentes Consortium, has a similar policy-oriented approach to binational issues. Focusing on major policy issues within the US-Mexico border region, the Puentes Consortium is the joint initiative of six US and Mexican institutions whose aim is to build a distinctive network of Mexican and US scholars. Launched in 2009, the Puentes Consortium consists of the Tec de Monterrey, the Universidad de Monterrey, and the Universidad de las Américas Puebla in Mexico and the University of Arizona; the University of California, San Diego; and Rice University in the United States. Over the first five years, the member institutions have contributed \$30,000 annually to support policy-oriented research, travel, and short visiting appointments for their faculties. All research is conducted by binational teams and must produce policy recommendations. Like PIMSA, the Puentes Consortium's core values include long-term commitment, binational perspective, and solutions-oriented research. In 2014, the consortium added a visiting scholar program to its agenda to supplement a yearly call for binational research among its partner institutions.¹¹

These three consortia each have different scales and missions. CONAHEC is the most heterogeneous and inclusive of the three, but its mission is also the broadest and most diffuse. Each optimizes resources and perspectives in ways that individual institutions could not easily do. Through modest investments, institutions gain access to a network of like-minded institutions

¹¹ The Puentes Consortium, www.puentesconsortium.org/.

in order to achieve specific goals by building networks for researchers; providing funding for research; producing distinctive, binational research; and ultimately publishing and disseminating research findings. Each of these consortia generates mobility opportunities for faculty and students, and while this is not the principal aim of the consortia, it is a natural outcome of network-creating initiatives such as these.

Recommendations for Bilateral Higher Education Mobility in the US-Mexico Context

The insights from surveys and interviews as well as a comparative examination of other regional efforts reveal that despite existing barriers to cooperation, there are great opportunities. Higher education mobility must be a binational effort; it should be institution-led and must include partnerships with public sector government agencies and private sector contributors/investors. We recommend the following actions:

1. Create a framework of policies and mechanisms for higher education mobility that is voluntary and flexible over time. This framework should include a loosely coordinated central entity to both convene and focus binational dialogue on higher education.

The framework serves as a reference guide to universities and colleges that wish to participate in higher education mobility and research collaboration. As is the case in Europe, an open method of cooperation is essential. Top-down, single-solution responses not only will not work, but also will be actively rejected by many higher education institutions, which value their autonomy more than almost any other principle. The framework, then, must allow for multiple points of participation by interested institutions. The bar to entry must not be excessive, though it should require serious commitment by those involved in collaborative efforts.

The framework should include a centralized entity that facilitates information exchange and provides a context for binational dialogue about the range of issues that are important for higher education in our region. These issues may include both those that affect the future of higher education—like financial pressures, and public and governmental oversight—and international competition, as well as those that higher education institutions are well positioned to affect, like

workforce preparation, regional development, research, and innovation. The framework should also provide a strategic roadmap for joint action among like-minded institutions. Finally, the framework should also provide resources (information, funding information, best practices) for those institutions that seek to continue their efforts outside of the joint action model.

2. Identify strategic academic fields that benefit most from bilateral collaboration and build communities, or higher education clusters for regional development, around these areas.

Experience in the US-Mexico context tells us that a strong sense of community and information sharing grows within focused binational consortia of a manageable size (ideally, no more than 20–30 institutions). Consortia should have three principal aims: 1) to create active networks of students and faculty around problems of importance to US-Mexico regional development, 2) to build a financial model that includes institutional baseline funds, along with governmental, private philanthropic, and corporate sources, and 3) to build educational and training capacity in ways that integrate US and Mexican higher education systems, such as through joint or dual degrees, joint curriculum development, and jointly taught courses.

This three-pronged approach builds clusters organically around issues of interest both to researchers and to regional development. Consortia cannot be formed from the outside, but rather must coalesce through a positive decision to do so. Government or industry should, however, provide leadership in this effort by providing seed funding toward binational workshops on specific problems, such as shale gas production in the South Texas-Northern Mexico region (Eagle Ford/Burgos Basin) or climate change and its effects on regions across the United States and Mexico. This kind of workshop would address issues related to technology, workforce preparation, and environmental remediation and protection. Over time, these workshops could turn into concrete projects and perhaps consortia with focused missions. We must be sure to create enough higher education clusters (HECs) for regional development so that we involve a significant number of institutions in these endeavors. Beyond energy, health care, public health, education, and vital infrastructure questions are also ripe for inquiry and innovation by scholars and students in the United States and Mexico.

3. Create long-term infrastructure to advance government support in partnership with institutions of higher education, industry, and other important actors.

We propose the following mechanisms to link government, industry, and higher education in meaningful ways:

While it has at times struggled to maintain continuity and relevance,¹² the Border Governors' Conference (BGC)—the annual, binational gathering of the governors of the 10 border states—would be an ideal venue to bring together the constituencies necessary to move toward this cluster-based approach. A focused agenda on higher education research, innovation, and workforce preparation around a few, strategic issues may be just what the BGC needs to reinvent itself and breathe life into its agenda and activities.

Beyond the BGC, an organization with the breadth and credibility of CONAHEC should be tapped to provide communications, connectivity, and other “brokerage” infrastructure that will ensure implementation of any specific policy mechanisms that arise in the Border Governors' Conference.

The North American Development Bank (NADBANK) should be used to support critical bilateral research and innovation projects as well as to incentivize academic mobility between the United States and Mexico. This may require some new funding, but could also be supported by redirecting funds already earmarked for similar purposes in federal and state budgets. The use of NADBANK in this way would also allow for the development of an independent “North American Fund for Higher Education Mobility and Integration,” which could receive funds from both private and public sources to support strategic initiatives as determined by the policy groups in the BGC.

4. Convene a bilateral working group to discuss and negotiate a long-term convergence and harmonization plan for strategic technical education and licensure.

¹² Shannon K. O'Neil, “Revitalizing the Border Governor's Conference,” *Latin America's Moment* blog, September 27, 2011, <http://blogs.cfr.org/oneil/2011/09/27/revitalizing-the-border-governor's-conference/>.

In technical areas such as engineering, architecture, and medicine, a regional regime for mutual recognition of credits, degrees, and licensures—while complex and difficult to achieve—would have an important long-term impact on the North American regional development prospects—including the more integrated labor markets—greater alignment of technology innovation efforts, and broader development of strategic areas of mutual interest, including energy, water, and food security. This is a longer-term aim that will require a strong will on both sides to break up the monopolies that accrediting agencies have in each country, but would revolutionize education in technical fields across the region.

5. Create opportunities at a meaningful number of higher education institutions: technical and community colleges, four-year teaching institutions, and research universities.

It is important that the US-Mexico higher education framework that evolves is communicated and made available to all higher education institutions within the higher education industry. Without significant participation from all levels of higher education providers, there is a great risk that not only will we not achieve meaningful regional development and mobility goals, but we will also promote a system to which not all students and faculty have equal access. Both in terms of access to educational opportunity and in terms of maximizing regional development, wide participation by institutions of our binational systems of higher education is essential for success. This should be taken into consideration both by the BGC and by CONAHEC.

6. Take an “all of the above” approach to mobility at the institutional level.

While we have laid out specific recommendations based on feedback from the survey, interviews, and a comparative review of global higher education systems, it is important to keep in mind how vast the higher education landscape is across the United States and Mexico. With more than 2,500 higher education institutions between our two countries, this region boasts a great volume and variation of institutions. It is clear that not every institution will want to enter into an HEC or consortium and that many will not even view Mexico or the United States as a priority. In order to keep mobility numbers trending upward, the higher education community

must be on the constant lookout for opportunities to partner with industry, government, individuals, and foundations. Institutions must think broadly about the models that can work, including anything from a short-term program that provides an introductory experience that can lead to longer-term study or research abroad to a variety of co-curricular and extracurricular vehicles that can bring our students and faculty into meaningful contact with one another. Higher education institutions must be open and willing to make these opportunities available to their faculty and students.

7. Prioritize language study, as it is foundational for long-term development and the region's competitiveness.

Foreign language study should be a component of any study, research, or co-curricular international program that is developed between partners in the United States and Mexico. In the US-Mexico region, we have a unique opportunity to develop a region that is functionally bilingual in Spanish and English. Failing to do this may become a regional impediment in the future. As our two countries necessarily integrate their economies more and more, language will become even more important, and our long-term competitiveness will depend on our ability to communicate with one another. We are not advocating for obligatory study of Spanish or English, or for a plan to make all members of the region functionally bilingual. We are, though, advocating for the inclusion of language study in most, if not all, efforts to build binational collaborations or consortia.

By implementing these recommendations, the United States and Mexico could become, over time, one of the most integrated higher education regions in the world, demonstrating distinctive leadership in economic and human development, higher education, and policy innovation.

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