Recruiting International Graduate Students in a Challenging Environment
Introduction

Recruiting international students has never been easy. But global geopolitical changes are making the task more difficult than in the recent past. Perhaps the best approach is to be aware of the trends and to be able to adapt.

The articles in this compilation note recent declines in international graduate applications, and other data that suggest the way graduate programs can have their enrollments hurt by factors beyond their control. Beyond visa delays, programs face the increasing tensions between the U.S. and China, particularly about science – when Chinese science students are crucial to many graduate programs.

Part of recruiting international students is paying attention to the environment they will face when they enroll – after all, their reports back home to friends and relatives will have a huge impact on how many follow them. As a result, graduate programs are confronting the hostility some non-Americans face in the United States, and the need to help graduate students (international and domestic alike) finish their programs and find good employment options.

Inside Higher Ed will continue to track these issues. We welcome your comments on this compilation and your suggestions for future coverage.

--The Editors
editor@insidehighered.com
International Recruitment Strategies and Solutions

How can professionals attract talented students from abroad in such trying times? By understanding the larger forces at play, learning what’s working at other institutions, reducing barriers for applicants and using the tools that give them the best chance for success.

This compilation of articles from Inside Higher Ed explores all of these topics. You’ll find a feature article outlining 10 resources that ETS makes available to help programs recruit and admit the best class, as well as 10 tools and services to help reduce barriers for applicants. As a nonprofit organization, many of these resources are provided as part of ETS’s mission to help advance quality and equity in education for all people worldwide.

The compilation also highlights:

• **Search Services** — The GRE® Search Service and TOEFL® Search Service are test-taker databases where recruitment professionals can create targeted mailing lists to make their campaigns more effective. The GRE database has more than 500,000 names and can be searched using more than 30 criteria, including country of citizenship and intended major. The TOEFL database has more than one million names and can be searched using 26 criteria, including country, TOEFL score and field of study. Students can opt in to either service for free when they register for a test, which helps them get noticed by programs they may not have considered previously.

• **Fee Reduction Programs** — To ensure that the cost of taking a test is not a barrier to study, ETS provides fee reduction vouchers to GRE® test takers who can demonstrate financial need. We also provide these vouchers to national programs that service underrepresented groups, those from low-income backgrounds and first-generation college students. Those who receive vouchers pay 50 percent of the regular test fee. The GRE program announced several updates to its fee reduction program beginning July 1, 2019, including that ETS will provide GRE Fee Reduction Vouchers to the EducationUSA Opportunity Fund Program for distribution to eligible test takers outside of the United States who have a financial need.

We hope you find this collection of articles curated by Inside Higher Ed — with a few contributions from ETS — valuable. Read on to learn more about these and other resources from ETS:

• Search Services — [ets.org/searchservice](http://ets.org/searchservice)
• GRE Fee Reduction Program — [ets.org/gre/grefeereduction](http://ets.org/gre/grefeereduction)

Sincerely,

Alberto Acereda
Executive Director, Global Higher Education
ETS
Where in the world are your future students?

Qualified students from around the globe are eager to earn an advanced degree.

Your ideal students are out there and ready to begin their journey to a graduate degree.

Tell them why your program should be their destination.
New enrollments of international students at U.S. graduate schools fell for the second year in a row, according to a survey from the Council of Graduate Schools.

First-time international enrollments fell by 1 percent from fall 2017 to fall 2018, following on a 1 percent decline the year before that.

“This is the first time we’ve seen declines across two consecutive years, and while we think it’s too soon to consider this a trend, it is troubling,” Suzanne Ortega, president of CGS, said in a statement.

“We continue to monitor issues, including changes in immigration and visa policy, with growing concern over the possible negative impact to the U.S.’s image as a welcoming destination for international students and scholars.”

The overall decline in first-time international graduate enrollments was due to drops at the master’s level. The number of new international students enrolled in master’s programs declined by 2 percent, while first-time enrollment at the doctoral level increased by 3 percent.

Less research-intensive universities -- many of which have come to rely on international students in master’s programs as a key source of revenue -- were hit hardest by the decline in new international master’s students. First-time international enrollment in master’s programs fell by 15 percent at master’s-level institutions, and by 8 percent at doctorate-granting institutions outside of those classified as most research intensive.

At doctoral universities with the highest research activity, first-time international enrollment in master’s programs actually rose by 1 percent.

The number of international students enrolled in engineering programs -- the most popular field for international students -- declined by 10 percent, following on a 10 percent decline the year before and a 3 percent decline the year before that. First-time international enrollments also fell in public administration and services, by 27 percent, and in the physical sciences, by 13 percent.

First-time enrollments from the No. 1-sending country, China, stayed steady, while the number of new students coming from the No. 2 country, India, fell by 2 percent, marking the third straight year of declines in new Indian students. China and India together account for about 60 percent of all international graduate students in the U.S.

For other groups of students, the base of students is smaller. The number of new students from the Middle East and North Africa -- who account for 7 percent of international students in the U.S. -- declined by 12 percent, also the third straight year of declines in new students from that region.

There was an 8 percent decrease in the number of new international students from Iran, which follows a 16 percent decrease the year before that. Iran is one of the countries affected by the Trump administration’s travel ban. While earlier versions of the travel ban prohibited Iranians from coming to the U.S. altogether, the current version of the ban permits Iranians to enter the U.S. on F, J or M student or exchange visitor visas. All other groups of Iranians are barred from entering the U.S.

Other notable shifts in first-time enrollments include a 5 percent increase in the number of first-
time international students from sub-Saharan Africa -- which builds on a 27 percent gain the year before that -- a 5 percent gain from Latin America and the Caribbean, and a 3 percent drop in the number from Europe. There were significant declines in the number coming from Japan, down 15 percent, and Saudi Arabia, down 21 percent. The decline from Saudi Arabia is likely attributable in part to reductions in the Saudi government’s foreign scholarship program.

In addition to the data on first-time enrollments, CGS also surveyed institutions about applications, and found that the total number of applications submitted by prospective international graduate students fell by 4 percent from fall 2017 to fall 2018. As with first-time international enrollments, this marked the second year of declines in international applications and came on top of a 3 percent decline from fall 2016 to fall 2017.

The fields seeing the biggest declines in international applications were engineering (down 16 percent), physical and earth sciences (down 9 percent), and business (down 8 percent).

Though there were declines in both first-time international enrollments and applications for programs in engineering, CGS’s associate vice president for research and policy analysis, Hironao Okahana, pointed out that there were increases in both these metrics for mathematics and computer sciences, a field that can overlap with computer engineering. The numbers of international applications and first-time international enrollments in mathematics and computer science programs both increased by 6 percent from fall 2017 to 2018.

A total of 369 institutions responded to CGS’s survey, reflecting a 47.4 percent response rate. Below are data tables from the CGS showing annual changes in first-time international enrollments at U.S. graduate schools across the last six years, broken down by region or country of origin and field of study.

First-Time International Enrollments at U.S. Graduate Schools, by Region or Country of Origin

<table>
<thead>
<tr>
<th>Region or Country of Origin</th>
<th>Fall 2012 to Fall 2013</th>
<th>Fall 2013 to Fall 2014</th>
<th>Fall 2014 to Fall 2015</th>
<th>Fall 2015 to Fall 2016</th>
<th>Fall 2016 to Fall 2017</th>
<th>Fall 2017 to Fall 2018</th>
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<tbody>
<tr>
<td>Overall</td>
<td>+10%</td>
<td>+8%</td>
<td>+5%</td>
<td>+5%</td>
<td>-1%</td>
<td>-1%</td>
</tr>
<tr>
<td>Asia</td>
<td>--</td>
<td>--</td>
<td>+7%</td>
<td>+8%</td>
<td>-2%</td>
<td>0%</td>
</tr>
<tr>
<td>China</td>
<td>+5%</td>
<td>-1%</td>
<td>+12%</td>
<td>0%</td>
<td>+5%</td>
<td>0%</td>
</tr>
<tr>
<td>India</td>
<td>+40%</td>
<td>+27%</td>
<td>+12%</td>
<td>-7%</td>
<td>-13%</td>
<td>-2%</td>
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<tr>
<td>Japan</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>+3%</td>
<td>-15%</td>
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<tr>
<td>South Korea</td>
<td>-12%</td>
<td>-7%</td>
<td>+5%</td>
<td>+10%</td>
<td>-12%</td>
<td>-4%</td>
</tr>
<tr>
<td>Taiwan</td>
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<td>-8%</td>
<td>+2%</td>
<td>+14%</td>
<td>+10%</td>
<td>+1%</td>
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<tr>
<td>Europe</td>
<td>+3%</td>
<td>+1%</td>
<td>-4%</td>
<td>-8%</td>
<td>+1%</td>
<td>-3%</td>
</tr>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>--</td>
<td>--</td>
<td>-6%</td>
<td>+5%</td>
<td>-10%</td>
<td>+5%</td>
</tr>
<tr>
<td>Brazil</td>
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<td>+91%</td>
<td>-30%</td>
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</tr>
<tr>
<td>Mexico</td>
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<td>-1%</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>--</td>
<td>--</td>
<td>+1%</td>
<td>-11%</td>
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<td>-12%</td>
</tr>
<tr>
<td>Iran</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>-16%</td>
<td>-8%</td>
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<tr>
<td>Saudi Arabia</td>
<td>--</td>
<td>--</td>
<td>+5%</td>
<td>-13%</td>
<td>-2%</td>
<td>-21%</td>
</tr>
<tr>
<td>North America (Canada only)</td>
<td>+3%</td>
<td>-1%</td>
<td>+1%</td>
<td>-3%</td>
<td>-7%</td>
<td>+6%</td>
</tr>
<tr>
<td>Oceania</td>
<td>--</td>
<td>--</td>
<td>-9%</td>
<td>+7%</td>
<td>-6%</td>
<td>-10%</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>--</td>
<td>--</td>
<td>+9%</td>
<td>+3%</td>
<td>+27%</td>
<td>+5%</td>
</tr>
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First-Time International Enrollments at U.S. Graduate Schools, by Field of Study

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Fall 2012 to Fall 2013</th>
<th>Fall 2013 to Fall 2014</th>
<th>Fall 2014 to Fall 2015</th>
<th>Fall 2015 to Fall 2016</th>
<th>Fall 2016 to Fall 2017</th>
<th>Fall 2017 to Fall 2018</th>
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</thead>
<tbody>
<tr>
<td>Overall</td>
<td>+10%</td>
<td>+8%</td>
<td>+5%</td>
<td>+5%</td>
<td>-1%</td>
<td>-1%</td>
</tr>
<tr>
<td>Arts &amp; Humanities</td>
<td>+9%</td>
<td>+3%</td>
<td>+5%</td>
<td>+6%</td>
<td>-12%</td>
<td>0%</td>
</tr>
<tr>
<td>Biological &amp; Agricultural Sciences</td>
<td>--</td>
<td>--</td>
<td>+1%</td>
<td>+2%</td>
<td>-1%</td>
<td>-2%</td>
</tr>
<tr>
<td>Business</td>
<td>+6%</td>
<td>+2%</td>
<td>+2%</td>
<td>+7%</td>
<td>-11%</td>
<td>+1%</td>
</tr>
<tr>
<td>Education</td>
<td>+3%</td>
<td>-1%</td>
<td>0%</td>
<td>+7%</td>
<td>-16%</td>
<td>-4%</td>
</tr>
<tr>
<td>Engineering</td>
<td>+17%</td>
<td>+11%</td>
<td>+1%</td>
<td>-3%</td>
<td>-10%</td>
<td>-10%</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>--</td>
<td>--</td>
<td>-5%</td>
<td>-14%</td>
<td>+3%</td>
<td>+3%</td>
</tr>
<tr>
<td>Mathematics and Computer Sciences</td>
<td>--</td>
<td>--</td>
<td>+11%</td>
<td>+4%</td>
<td>+2%</td>
<td>+6%</td>
</tr>
<tr>
<td>Physical and Earth Sciences</td>
<td>--</td>
<td>--</td>
<td>+6%</td>
<td>-3%</td>
<td>-1%</td>
<td>-13%</td>
</tr>
<tr>
<td>Public Administration and Services</td>
<td>--</td>
<td>--</td>
<td>+4%</td>
<td>+7%</td>
<td>+4%</td>
<td>-27%</td>
</tr>
<tr>
<td>Social and Behaviors Sciences</td>
<td>--</td>
<td>--</td>
<td>+1%</td>
<td>+9%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Other Fields</td>
<td>+7%</td>
<td>+2%</td>
<td>+7%</td>
<td>+11%</td>
<td>+4%</td>
<td>+6%</td>
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New Concerns on International Enrollments

Student numbers in U.S. decline; reports grow on visa delays.

By Elizabeth Redden // April 29, 2019

The total number of international students studying in the U.S. at all levels declined by 2.7 percent from March 2018 to this March, according to quarterly data on student visa holders recently published by U.S. Immigration and Customs Enforcement. A total of 1,169,464 international students were studying in the U.S. this spring compared to 1,201,871 the spring before. The data include students studying at all levels, from K-12 to language study to higher education, and include students who have already completed their programs and stay in the U.S. to work for one to three years after graduating through the optional practical training program.

The new student visa numbers follow on data from the annual Open Doors survey showing two years of declines in new enrollments of international students at U.S. universities. The ICE data show a 2 percent year-to-year decline in the total number of international students from the leading sending country, China, and a 1.2 percent decline in the number from the second-leading sending country, India. The number from No. 3 country South Korea fell by 7.6 percent. The number of students from Saudi Arabia continued to fall sharply, by 17.1 percent year over year, a change largely attributable to reductions in the Saudi government’s scholarship program.

Meanwhile, hundreds of Chinese students studying in the U.S. have faced delays in renewing their student visas after a policy change last year that shortened the duration of visas for Chinese graduate students in certain STEM fields from five years to one year, National Public Radio reported. Many of the students flew home in December but have been unable to renew their visas as they await the results of an additional screening process known as “administrative processing.”

The NPR report follows on a New York Times article earlier this month reporting that the U.S. has canceled visas for a number of Chinese professors in the social sciences. The visa bans appear to be particularly affecting researchers affiliated with the state-run Chinese Academy of Social Sciences.

The news about visa delays and cancellations comes in the context of increasing scrutiny of U.S.-China research collaborations and concerns on the part of the White House, members of Congress and federal granting agencies about the theft of sensitive academic research by competitor countries.
WASHINGTON, D.C. -- A report released Wednesday at the NAFSA: Association of International Educators annual conference looks at national policies supporting the internationalization of higher education in the Americas.

The report -- "The Shape of Global Higher Education: The Americas" -- focuses on national policies in the U.S. and Canada as well as four Latin American countries: Brazil, Chile, Colombia and Mexico. It was released by NAFSA in conjunction with the British Council and builds on a similar report the council released this month focused primarily on national higher education policies in Europe.

The researchers score countries on 37 indicators variously related to their internationalization strategies, their policies on student and academic mobility and research, their policies on transnational higher education, their policies relating to quality assurance and credential evaluation, and funding support for student and faculty mobility.

Out of 20 countries compared in the report, the Netherlands has the highest overall score, followed by Germany, Ireland, Australia and Poland. Canada ranks 10th out of 20, and the U.S. 13th. The four Latin American countries rank 17th through 20th.

However, Alex Usher, the main author of the report and the president of the Toronto-based Higher Education Strategy Associates, emphasized in a presentation Wednesday that the metrics in the study favor European countries in their assumptions. For example, one indicator, regarding foreign degree recognition, asks whether "the process taken by national academic recognition bodies in recognizing foreign qualifications [is] clear, transparent and consistent?" In the U.S., unlike in Europe, credential evaluation is not taken by a national recognition body but instead by individual colleges and universities.

Similarly, another indicator asks about governmental efforts to sign new bilateral agreements with foreign education ministries on higher education collaboration. In the U.S., individual colleges and universities generally take the lead in forging partnerships with their foreign counterparts.

"The assumption is that governments are the prime mover in internationalization policy, and for a whole bunch of reasons that's not true in Canada or the United States -- it really is institutions that are the driving force," Usher said. "If you take out a lot of that stuff around where it's government or institutions, whether it's decentralized or centralized, actually Canada and..."
National Policies and Internationalization

the U.S. don’t look that different than Europe on most of these measures."

Indeed, the report concludes, "In the main, this analysis finds the six countries in the Americas chosen for this study -- Brazil, Canada, Chile, Colombia, Mexico and the United States -- to all rate slightly lower on our measures of support for international engagement in [higher education] than other national systems with comparable levels of national income (as measured by GDP).

"In Canada and the U.S., this may not be due to lesser interest in internationalization so much as a different set of institutions and approaches: labor market institutions and credential evaluation are more market-driven, HE policy is more decentralized and the impetus for internationalization lies more with colleges and universities than with governments. But in Canada and the U.S., the drive to attract more international students is strong, albeit mainly for financial reasons. There is therefore little reason to expect that either country will see its scores fall in the near future, though equally their different institutional structures may make it difficult to rise much, either."

"In the less wealthy Latin American countries, the story is slightly different," the report continues. "The ability of these countries to attract foreign students is diminished both by the lack of ‘prestige’ institutions and by the fact that very few courses are available in English. That said, any of the three Spanish-speaking countries could become a regional hub for IHE in Spanish because of the large Spanish-speaking Latin American market; Brazil’s attractiveness is diminished further by being several thousand kilometers from any other Portuguese-speaking nations.

"However, as each of these countries moves closer to having services-based knowledge economies, the need for domestic universities to act as economic drivers will increase and, for that to happen, these institutions’ research strength will need to be increased. One therefore suspects that the emphasis on internationalization in these countries in the years to come will be with respect to international faculty cooperation, or on increased outbound mobility for graduate or postdoctoral students."

NAFSA also released a separate report on Wednesday about the decline in new international enrollments in the U.S. The report, titled "Losing Talent: An Economic and Foreign Policy Risk America Can’t Ignore," cites data from the annual Open Doors report showing two consecutive years of declines in new international enrollments at U.S. colleges and notes survey data showing that "institutions continue to report that prospective international students and their families are concerned about U.S. federal policies and rhetoric on immigration, along with apprehensions of personal safety and tense race relations."

The report also cites Project Atlas data showing that the U.S. share of globally mobile students fell from 28 percent in 2001 to 22 percent in 2018. "We are losing our market share of international students and scholars, while many other countries are proactively introducing national policies and marketing strategies in order to attract these talented individuals," the report says.
China Issues Warning to U.S.-Bound Students

China’s Ministry of Education warns students of the risk of visa problems if they come to the U.S.

By Elizabeth Redden // June 4, 2019

China’s Ministry of Education on Monday warned students interested in studying in the U.S. about potential difficulties getting visas from the American government.

“For some time, some of the visas for Chinese students studying in the United States have been restricted,” the ministry said. “The visa review period has been extended, the validity period has been shortened and the refusal rate has increased. This has affected the Chinese students studying in the United States normally or successfully completing their studies in the United States. The Ministry of Education reminds students and scholars to strengthen risk assessment before going abroad to study, enhance awareness of prevention and make appropriate preparations.”

The statement from China’s Ministry of Education comes amid increasing tensions between the U.S. and China over the issue of higher education and in the context of a broader trade war. The U.S. last year shortened the duration of visas for Chinese graduate students in certain science, technology, engineering and mathematics (STEM) fields from five years to one year, and Chinese-U.S. research collaborations have become the focus of intensified scrutiny from the White House, members of Congress, scientific funding agencies and national security agencies, all of which have raised concerns about the risk of espionage and intellectual property theft posed by Chinese students and scholars.

Outside the STEM fields, the US. has reportedly canceled visas for a number of Chinese professors affiliated with the state-run Chinese Academy of Social Sciences. And many colleges have closed their Confucius Institutes -- Chinese government-funded centers for language education and cultural programming -- amid growing criticism from U.S. lawmakers who argue that the institutes serve as platforms for Chinese propaganda. The defense spending act passed into law last year bars colleges that receive Defense Department funding for Chinese language study from also hosting Confucius Institutes, a restriction that has contributed to the spate of closures.

“The United States rejects the unfounded allegation of a widespread and baseless campaign to deny Chinese visas,” a State Department official said. The official said that the
China Issues Warning to U.S.-Bound Students

Higher education is becoming increasingly a part of the battlefield. That has to do on the one hand with the number of international students but at the same time the knowledge economy and the importance of research and science.

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China Issues Warning to U.S.-Bound Students

Anti-espionage reasons has spread from the natural sciences to the social sciences. Recently, the United States also canceled 10-year visas for a group of Chinese scholars engaged in the study of China-U.S. relations.

“These actions have harmed the dignity of Chinese students studying in the United States and have also seriously hurt the feelings of the Chinese people,” Xu continued. “We can say that such American behavior is a cold snap for Chinese-American educational exchange and cooperation. We hope that the United States will quickly correct its erroneous ways and adopt a more proactive posture to do more that will benefit educational exchange and cooperation between the two countries, and to work hard to enhance the mutual understanding and friendship between the people of China and the United States.”

Hans de Wit, the director of Boston College’s Center for International Higher Education, said both China and the U.S. are using education “as part of the whole trade war to put pressure on each other.”

De Wit, an Inside Higher Ed blog contributor, has written in these pages along with Philip Altbach about the vulnerability of international student flows to global instability and rising forces of nationalism.

“Because international students are so economically important, this instability will grow,” de Wit said. “Higher education is becoming increasingly a part of the battlefield. That has to do on the one hand with the number of international students but at the same time the knowledge economy and the importance of research and science.”

“This is in the context of this trade war but also in the context on both sides of suspicions of the other,” said Richard Madsen, a research professor and emeritus professor of sociology at the University of California, San Diego, and director of the Fudan-UC Center on Contemporary China.

“There is talk in Washington, D.C., about dangers of Chinese spying and espionage and stealing of intellectual property and so forth: you hear this from the director of the FBI and other voices in Washington and Congress. There’s also a concern about so-called influence operations with the Confucius Institutes being a major source of that, and therefore kind of a move for universities to get rid of these Confucius Institutes.”

“On the Chinese side, there’s intensified nationalism, and concerns about the United States either bullying China or trying to affect China in various ways. Issues like the Huawei issue -- the Chinese telecom company that the U.S. has charged with stealing trade secrets and violating sanctions against Iran -- are becoming important. There’s a fouling of relationships between the two countries that goes across a number of realms -- there’s the economic realm, there’s the national defense realm, there’s the cultural realm -- these all come together and create increasingly deteriorating relationships with China, and I presume that in the future that will affect things like international students coming to the universities to study.”

As to the effect of the ministry’s statement in and of itself, Madsen said he thinks word had already gotten out in China about visa problems.

“I think families will look at their own experience and look at the knowledge they’ve gotten from friends and social networks and they will see if what the government says corresponds to what they know from other sources,” he said. “I think in this case it will correspond. Whether it will deeply change anyone’s opinion, I don’t know. I think for many people it simply told them what they already knew.”

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# How ETS Helps Programs Recruit and Admit the Best Class

## Recruitment

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<thead>
<tr>
<th>Service</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Search Services</strong></td>
<td>Reach 1 million+ prospective applicants. Search GRE® and TOEFL® test-taker databases by country of citizenship, academic performance, educational objectives and ~30 other criteria: ets.org/searchservice.</td>
</tr>
<tr>
<td><strong>HigherYield™ Enrollment Marketing Solution</strong></td>
<td>Launch and manage dynamic multichannel campaigns to qualified candidates through a solution powered by ETS and Liaison International: higheryield.org.</td>
</tr>
<tr>
<td><strong>Test-Taker Trends</strong></td>
<td>Download A Snapshot of Individuals Who Took the GRE® General Test: ets.org/gre/snapshot.</td>
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<tr>
<td><strong>Free Publicity</strong></td>
<td>Promote your events on GRE test-taker-facing social channels: ets.org/gre/postmyevent.</td>
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<tr>
<td><strong>Client Relations</strong></td>
<td>Consult with ETS reps about the GRE program services, test validity and admissions, campus visits and webinars. Email: <a href="mailto:gretests@ets.org">gretests@ets.org</a>.</td>
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</tbody>
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## Admissions

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<th>Service</th>
<th>Description</th>
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<tr>
<td><strong>Admissions Support</strong></td>
<td>Resources to support a goal-oriented, fair admissions practice inclusive of GRE® General Test and GRE® Subject Test scores: ets.org/gre/admissions.</td>
</tr>
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<td><strong>Holistic Admissions Support</strong></td>
<td>Tools for implementing a holistic admissions practice, including promising practices curated from programs using them successfully now: holisticadmissions.org.</td>
</tr>
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<td><strong>Test-Taker Essays, Photos and Scores</strong></td>
<td>View scores and test-taker photos online, create custom reports, and access actual Analytical Writing responses with the ETS® Data Manager: ets.org/gre/edm.</td>
</tr>
<tr>
<td><strong>Score Use and Interpretation</strong></td>
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How ETS Reduces Barriers for Applicants

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Science vs. Security

Over past 18 months, the White House, federal agencies and Congress have all signaled concerns about theft of sensitive academic research by foreign competitors. Here’s what’s been happening.

By Elizabeth Redden // April 16, 2019

Tension between national security and science -- by its nature open and international -- is nothing new.

But over the past year and a half, national security agencies, federal granting agencies, the White House and members of Congress have all signaled their increasing concern about international students or scholars who might seek to exploit the openness of the U.S. academic environment for their own -- or their nations’ -- gain. And they’re signaling that when it comes to the balance between scientific openness and national security -- and, to add a third dimension, economic competitiveness -- they’re not happy with where that balance is being struck, especially when it comes to China.

Over the past year and a half, there has been a steady drumbeat of developments out of Washington on this issue. To summarize:

- In December 2017, the White House released a national security strategy that floated for the first time the possibility of restrictions on visas for STEM students from certain nations to prevent the transfer of intellectual property to competitor countries.

- In February 2018, Federal Bureau of Investigation director Christopher Wray told the Senate intelligence committee that China is exploiting America’s open research and development environment and that the intelligence threat from China would require "a whole-of-society response" involving not just the intelligence sector, but the academic and private sectors as well.

- Congressional hearings with names like "Scholars or Spies: Foreign Plots Targeting America’s Research and Development" followed. In June, the State Department moved to restrict Chinese graduate students in certain high-tech fields like aviation and robotics to one-year visas, instead of the usual five.

- Programs run by foreign governments aimed at recruiting diasporic or international academic talent -- most notably China’s Thousand Talent program -- have also come under federal scrutiny. Speaking at a House armed services committee hearing last June, Anthony M. Schinella, the national intelligence officer for military issues in the Office of the Director of National Intelligence, said these talent programs “facilitate the transfer of foreign technology, intellectual property and know-how to advance China’s science, technology and military modernization goals.”

- An amendment to the defense spending authorization bill last year would have barred Department of Defense funding for any researcher "who has participated..."
in or is currently participating in a foreign talent or expert recruitment program" operated by China, Iran, North Korea or Russia. Although the amendment wasn’t included in the final bill, the version of the bill that was signed into law in August includes language calling for further study of foreign talent recruitment programs and the development of relevant regulations.

More recently, in January of this year, the Department of Energy, which funds research related to nuclear energy, issued a memo restricting employees and grantees from participating in foreign talent recruitment programs operated by countries deemed by the agency as “sensitive.” A DOE official said the policy, which would affect talent programs operated by China, Iran, North Korea and Russia, has not yet been put in place.

Moreover, it’s not just international collaborations in research funded by the Defense and Energy Departments with their obvious national security implications that have come under increased scrutiny over the past 18 months. Foreign collaborations in the biomedical sciences have, too.

In August, the executive director of the National Institutes for Health, Francis S. Collins, sent a letter to grantees saying the agency “is aware that some foreign entities have mounted systematic programs to influence NIH researchers and peer reviewers.” The letter outlined three main areas of concern: “diversion of intellectual property (IP) in grant applications or produced by NIH-supported biomedical research to other entities, including other countries”; “sharing of confidential information on grant applications by NIH peer reviewers with others, including foreign entities, or otherwise attempting to influence funding decisions”; and “failure by some researchers working at NIH-funded institutions in the U.S. to disclose substantial resources from other organizations, including foreign governments, which threatens to distort decisions about the appropriate use of NIH funds.”

The NIH has reportedly sent letters to dozens of research universities asking them to provide information on specific researchers believed to have undisclosed links to foreign governments, and Senator Charles Grassley, a Republican from Iowa, shared in February that the Department of Health and Human Services’ Office of Inspector General had been referred a number of cases involving allegations that principal investigators on NIH grants had failed to disclose foreign affiliations. An NIH working group on foreign influences on research integrity comprised mostly of university leaders came out with a report in December with a series of recommendations for both the agency and universities to improve disclosure, training and communication, peer review, and monitoring processes.

Bound up in all of this is a broader scrutiny of U.S. universities’ collaborations with China and their acceptance of funding from Chinese government agencies or companies. This scrutiny manifests most prominently in calls from lawmakers to close their Chinese-government funded Confucius Institutes. A wave of U.S. colleges has announced closures of the institutes, which typically focus on Chinese language education and cultural programming, as pressures for them to do so have increased.

Universities have also come under criticism from lawmakers for accepting research funding from Huawei, the Chinese telecom giant that has been charged with violating U.S. sanctions and attempting to steal trade secrets. Some major research universities have cut ties with the company or pledged not to accept future funding. The Massachusetts Institute of Technology is the latest university to announce it will not accept new funding from Huawei or another Chinese telecom company, ZTE. MIT also announced that it would add an extra layer of review for all collaborations involving people or entities from China (including Hong Kong), Russia and Saudi Arabia.

So that’s the overview. And all this is taking place in the context of President Trump’s trade war with China and an increasingly competitive relationship between the two countries.

Big picture, what appears to be driving this intensified scrutiny across the various agencies of the federal government and the Congress is a conviction that if academics and other guardians of high-tech knowledge are not more careful, the U.S. risks letting other countries -- most notably China -- steal the fruits of U.S. taxpayer-funded research and cheat their way into gaining a technical edge in certain crucial science and technology fields.

And it’s not just primacy in fields with obvious national security-related implications that’s at issue: at stake as well is U.S. dominance in the biomedical and life sciences and the economic advantage that comes with that. As Grassley said in a February statement about foreign threats to NIH-funded research, “These projects can
produce important breakthroughs for patients and industry, keeping America at the cutting edge. I intend to continue scrutinizing this area so taxpayers get their money’s worth when funding this research and foreign actors can’t pilfer the good work done by legitimate researchers."

“This is about not only protecting our national security interests, but it’s also protecting our commercial interests,” said Joanne Carney, the director of government relations at the American Association for the Advancement of Science. “That’s an element of national security. Trying to balance our ability to be an innovative nation and protect our commercial interests is something that I think is a priority for the current administration. I think we’re going to go through some growing pains of how do we balance our ability to be an open nation, the ability to collaborate with some of our international partners, while also balancing our commercial interests and national security interests. We’re just going through a new phase.”

"I don’t think it’s necessarily that anything has changed so much as there’s just a growing awareness that there is a potential issue,” said M. Roy Wilson, the president of Wayne State University and co-chair of the NIH working group on foreign influences on research integrity. "I do want to emphasize I think everybody on the committee -- most of us were university presidents -- were very, very, very sensitive to the fact that most foreign scientists who get NIH grants and who collaborate with scientists here, the vast, vast majority are very productive and have contributed a huge amount to science and are playing by the rules. We want to make sure that we don’t stigmatize the overwhelming majority of foreign investigators. But having said that, there’s just a growing awareness that there has been some small but nonetheless important problem that has to be addressed."

The Risk

The U.S. academic research infrastructure is highly reliant on international students and scholars, and Chinese nationals make up the single largest group of students and visiting scholars alike. Students from China earned 5,157 doctorates in science and engineering fields at American universities in 2017, accounting for more than 12 percent of the 41,438 doctorates awarded in science and engineering fields in the U.S. that year, according to data from the National Science Foundation’s Survey of Earned Doctorates. In the fields of engineering and mathematics and computer sciences, international students in general (not just students from China) make up the majority of students earning doctorates at U.S. universities. Many in higher education argue that American universities’ ability to continue to attract talented students and scholars from China and elsewhere around the globe is therefore critical to the U.S. remaining a leader in science and technology research.

Science is international, and it’s also open: long-standing U.S. government policy holds that fundamental research -- defined as “basic and applied research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community” -- should be unrestricted "to the maximum extent possible."

That said, the U.S. does have laws and systems in place to protect research that is considered sensitive. Research can be deemed classified -- and many research universities have faculty who do government-funded classified research. Technologies deemed sensitive for their potential “dual use” implications -- both military and commercial purposes -- can be subject to export controls by the Department of Commerce, including "deemed export" rules that prohibit transfer of the technology to foreign nationals who are present within the U.S. The Department of State regulates export of certain technologies...
subject to arms control regulations, and the Department of Treasury enforces economic and trade sanctions.

But security officials say the national security risk is increasing. A 2018 report from a Pentagon entity, the Defense Innovation Unit, on China’s technology transfer ambitions stated that “Chinese science and engineering students frequently master technologies that later become critical to key military systems, amounting over time to unintentional violations of U.S. export control laws. The phenomena of graduate student research increasingly having national security implications will inevitably increase as the distinction between military and civilian technology blurs.”

Priestap argued that colleges and universities need to do more to educate faculty and students about how to protect intellectual property and to mitigate threats. “These schools would also be well served to recognize that, as stewards of taxpayer research dollars, they must implement clearer -- and in some cases more restrictive -- guidelines regarding funding use, lab access, collaboration policy, foreign government partnership, nondisclosure agreements and patent applications,” he said.

Reports from several nongovernmental groups have also raised concerns and suggested that universities and/or governments may need to consider more restrictive policies. A report from an Australian think tank released in October found that China has sponsored more than 2,500 military scientists and engineers to study at overseas universities since 2007 and argues that current policies of universities and governments do not adequately address scientific collaborations with the People’s Liberation Army.

“To date, there’s been no significant public discussion on why universities should be directly contributing to the technology of a nonallied military,” says the report, authored by researcher Alex Joske. “Importantly, there’s also little evidence that universities are making any meaningful distinction between collaboration with the Chinese military and the rest of their collaboration with China.”

Another report from a group of China specialists published by the Hoover Institution, “China’s Influence and American Interests: Promoting Constructive Vigilance,” also addresses the loss of sensitive or proprietary technology through academic instruction or cooperation.

“There are indications that the U.S. government is now strengthening measures to prevent the theft of sensitive technology and intellectual property that is being developed on U.S. campuses,” the report states. “These measures may require heightened screening and, in some cases, outright denials of visas to individuals from certain state-run institutions or even from certain sensitive research fields. Such calls have understandably prompted concern from the academic community, fearing that this will undermine the principles of academic freedom, hinder collaboration and deny American universities access to a rich talent pool. These reservations are merited and require that any tightening of visa categories be as narrow as possible.”

**Competition With China and Fears of Racial Profiling**

Robert Daly, director of the Wilson Center’s Kissinger Institute on China, describes the intensified focus on research security as “a central part of the American response to China, to its emergence as a peer competitor and to aspects of its ambition and to many of its methods -- not all of which are to be attacked and demonized but some of which are problematic.”

“It’s in the universities that you see it most starkly -- although universities aren’t the only place -- where America’s core values of security are at odds with America’s core values of openness, and we haven’t yet made a decision about how we are going to continue to value openness in light of security concerns,” Daly said. “And there’s a third tranche, which is the value of the market and market economic behavior, which also is at odds with
both openness and security and aspects of that play within the university setting as well.”

“From the security end of this, the question is why are we training China’s best and brightest to compete with us more effectively?” Daly asked. “That’s not a silly question. You might have a good answer for that, and one of the answers is over the last 40 years, America has tremendously benefited from Chinese talent. It’s a complicated question. There’s a real danger of racial profiling and there’s a danger of McCarthyist views, and yet even when you say that, when you strip it away, the security concerns remain legitimate because we know a good deal about China’s ambitions at this point.”

The risk of racial profiling has, however, sparked concern. Representative Judy Chu, a Democratic congresswoman from California and the chair of the Congressional Asian Pacific American Caucus, objected last year to what she described as efforts by Congress "to fuel the dangerous narrative that students from China should be viewed with more scrutiny than those from other countries.”

A letter published in *Science* last month from several groups of Chinese or Chinese American scientists also raises concerns about "the recent political rhetoric and policies that single out students and scholars of Chinese descent working in the United States as threats to U.S. national interests." The letter expresses the writers’ "sincere hope that increased security measures will not be used to tarnish law-abiding scientists and limit normal and productive scientific exchanges."

William Brustein, the vice president for global strategies and international affairs at *West Virginia University*, said he has grown increasingly concerned about the “China bashing” he hears from Washington.

“These programs that they’re targeting -- the Confucius Institutes, the talent programs -- there hasn’t recently in the last few years been a nuanced and a balanced approach to talking about the pros and the cons,” he said. “I would think it would be a big detriment to both countries if we continue down this road and we start seeing the end of Chinese student growth in America. To portray it as if all these people who are coming over are working somehow for the People’s Liberation Army or national security apparatus in China is so faulty, so wrong. Most of these people coming over, they want to get a top-notch education, their parents are putting all their resources into the hopes that maybe they’ll be able to get an H-1B visa, stay in the United States and have a career here. Or if they go back to China, they’ll be able to land greater opportunities there, whether it’s in business or some kind of government position. But nevertheless, it’s not as if they’re being trained or indoctrinated to come over here to be spies. I worry about where this is all going.”

The View From Campuses

University leaders say the increased scrutiny from Washington is having an effect on their campuses.

“I do think that all of these letters both from the agencies and from Congress and specific callouts in federal legislation have led to a sense of angst at universities,” said Sandra A. Brown, the vice chancellor for research at the *University of California, San Diego*. “I think everybody does feel it is a time of greater scrutiny. I’m reminding our faculty that we have normal processes in place to be monitoring these kinds of engagements and we are reminding them of what they are, helping them with any questions that they might have and meeting with them individually as needed with regards to their individual situations.”

“[The greater scrutiny] impacts both issues that relate to foreign collaborations at the investigator level and institutional collaborations but also the student side of things can’t be missed,” Brown
said. “Faculty are getting nervous about bringing students that in the past they may never have been concerned about.”

At the same time, she said, “I do think that this challenge has resulted in enhancements in communications between the universities and federal agencies, not just federal funding agencies, but national security agencies, the FBI, and all of those communications, I think, in the end, will be a good thing.”

Tobin Smith, vice president for policy at the Association of American Universities, said the association has been sharing best practices, “whether it’s training to make people aware of these things, whether it’s compliance with export control rules. There’s a lot of sharing of information around what campuses have been doing that they feel are effective practices in this area and what they have just started doing in light of some of the concerns that have come from NIH and some of the other agencies.”

“I can tell you the leading research universities and the administrators at the universities are giving this a significant amount of attention and taking this set of issues very seriously,” Smith said.

“The focus on what universities should be doing, I think, are really reminiscent of what we do in a number of areas related to research -- one is educating faculty and staff about issues in this area to make sure that they understand that they need to be disclosing who they’re working with, particularly if they have international collaborators. If they’re receiving money, receiving resources, if NIH-supported work is taking place overseas, that needs to be disclosed,” said Samuel L. Stanley Jr., the president of the State University of New York at Stony Brook and a member of the NIH working group on foreign influences on research integrity.

“The more problematic thing is, we really work on a system of trust -- we ask people to disclose,” Stanley said. “How do we monitor this? Do we do random audits, or are there red flags we look at? That’s where the partnership with the security agencies becomes so important. It becomes critical that we have information that can help us identify if cases have taken place in NIH or other agencies where people were not following the rules: What are some of the signal or signs that might have helped detect this?”

“There’s a tension that always exists,” Stanley said. “I chaired the National Science Advisory Board for Biosecurity for eight years; it taught me a lot. The security agencies really spend a lot of time thinking about how to protect assets. That’s what they do, and they do very well.”

“Of course, we in science think a lot about how you generate new knowledge and how you disseminate as broadly as possible so other people can push the field further. Those two are in fundamental conflict. Finding middle ground sometimes is difficult.”
A series of recent reported incidents have raised the specter of tensions between faculty members and the international students they teach.

The most recent such incident involved the resignation of a professor from the University of Maryland at College Park -- first reported by WAMU 88.5 -- after the professor, David Weber, accused a group of students from China of cheating and was accused in turn of discriminating against students based on their race and national origin.

Samantha Wu, who is from China, was taking a forensic auditing class in Maryland’s business school last fall. The class had two sections, one taught by Weber and one, in which she was enrolled, taught by David Hilton. Wu reported that on Nov. 7 Weber came into another class she was taking, a business ethics class taught by Jeffrey Milton, with a list of names of students he believed cheated on the final exam in the forensic accounting class.

In a complaint submitted to the Office of Civil Rights and Sexual Misconduct, Wu and others said Weber began yelling things to the class like, “All Chinese students cheated their way into [the] United States” and “You will all be expelled, your visas will be revoked, and you will have to go back to China.”

“This whole tirade lasted more than 30 minutes, and then he just departed the class with students full of shock,” Wu said in an interview.

“This course consisted of more than 90 percent Chinese students.” Wu and other complainants said this was not an isolated incident.

Students reported that Weber repeatedly made comments like “you are not a U.S. citizen/American, you don’t know what I’m talking about, you don’t get me.” He also allegedly said he had expelled a Chinese student in the past to deter him or her from cheating.

Weber also allegedly posted a message to students on a learning management system -- a copy of which was provided to Inside Higher Ed -- that partially attributed students’ apparent lack of interest in integrity to their culture. The message said, “You appear to be more focused on your grade than on the integrity of the profession and the M.S.A. [presumably the master of science in accounting] program. While we recognize that a portion of this is cultural, the purpose for many of you in obtaining an edu-
tus under United States civil rights laws, is wrong and is not tolerated. Maryland Smith is strongly committed to creating and promoting a culture that is fair, equitable and respectful to all students.”

According to Maryland’s statement, the dean of the Smith School of Business sent a personal apology to affected students on Nov. 10. “The Smith School takes all allegations of discrimination seriously. When allegations of discrimination are received, they are forwarded for investigation and due process is followed,” the statement said.

“The employee in question has resigned his employment and is no longer teaching at the university.”

Weber did not respond to multiple messages from Inside Higher Ed seeking comment. Weber’s lawyer -- as identified in the WAMU coverage -- also did not respond to requests for comment. The lawyer, Brian Mahany, sent a statement to WAMU contesting the words attributed to Weber and saying that he referred to students’ nationality when making the cheating allegations because the consequences for cheating for international students -- who stand to lose their visas if they are expelled -- are serious. “The purpose of this discussion was to consider the seriousness of the cheating allegations, not to discriminate,” Mahany said in a written statement to WAMU.

Weber told WAMU he encountered more cheating in the graduate accounting program at Maryland -- which enrolls a large Chinese student population -- than in other programs in which he’d taught. “I believe that culture and upbringing does play a role in cheating,” Weber said in writing to WAMU. “There is no question that there is a different rule-following and rule-breaking culture between the U.S. and China.”

“Does that mean that Chinese students are more prone to cheat? No,” Weber said to WAMU. “It isn’t proper to label an entire group of students based on nationality as being ‘cheaters.’ That isn’t fair to the many Chinese students who don’t cheat.”

Weber also told WAMU that he was trying to uphold Maryland’s academic honesty policy. “It is my fear that, despite the honor code, the school administration will not always support faculty members who report cheating, in contrast to what the policy actually says,”
Tensions Over International Students

wrote Weber. “This is especially when the program in which cheating occurs is one of the most profitable programs for the university.”

The incident at Maryland follows on several other news reports about tensions involving faculty and international students, in particular Chinese students. The number of students from China on U.S. campuses has more than quadrupled in the past decade, and many colleges have eagerly recruited Chinese students in part for the tuition dollars they bring.

Among the other cases, the Los Angeles Times reported in December that faculty at the University of California, Santa Barbara, were concerned about rates of cheating by Chinese students and their English proficiency levels. Faculty said they had been asking the university to improve screening of students’ English language levels and offer more remedial help and instruction in university norms, including norms relating to classroom behavior and academic integrity. One professor who spoke out said the decision to do so did not come easily, but that he was worried that failure to address the problems would inflame anti-Asian biases.

The Lawrence Journal-World reported earlier this month that an electrical engineering professor at the University of Kansas was suspended from teaching a class after he told a student using a translator on a cellphone to “learn English” and other students took offense. In this case it is not clear where this student was from and whether he or she was an international student. The professor involved, Gary Minden, declined Inside Higher Ed’s request for comment.

Finally, a Duke University professor’s email from January admonishing Chinese students for speaking their native language in the student lounge -- and advising them that failure to speak in English while in the academic building could have negative effects on their opportunities to secure internships and research opportunities with faculty -- attracted widespread condemnation on the campus and beyond. The case prompted scholars who study issues relating to international students and discrimination to suggest that it should not be seen as an isolated incident and that it pointed to a need for universities to provide more support and resources for faculty who are teaching in international classrooms.

Marcelo Barros, founder of the International Advantage, a company that advises international students who seek U.S. career opportunities, said the incident at Duke and others raise a question for him.

“I wonder given my work in higher ed with international students if we have a deep systematic issue around a general resentment towards international students that gets reflected in these outbursts from faculty,” he said.

“We talk about globalizing the campus and bringing international diversity. We talk about that as being beautiful and romantic. But such incidents tell me that we still have a long ways to go in terms of making our international students truly feel welcomed at our U.S. universities. Our words need to match our actions and behavior.”

New study finds discrimination against women and racial minorities in hiring in the sciences. The study’s about postdocs, but it has important implications for all of academe.

By Colleen Flaherty // June 7, 2019

A major 2012 study revealed significant gender bias in hiring in the natural sciences: male and female scientists alike discriminated against hypothetical undergraduate female candidates for a lab manager position whose CVs were identical to those of male candidates. The scientists rated women as less competent and even recommended paying them much less than men.

The lead author of that study piloted a similar experiment based on racial bias in the sciences thereafter. But she found that participants, many of whom were familiar with her earlier work, guessed what she was up to. She had to abandon the project to avoid compromising the data -- you can’t test people’s unconscious biases when they’re made conscious of them. More cynically, people are less prone to acting on their biases when they know someone’s watching.

Years later, another group of scientists has managed to carry out a study on racial bias in hiring in the sciences, concerning postdoctoral researchers in physics and biology. The experiment also included gender, to see how racial and gender biases intersect.

The results, published this week in *Sex Roles*, are startling in their magnitude. They also have major institutional policy implications, and not just for hiring.

Consistent with their hypotheses, the researchers found that scientists operated on a slew of stereotypes when asked to consider hypothetical postdoc candidates with identical qualifications but different names: apparently female or male, and white, black, Asian or Latinx.

Still, there were some differences observed between biologists and physicists. Namely, biologists did not discriminate against women in terms of who they would hire or find competent on a scale of one to nine.

Candidates with women’s names were rated as more likable than men by both physicists and biologists. Physicists rated male candidates as more competent and worth hiring than female candidates, and Asian and white candidates as more competent and hireable than black and Latinx candidates. Black women and Latinx women and men candidates were rated significantly lower than
all other candidates in physics, as well.

In biology, faculty raters saw Asian candidates as more competent and worthy of hiring than black candidates and as more hireable than Latinx candidates.

Again, the gender effect was absent in biology. Still, women of color took a double hit.

“Taken together, our findings lend experimental support to the double bind and unique challenges faced by women of color in science,” the paper says, citing research by Joan C. Williams and her daughter, Rachel Dempsey, on workplace bias against women. “Prior research has found that women of color not only experience the bias patterns encountered by white women, but also report biased experiences that differ from those of white women.”

Black women are more likely to experience isolation in the academy than white women, for example, the study says. Latinas, meanwhile, “report levels of disrespect and accent discrimination not reported by other women.”

**Design and Implications**

Like the 2012 study on gender alone, the new study was relatively simple in its design. Researchers asked professors of physics and biology to rate candidates on their competence and hireability. The results were striking:

**Figure 4. Boxplot illustrating distribution of Physics faculty competence ratings**

**Figure 3. Boxplot illustrating distribution of Biology faculty hireability ratings**

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**Table 1  Descriptive statistics and gender and racial/ethnic group comparisons**

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**Means with different subscripts are significantly different across a row (a) within gender (i.e., comparing ratings of male and female candidates) and (b) within racial/ethnic groups (i.e., comparing ratings of Asian, White, Black, and Latinx candidates)**

Source: Jessica Saunders
Corinne Moss-Racusin, associate professor of psychology at Skidmore College and lead author of the 2012 paper on gender bias in hiring, said the new study matters because it documents that this kind of discrimination exists years later -- and because it extends the research to include race and how it intersects with gender.

The fact that the new study’s authors were able to pull off what they did, undetected, is no small feat, she added. Still, Moss-Racusin said she was sadly unsurprised by the magnitude of the effect observed.

“We’ve had anecdotal evidence of this effect for quite some time,” Moss-Racusin said, “so the fact that we have such clear demonstration of it from sound experimental research is really powerful, and it should catch the attention of the scientific community.”

Like others who have discussed and shared the research online and elsewhere, Moss-Racusin highlighted the lack of a gender bias effect in biology as compared to physics. She said that might be because there are more women in biology than in physics, but there’s no way to know for sure. Her study, involving scientists in several fields, didn’t find evidence of interfield differences.

As for what Moss-Racusin called the “million-dollar question” -- how to move the dial on gender and racial bias in hiring in science -- she said blind hiring would make a difference, in theory.

Of the 635 tenured and tenure-track professors in the participant pool who were mailed surveys and study materials, some 251 faculty members responded (about a 40 percent response rate). Ninety percent of physicist respondents were male, compared to 65 percent of biologists.

Participants were told that the study was about how CV formatting and design styles influence science professors’ perceptions of postdoc candidates. To maintain the cover story, the researchers included questions about that purported topic, which they later tossed. They were, of course, much more interested in the next set of questions, which asked participants to assess the hireability, competence, likability and competitiveness of a given postdoctoral candidate. More specifically, the scientists were asked survey questions about the postdoc’s overall competitiveness, the likelihood he or she would be hired at their institution, and his or her competence and likability.

Study co-author and psychologist Jessica Saunders, a postdoc research associate at the Women’s Institute of Nevada at the University of Nevada at Las Vegas, said her team’s work was inspired by the 2012 paper on gender bias in hiring in the sciences. While that paper focused on undergraduates, Saunders and her co-authors decided to frame their work around postdocs. Why? These positions are a “critical step in the academic pipeline, potentially even more important than lab manager positions,” she said. Saunders also noted that her team mailed CVs directly to faculty members, who make hiring decisions such as these on a regular basis.

Asked whether her results would hold across the sciences or beyond, Saunders hesitated and cited the difference even between biology and physics. She expressed hope that potential hiring biases across academe would be addressed by the paper’s recommendations (more on that later).

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(More) Bias in Science Hiring

In reality, she said, at least in academe, it’s impossible to truly blind a hiring committee to a candidate’s race or gender throughout the process. Academic CVs include publications, for example -- a quick google of which reveals authors. There are ways to avoid that, too, such as quantifying research impact without naming a specific article. But then there are interviews.

“The short or final list of candidates still comes down to human beings making decisions about other human beings,” she said.

Moss-Racusin said it’s also somewhat dangerous to use shortcuts, such as blind hiring, to overcome biases, in that it may make people feel “morally credentialed.” Real progress requires more than that from both faculty members and the institution. Ideas include rethinking paid parental leave and other policies that might feed some of the biases in the first place.

“This is about shifting attitudes and shifting the systems that those attitudes exist in.”

Saunders agreed that it’s generally not possible to make CVs completely blind. So the paper suggests that hiring materials only include surnames to match the information found in citations. The paper also suggests adopting antibias trainings to target intersectional identities, such as gender and race, simultaneously. And the researchers recommend that all search decisions “be undertaken by a committee, providing additional checks and balances.”

Moss-Racusin said there’s no reason to believe that the new paper’s results wouldn’t apply to faculty hiring, as well.

“Sorry,” she said.
I was recently interviewed by a fellow alt-ac Ph.D. who is writing a book, accepted by a major academic press, intended for current and post-Ph.D.s considering non-academic career paths. He posed an interesting question to me:

“Do you regret doing your Ph.D.?”

That is not an easy question to answer for someone who once heavily identified as an academic but is no longer involved in the profession. So I responded to his question with one of my own:

“Do you mean do I regret it, or if I knew what I know now, would I do my Ph.D. all over again?”

I am now two jobs removed from academe. My career trajectory has radically changed from the days when I was dissertating day and night in the dense stacks of the library. Back then, I was blissfully ignorant about the anemic nature of the academic job market. Certainly no one supplied me with tenure-track placement data. That only became apparent when I began to tabulate placement numbers in the sixth and final year of my program.

Life looks very different now. My years in the Ph.D. program look very different. I now think about ways in which Ph.D. programs can be reformed to take into consideration the long-term, nonacademic job prospects of many of their students. To that end, it is vital that universities re-evaluate the time-to-degree requirements for many humanities Ph.D. programs.

The current structure of those programs is designed to train their students to become professors. This entails a litany of discipline-specific seminars, comprehensive exams and course teaching. But the problem is that such departmental requirements are antiquated, as many Ph.D.s are not getting tenure-track positions.

According to a study conducted from 2003 to 2012, the median
time that humanities Ph.D.s spent in their programs was 6.9 years or longer. Humanities Ph.D. programs are considerably longer than those in physical and life sciences. Most American Ph.D. students will complete their degrees while they are in their late 20s and 30s. Those are crucial years for their long-term earning power. Any additional year spent in a Ph.D. program will eat into future salary increases and the ability to save for retirement.

Ph.D.-granting departments have a moral responsibility to take into consideration how their program requirements impact their students’ potential earning power and financial stability. Universities should look to their counterparts in Europe that have shorter time frames to degree completion. In fact, since American universities hire European Ph.D.s (sometimes over American Ph.D.s whose degrees took longer to complete), there is little advantage for graduate students to be saddled with onerous degree requirements that have nominal professional value once they explore career options outside academe.

Where could time be saved? Humanities Ph.D. programs contain a large number of up-front courses that can take up to two years of study. As I reflect on my graduate student years, I would certainly trim the number of required courses and seminars. I would also lessen the number of qualifying exams. Cutting the number of courses and exams could result in graduate students preserving precious years down the road.

Humanities Ph.D. programs should also consider limiting their annual enrollment numbers so that they are actually training students for tenure-track academic positions that their Ph.D. students will actually fill. (I’m excluding post-docs, visiting assistant professors and adjuncts, since most first-year students don’t envision these contingent positions as the type of jobs they will one day have.)

In addition, the expected length of dissertations should be shortened. For tenure-track and tenured faculty, their dissertations are springboards for their first book projects. It makes sense that they want heavily footnoted, lengthy and densely researched dissertations. But for those students preparing for nonacademic careers, turgid, long-winded dissertations will simply collect dust in a box buried in their attic. The scholarly contribution will not put food on their table (whereas it does for faculty members, since academic publishing is part of their job).

So after considering the question for 10 seconds, I answered the interviewer, “I would do it all over again if I could complete my Ph.D. program in three to three and a half years. However, even though I found my Ph.D. journey intellectually fulfilling, I would not squander an additional three years of earning power on my Ph.D.”

Bio

Michael Zimm received his Ph.D. in classics from Yale University. He’s the director of marketing at Kris-Tech Wire, a copper wire manufacturer.
We Must Support Chinese International Students

We should not view such students as threats or cash cows but rather as people who can contribute knowledge, distinct cultural identities and other valuable resources, argues Xiaojie Li.

By Xiaojie Li // June 11, 2019

“I’m worried that I cannot return to the United States on time for the new semester.”

I’ve received messages like this now and then from Chinese international students before a college break. As a former international student and current staff member working for Chinese student services at an American university, I’ve heard and understood their anxiety.

The policy that shortened student visa durations from five years to one year, along with the potential delayed processing times, is supposed to only affect Chinese students in some high-tech majors. But stories about other Chinese students who have also received one-year visas or who are missing a semester due to administrative process has caused worries among a wider range of students.

Usually, students asked me whether our university would provide any help with their visa-renewal process. And while the institution may assist international students with coordinating certain documents if requested by a U.S. consulate, that does not help to ease the fear in their minds. Recently, China’s Ministry of Education warned students of potential risks in obtaining visas to the United States. That announcement from the Chinese central government validated existing anecdotal stories that students may have heard from friends and affirmed their concerns about visa-related challenges.

Besides living with the uncertainty due to the tightened visa policies and other regulations, Chinese students, as the largest international student population in the United States, are also increasingly disturbed by the generally unwelcoming environment in the country over all. After the Federal Bureau of Investigation director accused foreign researchers of stealing intellectual property from the United States, Chinese students and scholars have felt singled out and further alienated.

Today, discrimination against Chinese people seems more legitimate in society. One Chinese student revealed to me recently that she was assigned to a project group with all other Chinese students while her American peers were in a different group. She believed that her department did so assuming that Chinese students would affect the quality of Amer-
We Must Support Chinese International Students

ican students’ work due to their lack of English proficiency. Her peer Chinese students were reluctant to collaboratively protest the department’s approach, so the issue was left unaddressed. Strongly disappointed by her experience in this program, this student said she would not stay in America for even one more day after graduation and would tell any Chinese students she knew to avoid that program because she did not want them to be treated so unfairly.

Paradoxically, while Chinese students are seen as potential threat to national security, as well as less linguistically proficient, higher education institutions still invest heavily in Chinese student recruitment to maintain the inflow of these full-paying students. The University of Illinois at Urbana-Champaign, for example, has purchased insurance to counter the potentially reduced tuition income caused by a drop in Chinese students. Yet some colleges and universities view international students more as cash cows who serve their financial purpose than people who bring knowledge, distinct cultural identities and other valuable resources to American campuses.

And, in fact, some international students can tend to internalize that narrative and perceive themselves as cash cows as they “purchase” an American degree. I learned that several Chinese students who violated the code of academic integrity were unworried about potential penalties, believing that they would not be expelled because the university relies on their money. By studying in the United States, they were pursuing the highly symbolic value that an American degree provides more than a high-quality education and cross-cultural experience.

**What Institutions Should Do**

Although the overall political environment in America is unfriendly toward Chinese students and scholars, higher education institutions can still do many things to support them, given they have much to contribute to colleges and universities beyond the dollars they provide. They can:

**Take genuine actions against neo-racism.** Many colleges have emphasized their commitment to support our international students through slogans, emails and videos. But we should realize that international students will not truly feel welcomed and included until institutions honestly recognize and battle against the occasions when those students are treated unfairly on their campuses. This requires our colleges to engage in a “deeply engrained consciousness about the humanity of internationalization,” in the words of Jenny J. Lee, a professor in the Center for the Study of Higher Education at the University of Arizona, and to open-ly celebrate the contributions of Chinese students to academic research and campus diversity.

Beyond that, we, as faculty and staff members, should actively identify discriminatory behavior toward Chinese students, spend time listening to how they feel and help them to analyze the issues, increase their awareness of neo-racism and navigate existing resources. That way, Chinese students can better understand the importance of speaking out and also feel comfortable and empowered to do so. If we don’t make efforts and simply believe that it’s no one but Chinese students’ own fault if they stay quiet, neo-racism will not be corrected. And the message of “You are welcome here” will be meaningless, regardless of how frequently we say it.

**Strengthen the support for international student success.** For American higher education institutions to maintain their ability to attract international students in the long run, they should be sincerely devoted to providing high-quality education for international students. Examples could be tailoring tutoring programs that interna-
We Must Support Chinese International Students

Xiaojie Li is Chinese student services coordinator at the International Students and Scholars Center at the Arizona State University. She is also a Ph.D. student at the Center for the Study of Higher Education at the University of Arizona.

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Lessons From a Support Group

Mike Firmand describes how such a group can help students feel more in control of their job searches and outlines how to create your own.

By Mike Firmand // June 3, 2019

A small outburst of voices suddenly fills the room. “I didn’t know that was a thing,” one student announces above the swell of noise. We’re discussing a difficult topic: perceptions of gender and its influence on applicants in the interview process. “Should I ask about maternity leave benefits?” “My professor told me not to wear a wedding ring.”

The group grapples with mixed feelings as they talk through their views on whether to conceal aspects of identity as a strategy for succeeding in a job interview. This was a complicated but candid conversation on navigating uncertainty that took place in a job search support group for graduate students.

Piloting a Job Search Support Group

In my role at the Graduate College of the University of Illinois at Urbana-Champaign, where I regularly lead group programs focused on career exploration for graduate students, I am constantly struck by how much students benefit from spontaneous group discussion. Seeing how the dynamic, unexpected element of open dialogue can reveal new insights, I grew eager to develop a program for students to engage with peers about the job search in this sustained and collaborative way.

So this spring, I started the first-ever job search support group for graduate students at the University of Illinois. Over four weeks, around 12 master’s and Ph.D. students from across disciplines came together for weekly, 90-minute meetings focused on one component of the job search: assessing fit from a job ad, crafting application materials, interviewing strategies, networking and so forth. I planned for the sessions to be highly interactive, with most of the time designated for participants to tell stories, ask questions and reflect on their job search experiences together.

During those four weeks, I observed that most of the students felt a loss of control in the search. I came to realize that the main benefit of the support group model was that students could confront that feeling and take steps to overcome it. In this article, I will describe that loss of control, explain how the support group helped and outline strategies for creating your own job search support group.

Key Finding: A Loss of Control

As the students gathered for each weekly discussion, I noticed an abundance of they-centered language. Concerns about what skills and experiences they care...
Lessons From a Support Group

about most in a résumé. Not knowing what exactly they mean in one particular sentence in a job ad. Questions about how they assess interview answers.

They are employers, broadly, and a source of great concern for job seekers with limited mind-reading abilities. Not knowing employers’ expectations and wants with perfect precision at each step in the search seemed to be students’ most significant source of stress.

This lack of certainty manifested itself in students’ decisions about whether or not to apply for a job as they searched for the elusive perfect match. Participants would talk themselves out of applying after seeing just a single qualification they didn’t have. At the same time, students felt apprehensive about applying to jobs in which they met or exceeded every requirement for fear of being overqualified. At both ends of the spectrum, the students held perceptions of being the wrong fit based on what they say they are looking for. And in all cases, the stress was experienced as a deficiency on their part, as if their lack of assuredness was a result or an indication of their inadequacy as a job candidate.

Certainly, you should consider employers’ needs in how you present yourself as a job candidate. But being overly they focused can transform any external factor, many of which are beyond your control, into a source of anxiety. The lack of certainty can be overwhelming, and some students in the support group postponed their job search altogether as a result. Focusing on factors outside of their control led to feelings that they had no control.

Sharing the same room to explain these experiences of uncertainty revealed to participants that they were not alone in feeling powerless. Additionally, it helped them realize that most of their doubts stemmed from guesswork about employers and allowed them to recognize its demoralizing effects. Hearing their concerns being expressed by others made it possible for students to get out of their own heads where they could evaluate and reconsider their reservations. The lessons derived from the job search support group offer ways to take back control, which can be done through building confidence and fostering community.

Taking Control Through Confidence

Given that total certainty is impossible in the job search, you can quickly discouraged if you focus entirely on them. To break that pattern, the group sessions focused on reclaiming confidence by applying a more positive, self-directed and action-oriented mind-set. Here are three tactics discussed in our meetings that helped participants combat they-dominated thinking:

■ **When reading job ads:** Retrain your brain to first assess job ads from a positive mind-set before considering whether you match the qualifications. Instead of “Would they ever hire me for this,” ask, “Would I like to do this? Can I visualize myself doing this type of work for this organization? What about the work is exciting?”

■ **When crafting application materials:** I often tell the students that cover letters need to make a compelling argument. And your mind-set when making that argument should be: it was me all along. This employer may have decided on a prescribed list of knowledge, skills and experiences needed for this role, but in fact, what I have is the ideal, distinct mix of things it takes to succeed -- and here’s why.

■ **In the interview:** You may not have control over what questions are asked, but that doesn’t mean you lack agency. Your preparations should focus on what you want them to know about you. What stories do you want to tell? How have your experiences prepared you to contribute to the organization? Don’t wait for the perfect setup to tell your best stories, because it may never come.

Providing concrete strategies to build confidence broadened the impact of the support group beyond granting a space to share frustrations. After participating,
Lessons From a Support Group

students reported feelings of increased confidence regarding their ability to assess fit for a job, create effective application materials and manage the stress of the search.

How to Organize Your Own Group

As our support group made clear, another way to take control is through developing community with others. Consider creating your own support group, either informally with peers or by advocating for a formal program through your grad student association or career services office. If you want to start a group, here are some approaches that helped make our program successful:

- **Meet regularly:** Our group met at the same day and time each week. Students confirmed that having an established time devoted to collaboration helped them stay on track with individual aspects of their search. This consistency made it easier for those who attended all sessions to build rapport with one another, leading to more meaningful conversations in later weeks.
- **Have themes:** Organizing each week around a specific theme of the job search helped focus the conversation and discourage drastic pivots into unrelated topics. Because students knew the theme in advance, they prepared questions and stories around specific stress points, enabling deeper exploration of the topic, such as the dialogue on gender bias, without the pressure to move on to other issues.
- **Let participants steer the discourse:** At the outset, I decided that facilitators would only initiate and complement the conversation, providing just a brief (five to 10 minutes) introduction and occasional prompts to stimulate discussion. This structure helped participants get accustomed to the flow of the sessions, but it was even more important for facilitators to remain flexible -- reading the room to decide when to abandon predetermined talking points. Granting authority to students empowered them to probe and hash out what mattered most to them. It also gave them the self-reliance to reach their own understanding in dealing with uncertainty without the expectation of an expert to provide a one-size-fits-all solution.
- **Include a variety of voices:** Our group benefited from being open to graduate students of all fields and degree levels. Students were surprised and reassured that peers from different backgrounds shared sources of stress and uncertainty about the job search. Finding this common ground helped individuals validate their experience and presented an opportunity to find new members of their network of support, a key component for building resilience.

It takes courage to search for a job. It also takes courage to disclose your worries to a room full of strangers. Support groups offer graduate students a communal and collaborative space to activate their confidence, combat they-centered doubt and regain control amid the uncertainty of the job search.

Bio

Mike Firmand is assistant director of employer outreach at the Graduate College of the University of Illinois at Urbana-Champaign and a member of the Graduate Career Consortium -- an organization providing a national voice for graduate-level career and professional development leaders.
