



Council of Graduate Schools

RESEARCH REPORT

**FINDINGS FROM THE
2008 CGS INTERNATIONAL GRADUATE ADMISSIONS SURVEY
PHASE III: FINAL OFFERS OF ADMISSION
AND ENROLLMENT**

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OVERVIEW

In 2004, the Council of Graduate Schools (CGS) began an extensive, multi-year empirical examination of international graduate application, admission, and enrollment trends. This analysis responds to member institutions' concerns about continuing changes in the enrollment of students from abroad seeking master's and doctoral degrees from U.S. colleges and universities.

The core of this examination is a three-phase survey of CGS member institutions. The survey collects an initial snapshot of graduate school applications (*Phase I*, conducted in February of each year), final applications and an initial picture of admissions offers (*Phase II*, June), and final offers of admission, first-time enrollment, and total enrollment (*Phase III*, October).

The 2004 *Phase III* survey found a 6% decrease in first-time international graduate enrollment from 2003 to 2004, and a 3% drop in total international graduate enrollment.¹ The 2005 report revealed that first-time enrollment increased by 1% from 2004 to 2005, but total enrollment fell 3% during the same period.² The 2006 *Phase III* survey discovered a 12% increase in first-time enrollment and a 1% gain in total enrollment from 2005 to 2006.³ Last year's survey found a 4% increase in first-time enrollment and a 7% gain in total enrollment between 2006 and 2007.⁴

CGS survey data for 2008 suggest that U.S. graduate schools have continued to attract an increasing number of international students, as both first-time and total enrollments continue to rise. But the rates of increase in enrollment slowed between 2007 and 2008. Moreover, the rebound in total international enrollment still has not been large enough to reverse the declines that many institutions reported in 2004.

This survey report also describes the mechanisms in place at graduate schools to increase international student enrollment, as well as the mechanisms used by graduate schools to monitor early indicators of graduate enrollment growth and declines. These results provide vital data on international outreach efforts by U.S. graduate schools and deans.

This report first describes the survey methodology used to collect and calculate the changes in enrollment and admissions for 2008, and then compares the one-year changes to those in prior years. The third section examines the mechanisms used by graduate schools to increase and monitor international graduate enrollment.

¹ Brown, H., Syverson, P., & Doulis, M. 2004. "Assessing a Year of International Graduate Admissions: Trends and Findings from the CGS International Graduate Admissions Survey." *CGS Communicator* 38,10: 1-3.

² Brown, H. 2005. *Findings from the 2005 CGS International Graduate Student Admissions Survey III: Admissions and Enrollment*. Washington, DC: Council of Graduate Schools.

³ Redd, K.E. & Neubig, E.H. 2006. *Findings from the 2006 CGS International Graduate Admissions Survey Phase III: Admissions and Enrollment*. Washington, DC: Council of Graduate Schools.

⁴ Redd, K.E., Neubig, E.H., & Mahler, J.D. 2007. *Findings from the 2007 CGS International Graduate Admissions Survey Phase III: Final Offers of Admission and Enrollment*. Washington, DC: Council of Graduate Schools.

SURVEY METHODOLOGY AND RESPONSE RATE

The *2008 International Graduate Admissions Phase III: Final Offers of Admission and Enrollment* survey was sent to 490 U.S. colleges and universities that were members of CGS as of October 2008.⁵ The survey asked these institutions to report their final number of prospective international students who were offered admission to master's and doctoral degree programs, the number of new international graduate students (first-time enrollment), and the total number of international graduate students (first-time, plus continuing students). Institutions also were asked to provide admissions and enrollment data for students who originate from four key sending countries or regions, and admissions and enrollment numbers for seven broad fields of study. CGS defines an international student as a person who is not a citizen, national, or permanent resident of the United States and is in this country on a student visa, or on a temporary basis, and does not have the legal right to remain indefinitely.

About 37% (181) of the survey population responded to the survey. The response rates among certain types of institutions were considerably higher: all ten of the ten institutions with the largest international graduate student enrollments, 88% of the 25 largest, and 86% of the 50 largest participated in the survey.⁶ The high participation rate among the campuses with the largest international enrollments is important because collectively the 50 largest institutions enroll more than 41% of the total international graduate student population.⁷ The high response rate among these institutions suggests that the survey results accurately depict recent trends in admissions and enrollment at U.S. graduate schools.

The *Phase III* survey asked institutions to provide the number of admissions offers, first-time enrollment, and total enrollment for fall 2007 and fall 2008. For some campuses, the CGS survey was administered before their final 2008 enrollment numbers were known. For that reason, the survey results for enrollment (described in the next section of this report) should be considered an initial snapshot.

SURVEY RESULTS

First-time Enrollment

First-time enrollment is typically the best indicator of future trends in total graduate student enrollment. The survey results show that first-time enrollment of international students at U.S. graduate institutions continued to grow, but the rate of increase slowed in each of the past two years. Between 2007 and 2008, the number of first-time international graduate students grew 3%, less than the 4% increase that occurred in 2007 (see Table 1), and far below the 12% increase reported in 2006.

⁵ CGS also has member institutions in Canada and overseas affiliate members. These institutions were not included in the survey.

⁶ These enrollment figures are based on enrollment as of fall 2006. For more information, see National Center for Education Statistics. Integrated Postsecondary Education Data System (IPEDS) Fall Enrollment Survey. Dataset. Online. Available: <http://nces.ed.gov/ipeds/>.

⁷ Ibid.

Table 1. Change in International Graduate First-time Enrollment, Total Enrollment, and Admissions Offers, 2006 to 2007 and 2007 to 2008

	Admissions Offers, 2006 to 2007	Admissions Offers, 2007 to 2008	First-Time Enrollment, 2006 to 2007	First-Time Enrollment, 2007 to 2008	Total Enrollment, 2006 to 2007	Total Enrollment, 2007 to 2008
International Total	7%	3%	4%	3%	7%	3%
Country of Origin						
China	24%	15%	19%	14%	15%	10%
India	9%	-2%	8%	-2%	14%	3%
South Korea	-3%	-2%	3%	-4%	2%	-2%
Middle East*	4%	13%	12%	8%	5%	7%
Field of Study						
Business	4%	2%	12%	4%	10%	2%
Education	-8%	-7%	-6%	-2%	-2%	0%
Engineering	5%	0%	8%	1%	8%	3%
Humanities & Arts	3%	0%	4%	-1%	1%	0%
Life Sciences	4%	-1%	6%	1%	3%	3%
Physical Sciences	-10%	9%	2%	5%	0%	2%
Social Sciences	-1%	1%	-1%	-1%	1%	2%

Sources: 2007 & 2008 CGS International Graduate Admissions Survey III: Final Admissions and Enrollment, November 2007 and November 2008.

Note: Not all responding institutions provided data by country of origin and/or field of study.

*Middle East includes: Bahrain, Cyprus, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestinian Authority, Qatar, Saudi Arabia, Syria, Turkey, United Arab Emirates, and Yemen.

First-time Enrollment by Country/Region of Origin

India, China, and South Korea are the top three countries of origin for international graduate students in the United States. Collectively, students from these three countries account for about one-half of all non-U.S. students currently attending U.S. graduate schools, according to research from both CGS and the Institute of International Education.⁸ Thus, examining student flows from these three countries provides a good indicator of overall international student trends. Enrollment of students from countries in the Middle East⁹ has also been included in the CGS surveys because of the

⁸ Redd, K.E., Neubig, E.H., & Mahler, J.D. 2007. *Findings from the 2007 CGS International Graduate Admissions Survey Phase III: Final Offers of Admission and Enrollment*. Washington, DC: Council of Graduate Schools; Bhandari, R. & Chow, P. 2007. *Open Doors: Report on International Educational Exchange*. New York, NY: Institute of International Education.

⁹ Middle East includes: Bahrain, Cyprus, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestinian Authority, Qatar, Saudi Arabia, Syria, Turkey, United Arab Emirates, and Yemen.

geopolitical importance of this region; graduate students from the Middle East currently account for about 5% of all international enrollees.

The survey results reveal that the number of first-time students from India dropped 2% in 2008, following an increase of 8% in 2007. Similarly, first-time enrollment of students from South Korea fell 4% in 2008, following a 3% gain last year. The number of first-time enrollees from China and the Middle East both increased in fall 2008, by 14% and 8%, respectively, yet both of these increases mark a slowdown from the rates of increase in 2007.

First-time Enrollment by Field of Study

The fields of business, engineering, life sciences, physical sciences, and social sciences account for about three-quarters of all international students engaged in graduate education in the United States, based on previous CGS survey research.¹⁰ In 2008, three of these five fields experienced slowdowns in their rates of growth. The number of first-time international graduate students in engineering rose just 1% in 2008, following an 8% increase in 2007. In business, first-time enrollment increased 4% in 2008, compared with a 12% increase in 2007. And in life sciences, first-time enrollment rose just 1% this year, following a 6% gain in 2007. First-time enrollment increased fastest in physical sciences in 2008, with a 5% increase, up from a 2% gain in 2007. Physical sciences and business were the only two fields where first-time enrollment increased by more than 1% in 2008. The number of first-time enrollees declined in three broad fields in 2008: education (down 2%), humanities & arts (down 1%), and social sciences (down 1%).

Total Enrollment

Changes in total enrollment are important, but they often differ from the trends in first-time enrollment because graduate programs vary considerably in length, and students may take several years to complete their degrees. The total number of graduate students also usually reflects changes in first-time enrollment that occur in prior years.

Total international graduate student enrollment rose by 3% in 2008, compared with a strong 7% gain in 2007 (see Table 1), and a 1% increase in 2006. This slowdown in the rate of growth in total enrollment in 2008 is partly a function of the slowdown in the rate of increase in *first-time* graduate enrollment that occurred over the past two years (see above).

Despite the increases in total enrollment in the three most recent CGS surveys, total enrollments of international students are still below their 2003 levels at a number of institutions. About 43% of the 69 graduate schools that responded to the *Phase III* survey in both 2004 and 2008 still have fewer international students this year than they did in 2003. Collectively, the number of students from abroad at these institutions is currently 16% below what it was in 2003.

Total enrollment increased by a higher rate in 2008 than 2007 for students from the Middle East, but the total enrollment increases for students from China and India were both smaller in 2008 than they were in 2007. Total enrollment of South Korean students fell 2% in 2008, following a 2% increase last year.

¹⁰ Brown, H.A. 2006. *Graduate Enrollment and Degrees, 1986 to 2005*. Washington, DC: Council of Graduate Schools.

Changes in total enrollment by field of study ranged from a low of 0% in both humanities & arts and education, to a high of 3% in both engineering and life sciences. In contrast, changes in total enrollment in 2007 varied more widely, ranging from a 2% decline in education to a 10% increase in engineering.

Admissions Offers

The annual change in offers of admission to prospective students is another indicator of the future direction of international graduate student enrollment. The survey asked respondents to report the final numbers for offers of admission to international students seeking to enroll in U.S. graduate-level studies. In August, CGS' *Phase II* survey reported a 6% increase in international applications and an initial 4% increase in total admissions offers (also referred to as "admits.")¹¹ Because there are usually some minor adjustments in the numbers of admissions offers between the summer and fall, the *Phase III* survey allows respondents to update their initial admissions numbers.

Like first-time enrollment, the rate of increase in admissions offers to potential international students slowed between 2007 and 2008 (see Table 1). In 2008, the total number of graduate school admissions offers to non-U.S. citizens grew 3%, compared with a 7% gain last year. Admits from India fell 2% this year, compared with a 9% increase in 2007, and admits from South Korea declined for the second year in a row, down 2% in 2008, following a 3% decline in 2007. Admissions offers to prospective Chinese students, on the other hand, rose 15% in 2008, following increases of 24% in both 2006 and 2007. Graduate school admissions offers to students from the Middle East also rose in 2008, increasing 13%, following a 4% gain last year.

Admissions trends by field of study follow similar patterns as those for first-time enrollment. Education incurred steep declines in both 2008 and 2007, of -7% and -8%, respectively. Admissions offers in most other fields remained relatively stable in 2008, with changes ranging from -1% to 2%. The one notable exception was physical sciences, in which offers of admission increased 9% in 2008, following a 10% drop in 2007.

Trends by Institutional Enrollment Size

The overall changes in the number of international graduate admissions offers, first-time enrollment, and total enrollment potentially mask substantial differences between small and large institutions. To show the wide variation in trends, CGS reports changes in international graduate admits, first-time enrollment, and total enrollment by size of total international graduate student enrollment. Enrollment size is based on data collected by the U.S. Department of Education.¹²

Table 2 on the next page displays the changes in admissions offers, first-time enrollment, and total enrollment from 2007 to 2008 for the responding colleges and universities with the 25 and 50 largest enrollments of international graduate students. Overall, the larger institutions had larger gains on average in admissions and enrollments. Admissions offers to international students by the 25 largest institutions increased 7% from 2007 to 2008, compared with a 3% gain at the institutions outside the

¹¹ Redd, K.E., & Mahler, J.D. 2008. *Findings from the 2008 CGS International Graduate Admissions Survey Phase II: Final Applications and Initial Offers of Admission*. Washington, DC: Council of Graduate Schools.

¹²See footnote 6 for more information.

largest 50. Similarly, first-time enrollment at the largest graduate institutions increased by 5%, compared with a 3% gain at the smallest institutions. Total enrollment increased by 3% in all three institutional categories.

The same general pattern of larger increases at the larger institutions holds for admits and enrollments by country/region of origin. China is the one exception, with larger increases on average at the institutions outside the largest 50 than at the 25 largest and 50 largest institutions.

There was considerable variation in the rates of increase and decrease in admits and enrollments by field of study and institution size. For example, in engineering, first-time enrollment increased by 10% at the 25 largest institutions but fell 3% at institutions outside the largest 50; in contrast, first-time enrollment fell 2% in education at the 25 largest institutions, but rose 3% at institutions outside the largest 50. Changes in admits ranged from a 13% decline in education at the 50 largest institutions to a 14% increase in physical sciences at institutions outside the largest 50.

Table 2. Change in International Graduate Admissions and Enrollment, 2007 to 2008, by Institution Size¹³

	25 Largest Institutions			50 Largest Institutions			All Other Institutions		
	Admits	First-time Enrollment	Total Enrollment	Admits	First-time Enrollment	Total Enrollment	Admits	First-time Enrollment	Total Enrollment
Total International	7%	5%	3%	4%	3%	3%	3%	3%	3%
Country of Origin									
China	16%	13%	9%	13%	12%	9%	18%	16%	11%
India	5%	7%	6%	-3%	-1%	4%	0%	-5%	1%
South Korea	0%	-2%	-2%	-1%	-4%	-2%	-3%	-2%	-2%
Middle East*	18%	17%	11%	15%	10%	7%	10%	4%	7%
Field of Study									
Business	0%	1%	1%	2%	5%	4%	2%	2%	1%
Education	-11%	-2%	2%	-13%	-5%	0%	0%	3%	0%
Engineering	8%	10%	6%	4%	3%	4%	-5%	-3%	2%
Humanities/Arts	-2%	6%	2%	2%	0%	-1%	-3%	-1%	2%
Life Sciences	0%	0%	1%	-4%	-2%	2%	3%	5%	5%
Physical Sciences	13%	5%	2%	4%	3%	1%	14%	9%	3%
Social Sciences	8%	2%	3%	4%	-1%	2%	-4%	1%	3%

Source: 2008 CGS International Graduate Admissions Survey III: Final Admissions and Enrollment, November 2008

Note: Not all responding institutions provided data by country of origin and/or field of study.

*Middle East includes: Bahrain, Cyprus, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestinian Authority, Qatar, Saudi Arabia, Syria, Turkey, United Arab Emirates, and Yemen.

¹³ See footnote 6 for more information.

MECHANISMS TO INCREASE AND MONITOR INTERNATIONAL ENROLLMENT

In each phase of the international graduate admissions survey, CGS asks its member graduate school deans to respond to one or more questions regarding critical issues in international education. This year, deans were asked to report on the mechanisms in place at their graduate schools to increase international student enrollment and on the mechanisms used to monitor early indicators of graduate enrollment growth and declines.

Mechanisms to Increase the Numbers of International Students

On the survey questionnaire, institutions were asked to indicate which of a pre-set list of activities their graduate school had undertaken to increase international graduate student applications, offers of admission, and/or enrollment over the past two years. Eight out of ten responding institutions (81%) reported undertaking at least one effort to increase the numbers of international graduate students at their institution. Smaller institutions in terms of total international graduate student enrollment were more likely than larger institutions to have implemented such new activities: 83% of institutions outside the largest 50 versus 74% of the 50 largest institutions.

The survey found that graduate schools were most likely to have worked with specific foreign institutions and/or consortia of institutions to identify potential international students, with over half (54%) of respondents indicating that they had done so within the past two years (see Table 3). Four

Table 3. Mechanisms Undertaken Over the Past Two Years to Increase International Applications, Offers of Admission, and/or Enrollment, by Institution Size¹⁴

	Total	25 Largest Institutions	50 Largest Institutions	All Other Institutions
Worked with foreign institutions/consortia of institutions to identify potential students	54%	55%	53%	54%
Devoted more funding to marketing and promotion of graduate programs	41%	32%	35%	43%
Asked current staff to devote more time to international recruiting/outreach	36%	32%	40%	36%
Devoted more funding for international recruitment trips	31%	41%	42%	28%
Worked with commercial organizations to expand international applicant pool	17%	5%	5%	20%
Hired new staff to recruit international students	12%	18%	9%	12%
None	19%	27%	26%	17%

Source: 2008 CGS International Graduate Admissions Survey III: Final Admissions and Enrollment, November 2008

¹⁴ See footnote 6 for more information.

out of ten respondents (41%) indicated that they had devoted more funding over the past two years to marketing and promotion of their graduate programs, 36% reported asking current staff to devote more time to international recruiting and outreach efforts, and 31% indicated that they had devoted more funding for international recruitment trips. Just 12% of the respondents said they had hired new staff over the past two years to assist them in their international recruitment efforts.

Working with foreign institutions and/or consortia of institutions to identify potential students was the most common activity undertaken by graduate schools regardless of institution size. The 25 largest institutions, 50 largest institutions, and all other institutions were nearly as likely to have undertaken this activity. Only in three cases were there significant differences in responses by institution size; larger institutions were far less likely to have worked with commercial organizations to expand their international applicant pool than were all other institutions (5% of the 25 largest institutions and 5% of the largest 50 vs. 20% of the institutions outside the largest 50), larger institutions were less likely than smaller institutions to have devoted more funding to marketing and promotion of graduate programs (32% and 35% vs. 43%), and larger institutions were more likely to have devoted additional funding for international recruitment trips than all other institutions (41% and 42% vs. 28%).

Early Indicators of Graduate Enrollment Growth or Declines

Graduate school deans were also asked to respond to a second question about the mechanisms in place at their institution to monitor early indicators of graduate enrollment growth or declines for both international students and domestic students. Some 44% of respondents said they had such early indicators mechanisms in place for international students, and half (51%) said they had them in place for domestic students (see Table 4). By institution size, the 50 largest institutions were most likely to have early indicators mechanisms in place for international students and institutions outside the largest 50 were most likely to have them in place for domestic students.

Table 4. Institutions with Mechanisms in Place to Monitor Early Indicators of Graduate Enrollment, by Institution Size¹⁵

	Total	25 Largest Institutions	50 Largest Institutions	All Other Institutions
For International Students	44%	41%	47%	43%
For Domestic Students	51%	45%	47%	52%

Source: 2008 CGS International Graduate Admissions Survey III: Final Admissions and Enrollment, November 2008

For international students, 76 respondents provided details about the mechanisms they use to monitor early indicators of graduate enrollment growth or declines. Of those respondents, 76% said they routinely track or monitor international application, admission, acceptance and/or enrollment data through electronic or other means; 21% said they monitor international application, admission,

¹⁵ See footnote 6 for more information.

acceptance and/or enrollment data on a weekly basis; 13% specifically said that international application, admission, acceptance and/or enrollment data were compared with data from the previous year or years; 7% mentioned enrollment management systems/databases; 7% said they track prospective students and/or international student inquiries; 5% mentioned enrollment targets/projections; and 3% said they have developed enrollment projection models.

For domestic students, the results were similar. Eighty-five respondents provided details about the mechanisms used at their institution to monitor early indicators of graduate enrollment growth or declines. Of those respondents, 84% said they routinely track or monitor domestic application, admission, acceptance and/or enrollment data through electronic or other means; 19% said they monitor domestic application, admission, acceptance and/or enrollment data on a weekly basis; 12% specifically said that domestic application, admission, acceptance and/or enrollment data were compared with data from the previous year or years; 6% said they track prospective students and/or domestic student inquiries; 5% mentioned enrollment management systems/databases; 5% mentioned enrollment targets/projections; and 2% said they have developed enrollment projection models.

SUMMARY AND CONCLUSIONS

The results of CGS' 2008 *International Graduate Admissions Phase III: Final Offers of Admission and Enrollment* survey indicate that while the numbers of international graduate students admitted to, and enrolling in, U.S. graduate schools continue to increase, the rates of increase have slowed. The survey data show that first-time enrollment of international students in U.S. graduate schools, a key measure of future trends, rose 3% from 2007 to 2008, compared with a 4% increase from 2006 to 2007, and a 12% rise from 2005 to 2006. The number of admissions offers to prospective international graduate students, a second important indicator of future enrollment activity, also increased at a slower rate in 2008 when compared with last year.

The decelerating rate of growth in international *first-time* enrollment in 2007 and 2008 has begun to impact *total* international graduate school enrollment. The number of international students in U.S. graduate schools increased 3% in 2008, down from a 7% increase in 2007. Despite the increases in enrollment this year and last, total international graduate student enrollment is still down at 43% of the institutions that responded to the *Phase III* survey in both 2004 and 2008.

This year's gain in *total* enrollment is due in part to the 10% and 7% increases in the number of students from China and the Middle East, respectively. But a potentially troubling sign is that *first-time* enrollment of students from India fell 2% this year after gains of 8% in 2007 and 32% in 2006. The number of first-time students from South Korea also fell in 2008, with a 4% decline, following a 3% increase in 2007. Business, engineering, and life sciences experienced declining rates of growth in first-time students in 2008, and education, humanities & arts and social sciences incurred actual declines. Further, the total number of *admits* from India and South Korea fell in 2008 by 2% each, as did the number of admits in two of the seven broad fields: education (-7%) and life sciences (-1%). Business and physical sciences were the only two fields where admits and first-time enrollment increased by more than 1% in 2008.

Eight out of ten responding institutions reported undertaking at least one effort to increase international graduate student applications, offers of admission, and/or enrollment over the past two years. Working with specific foreign institutions and/or consortia of institutions to identify potential international students was the most common activity, with over half of the respondents (54%) indicating that they had done so within the past two years, followed by devoting more funding to international marketing and promotion efforts (41%), and asking current staff to devote more time to international recruiting and outreach efforts (36%). Nearly half (44%) of the survey respondents said they have mechanisms in place at their institution to monitor early indicators of graduate enrollment growth or declines for international students, and half (51%) said they have such mechanisms in place for domestic students.

The overall results from this year's *Phase III* survey show that international graduate enrollment continues to rise, but the slowdown in the rate of increase will need to be closely monitored. The activities of graduate schools and deans to track and increase international student enrollment will be crucial in preventing the slowdown from becoming a decline. What remains to be seen, however, is how the current global economic crisis will impact graduate enrollment in the longer term. It is simply too soon to tell if graduate enrollment will indeed increase during this economic downturn as typically occurs, or if something different is in store.

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The Council of Graduate Schools (CGS) is an organization of over 500 institutions of higher education in the United States and Canada engaged in graduate education, research, and the preparation of candidates for advanced degrees. CGS members award 94% of the doctoral degrees and 80% of the master's degrees in the United States.¹⁶ The organization's mission is to improve and advance graduate education, which it accomplishes through advocacy in the federal policy arena, research, and the development and dissemination of best practices.

¹⁶ Redd, K.E. 2007. *Graduate Enrollment and Degrees: 1996 to 2006*. Washington, DC: Council of Graduate Schools.