

2015 CGS International Graduate Admissions Survey



Preliminary Applications



2015 CGS International Graduate Admissions Survey Preliminary Applications

Jeff Allum
Director, Research and Policy Analysis
Council of Graduate Schools

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HIGHLIGHTS

- **U.S. graduate programs continue to see increases in applications from prospective international students.** Between Fall 2014 and Fall 2015, applications from prospective international graduate students increased 2%, the tenth consecutive year of increases.
- **Applications from China continue to decrease, while applications from India continue to increase.** Between Fall 2014 and Fall 2015, and continuing a three-year trend, applications declined among prospective graduate students from China (-2%), and increased among prospective graduate students from India (12%).
- **STEM fields continue to draw the largest number of applications from international students.** The fields of engineering and mathematics & computer sciences constitute 50% of all applications from prospective international graduate students for Fall 2015.
- **Applications to business programs decline.** There was a 2% decrease in applications to business programs among prospective international graduate students between Fall 2014 and Fall 2015, the first decline since this survey was launched in 2004.
- **Increases in applications are largely driven by research universities with very high research activity.** The number of applications from prospective international graduate students increased 4% for research universities with very high research activity between Fall 2014 and Fall 2015, but decreased for all other institutions.

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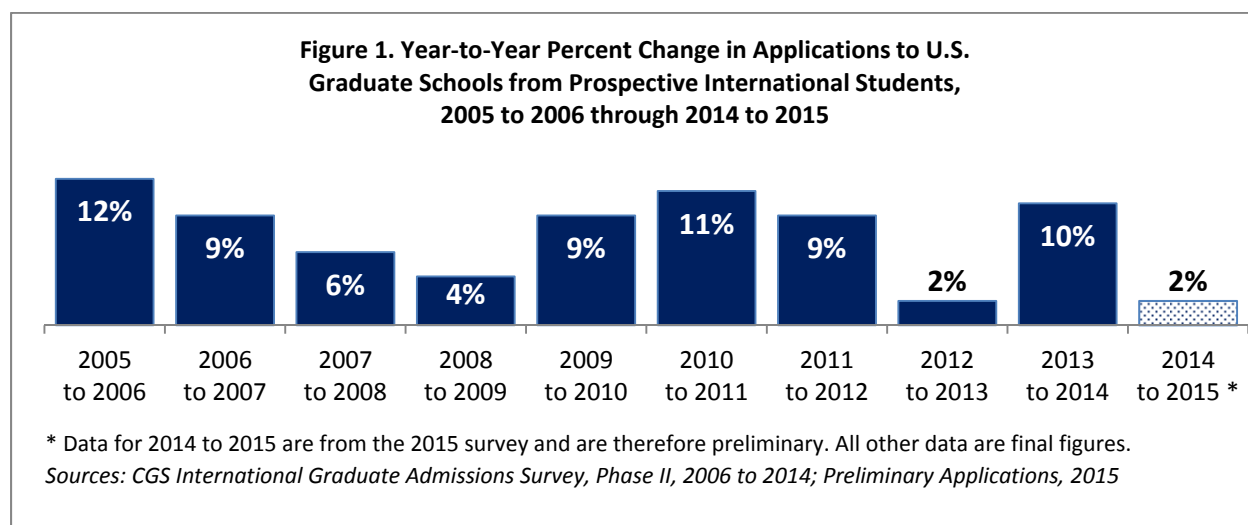
BACKGROUND

The *2015 CGS International Graduate Admissions Survey: Preliminary Applications*, which was administered between February 4 and March 17, 2015, was sent to 793 institutions of higher education, 501 of which were CGS members as of January 2015, and 292 of which were not CGS members but were members of the Conference of Southern Graduate Schools (CSGS), the Midwestern Association of Graduate Schools (MAGS), the Northeastern Association of Graduate Schools (NAGS), or the Western Association of Graduate Schools (WAGS). Institutions were asked to report the numbers of applications for admission to graduate programs from prospective international students for Fall 2014 and Fall 2015. For the first time since the survey was launched in 2004, institutions were asked to provide data according to degree objective for all regions of the world using a revised taxonomy of broad fields.

For most institutions, the survey was administered early in their application cycles, before final numbers were known. For this reason, the application counts in this report may not reflect final application counts, which will be reported in the *2015 CGS International Graduate Admissions Survey: Final Applications, Admissions, and Enrollment*. A total of 377 institutions, or 48%, responded to the survey. Institutions responding to the survey conferred 81,214, or 70% of the 115,315 graduate degrees awarded to international students in the U.S. in 2012-13 (U.S. Department of Education, 2013). Full data tables appear in Appendices A through D, and general information about the survey appears in Appendix E. The questionnaire and more detailed information about the survey, including definitions, appear in the “Questionnaire & Methods” document, which can be found at www.cgsnet.org.

OVERALL APPLICATIONS

Institutions responding to the *2015 CGS International Graduate Admissions Survey: Preliminary Applications* reported receiving 676,484 applications from prospective international graduate students to U.S. graduate programs for Fall 2015. Preliminarily, this suggests a 2% increase between Fall 2014 application counts and Fall 2015 application counts, marking 10 consecutive years of increases (see Figure 1). This report describes the survey findings in detail, including descriptions of preliminary applications by field of study, country of origin, region of origin, degree objective, and institutional characteristics.



PRELIMINARY APPLICATIONS BY FIELD OF STUDY

Engineering and mathematics & computer sciences account for one-half (50%) of all applications to U.S. graduate programs from prospective international students. With 231,751 applications, the field of engineering accounted for the largest number of applications from prospective international graduate students for Fall 2015, larger than biological & agricultural sciences, health sciences, physical & earth sciences, and social & behavioral sciences combined (see Appendix A). Mathematics & computer sciences accounted for the second largest number of applications from prospective international graduate students, at 136,903. Business was the third largest field of study, accounting for 86,554 applications from prospective international graduate students, followed by social & behavioral sciences with 62,899. Arts & humanities accounted for 41,016 applications from prospective international graduate students for Fall 2015. Education and public administration & services accounted for the smallest numbers of applications from prospective international graduate students for Fall 2015 at 18,044 and 8,469 respectively. A total of 34,752 applications were received for all other fields.

The two largest fields of study in terms of applications from prospective international graduate students, engineering and mathematics & computer sciences fields, also received large numbers of applications to master's & certificate programs in comparison to doctoral programs. For example, 155,659 (67%) of 231,751 applications to engineering programs were for master's & certificate programs compared with 74,720 doctoral programs. Three fields of study that have had particularly high concentrations of applications from prospective international doctoral students, include physical & earth sciences, biological & agricultural sciences, and social & behavioral sciences. Arts & humanities is the only broad field in which there was a balance of master's & certificate and doctoral applications from prospective international graduate students, with 50% each.

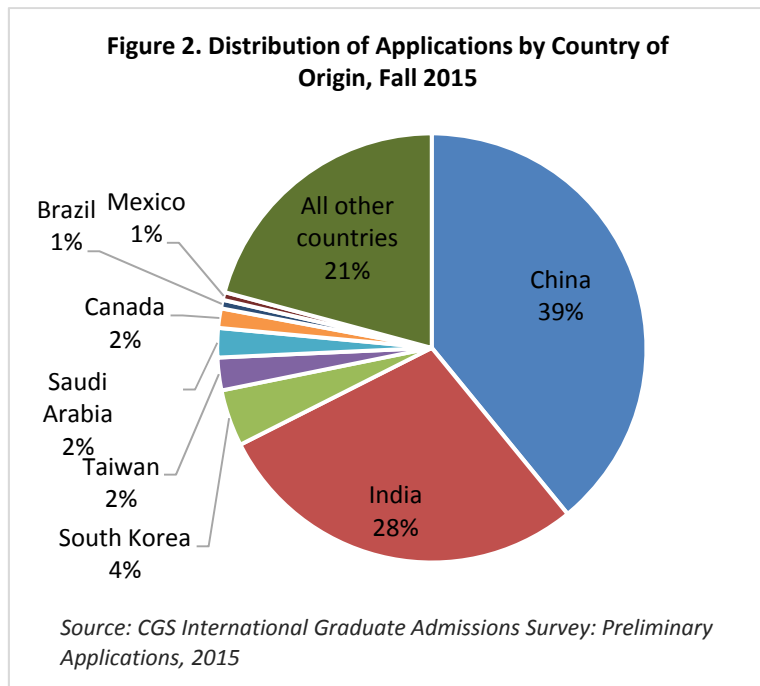
Although there were increases in applications from prospective international graduate students in six of eight broad fields between Fall 2014 and Fall 2015, the primary drivers of growth were the fields of engineering (4%) and physical & earth sciences, which includes mathematics & computer sciences (14%) (see Appendix B). There were also increases in other fields (22%), education (16%), life sciences (16%), and arts & humanities (1%). There were declines in applications in social sciences & psychology and business (-2% each). The 2% decline in applications from prospective international students in the field of business is the first such decline in this field since the survey was launched in 2004. This is consistent with the 1.7% decline in first-time enrollment among international students in the field of business between Fall 2012 and Fall 2013, according to the most recent *CGS/GRE Survey of Graduate Enrollment & Degrees* (Allum, 2014a).

PRELIMINARY APPLICATIONS BY COUNTRY/REGION OF ORIGIN

According to institutions responding to the survey, 264,406 applications from prospective graduate students from China and 192,574 applications from prospective graduate students from India were submitted to U.S. institutions for Fall 2015 (see Appendix A). Together, applications from China and India, the two largest sending countries, constitute 67% of all applications from prospective international graduate students to U.S. institutions (see Figure 2). Prospective graduate students from South Korea, the third largest sending country, submitted 28,876 applications to U.S. institutions for Fall 2015. Prospective graduate students from Brazil, one of the fastest growing, albeit smaller sources of international graduate students in recent years (Allum, 2014b) submitted 4,384 applications for Fall 2015. More than one-half of applications from prospective graduate students from India, China, Saudi

Arabia, and Taiwan were for master’s & certificate programs. In contrast, more than one-half of applications from prospective graduate students from all other countries were for doctoral programs. Institutions responding to the survey reported receiving more applications from prospective international graduate students from Asia (534,578) than from any other region for Fall 2015 (see Appendix A). Prospective graduate students from the Middle East and North Africa, the second largest

sending region, sent 47,876 applications to U.S. institutions for Fall 2015, while prospective graduate students from Europe, the third largest sending region, sent 32,423 applications. Roughly two-thirds (68%) of all applications from students from Asia were for master’s & certificate programs. There was a greater proportion of applications to doctoral programs from prospective graduate students from all other regions of the world. For example, 65% of applications from prospective graduate students from Europe, and 63% of applications from prospective graduate students from the Middle East and North Africa were for doctoral programs.

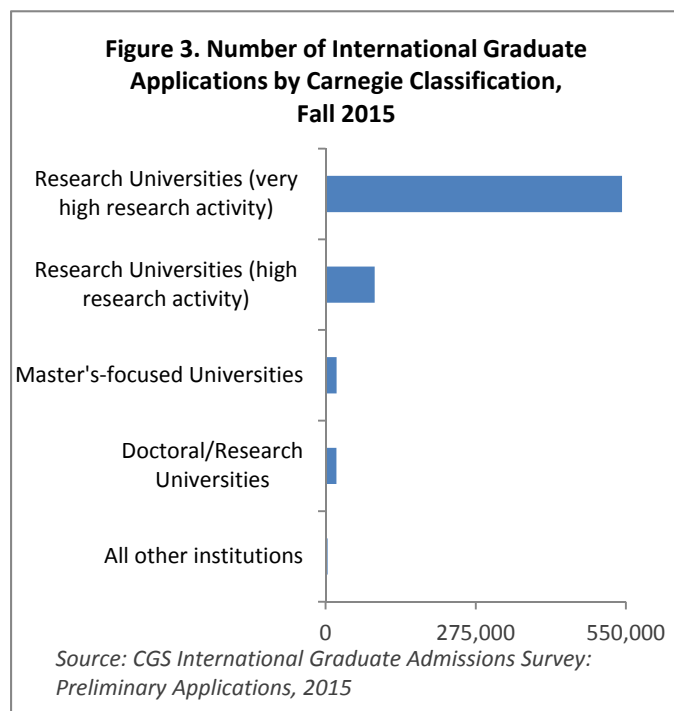


For the third consecutive year, the number of applications from prospective graduate students from China, the largest sending country, decreased while the number of applications from prospective graduate students from India, the second largest sending country, increased (see Appendix B). Between Fall 2014 and Fall 2015, applications from prospective students from China declined 2% while applications from prospective students from India increased 12%. The number of applications from prospective graduate students from South Korea, the third largest sending country, increased 4% after three consecutive years of declines. The number of international applications from prospective graduate students from Brazil increased 4%. The number of applications increased 6% among prospective students from Sub-Saharan Africa and the Middle East, and declined 1% among prospective students from Europe.

PRELIMINARY APPLICATIONS BY INSTITUTIONAL CHARACTERISTICS

Of the 676,484 applications submitted to U.S. graduate programs for Fall 2015, 65% (440,139) were to public institutions, while 35% (236,345) were to private, not-for-profit institutions (see Appendix C). The vast majority (652,601) of applications were to doctoral institutions. As illustrated in Figure 3, institutions with very high research activity received the vast majority (83%) of applications from prospective international graduate students to doctoral institutions and 80% of applications among all institutions. Smaller numbers of applications from prospective international graduate students were to master’s-focused and other institutions (20,251 and 3,628, respectively).

International applications increased at both public institutions (1%) and private, not-for-profit institutions (5%) in 2015 (see Appendix D). International applications increased by 4% at research institutions with very high research activity, and declined at all other institutions. For example, applications from prospective international graduate students to research universities with high research activity decreased 5% between Fall 2014 and Fall 2015.



While private, not-for-profit institutions reported greater growth in preliminary application from prospective international graduate students than their public counterparts, it should be noted that the survey includes relatively small number of private, not-for-profit institutions. Similarly, the comparatively large percentage decreases in applications to private, not-for-profit institutions that are not high research activity institutions from prospective international graduate students should also be interpreted with caution, since the number of those institutions participating in the survey is smaller. These findings, as well as those concerning master’s-focused and all other institutions should be interpreted cautiously given the relatively small number of applications reported by those institutions, and the preliminary nature of these data.

SUMMARY AND CONCLUSIONS

Respondents to the 2015 CGS International Graduate Admissions Survey: Preliminary Applications, which confer approximately 70% of all graduate degrees awarded to international students in the U.S., report a 2% increase in applications from prospective international graduate students between Fall 2014 and Fall 2015, the tenth consecutive year of increases. The overall increase appears to be driven by two factors. First, increases appear to be driven in part by the reported 4% increase in applications to graduate programs in the field of engineering, the largest field of study among international students, as well as the 14% increase in applications to programs in physical sciences, which includes mathematics & computer sciences. Second, increases are also a partial reflection of the 12% increase in applications from prospective graduate students from India, the second largest sending country of international students to U.S. institutions, and, to a lesser extent, increases from four other countries (Brazil, Canada, Mexico, and South Korea).

These and other increases in applications from prospective international graduate students have been offset by declines in other areas. The number of applications from prospective graduate students from China, the largest sending country, decreased 2% between Fall 2014 and Fall 2015, the third consecutive year of declines in applications from students from that country. Applications to business programs also declined 2% between Fall 2014 and Fall 2015, the third largest field of study among international students. This is the first decline in applications in business since the survey was launched in 2004.

Although 2015 marks the tenth consecutive year of increases in applications from prospective international graduate students to U.S. institutions of higher education, the rate of increase has slowed and is considerably lower than the 10% increase in 2014 (Allum 2014b). While this lower rate of increase may not directly translate into lower rates of increase admission or first-time enrollment, it is a finding worth watching in the future. The *2015 CGS International Graduate Admissions Survey: Final Applications, Admissions, and Enrollment* will provide evidence of whether this pattern will be repeated. The fact that this survey has reported three consecutive years in which applications from prospective graduate students from China have declined and applications from prospective graduate students from India have increased suggests the beginning of a new trend. With the addition of data by degree objective, future iterations of this survey will be better able to monitor the source of these and other trends.

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APPENDIX A.**Preliminary Number of International Graduate Applications by Field of Study, Country of Origin, and Region of Origin, Fall 2015**

	Master's & Certificate	Doctorate	Total
International Total	425,446	249,227	676,484
Fields of Study			
Arts & Humanities	20,465	20,516	41,016
Biological & Agricultural Sciences	13,918	33,963	48,165
Business	72,290	14,377	86,554
Education	10,740	7,248	18,044
Engineering	155,659	74,720	231,751
Health Sciences	15,292	10,793	26,095
Mathematics & Computer Sciences	105,141	31,457	136,903
Physical & Earth Sciences	7,535	33,705	41,320
Public Administration & Services	7,819	1,105	8,469
Social & Behavioral Sciences	20,556	42,193	62,899
Other Fields	28,341	6,490	34,752
Countries of Origin			
Brazil	1,872	2,506	4,384
Canada	4,470	5,481	9,935
China	169,984	93,944	264,406
India	160,968	30,713	192,574
Mexico	1,959	2,007	3,978
Saudi Arabia	8,949	5,829	14,955
South Korea	8,581	20,097	28,876
Taiwan	8,605	7,999	16,617
Regions of Origin			
Asia	362,962	170,025	534,578
Europe	11,220	21,003	32,423
Latin America & Caribbean	9,203	9,788	19,001
Middle East & North Africa	17,559	29,904	47,876
North America (Canada only)	4,470	5,481	9,935
Oceania	880	1,225	2,103
Sub-Saharan Africa	8,135	5,938	14,210

Note: Sums of parts may not equal the total, due to the fact that not all responding institutions provided data for all subfields, and some institutions may have double-counted applications.

Source: CGS International Graduate Admissions Survey: Preliminary Applications, 2015

APPENDIX B.**Change in Preliminary Number of International Graduate Applications by Field of Study, Country of Origin, and Region of Origin, 2011 to 2012 through 2014 to 2015**

	Final Number of Applications, 2011 to 2012	Final Number of Applications, 2012 to 2013	Final Number of Applications, 2013 to 2014	Preliminary Number of Applications, 2014 to 2015
International Total	9%	2%	10%	2%
Fields of Study				
Arts & Humanities	7%	4%	5%	1%
Business	7%	1%	7%	-2%
Education	18%	-2%	4%	16%
Engineering	14%	5%	12%	4%
Life Sciences *	-1%	-7%	-1%	16%
Physical & Earth Sciences **	8%	3%	18%	14%
Social Sciences & Psychology	11%	-2%	2%	-2%
Other Fields	9%	5%	4%	22%
Countries of Origin				
Brazil	9%	25%	61%	4%
Canada	7%	-5%	1%	2%
China	19%	-3%	-1%	-2%
India	3%	22%	33%	12%
Mexico	10%	-8%	1%	8%
South Korea	-1%	-15%	-5%	4%
Taiwan	-2%	-13%	0%	0%
Regions of Origin				
Africa	-3%	4%	9%	***
Europe	7%	-2%	3%	-1%
Middle East	11%	2%	8%	***
Sub-Saharan Africa & Middle East	***	***	***	6%

* Includes biological & agricultural sciences and health sciences.

** Includes all physical sciences as well as mathematics & computer sciences.

*** Changes cannot be calculated because definitions of regions of origin have changed.

Note: Not all responding institutions provided data for all subfields, and there were instances in which applications were double-counted. Changes by fields of study, countries of origin, and regions of origin presented in this table reflect the original taxonomy and definitions used between 2004 and 2014. Beginning in 2016, this table will be expanded to reflect the revised taxonomy and definitions adopted in 2015.

Sources: CGS International Graduate Admissions Survey, Phase II, 2012 to 2014; Preliminary Applications, 2015

APPENDIX C.**Preliminary Number of International Graduate Applications by Institutional Control and Carnegie Classification, Fall 2015**

	Total		
	Public	Private, Not-for-Profit	Total
All institutions	440,139	236,345	676,484
Research Universities (very high research activity)	354,854	188,013	542,867
Research Universities (high research activity)	65,088	24,682	89,770
Doctoral/Research Universities	6,561	13,403	19,968
Master's-focused Universities	11,784	8,467	20,251
All other institutions	1,852	1,776	3,628

	Master's & Certificate		
	Public	Private, Not-for-Profit	Total
All institutions	281,908	143,538	425,446
Research Universities (very high research activity)	217,538	104,345	321,883
Research Universities (high research activity)	47,122	18,613	65,735
Doctoral/Research Universities	5,645	11,826	17,475
Master's-focused Universities	11,191	8,097	19,288
All other institutions	412	653	1,065

	Doctorate		
	Public	Private, Not-for-Profit	Total
All institutions	158,014	91,213	249,227
Research Universities (very high research activity)	137,100	83,668	220,761
Research Universities (high research activity)	17,966	4,296	22,262
Doctoral/Research Universities	915	1,756	2,671
Master's-focused Universities	593	370	963
All other institutions	1,440	1,123	2,563

Note: Private, for-profit institutions are included in the totals but are not broken out separately.

Source: CGS International Graduate Admissions Survey: Preliminary Applications, 2015

APPENDIX D.

Change in Preliminary Number of International Graduate Applications by Institutional Control and Carnegie Classification, 2014 to 2015

	Public	Private, Not-for-Profit	Total
All institutions	1%	5%	2%
Research Universities (very high research activity)	2%	9%	4%
Research Universities (high research activity)	-5%	-5%	-5%
Doctoral/Research Universities	-5%	-22%	-18%
Master's-focused Universities	8%	-10%	-2%

Note: Private, for-profit institutions and institutions classified as specialized or baccalaureate institutions are included in the total but are not broken out separately.

Sources: CGS International Graduate Admissions Survey, Phase II, 2012 to 2014; Preliminary Applications, 2015

APPENDIX E.

About the Survey

Since 2004, the Council of Graduate Schools (CGS) has implemented an annual examination of international graduate application, admission, and enrollment trends. The multi-phase *CGS International Graduate Admissions Survey* collected an initial snapshot of applications to U.S. graduate schools from prospective international students (*Phase I*), final applications and initial offers of admissions to prospective international students (*Phase II*), and final offers of admission and international graduate student enrollment (*Phase III*) using data from CGS member institutions.

Beginning in 2015, *Phase I* and *Phase III* of the survey were redesigned to collect data by degree objective (master's & graduate certificate vs. doctorate), all regions of origin, eight countries of origin, and all broad fields of study. *Phase I* and *Phase III* were also renamed to *CGS International Graduate Admissions Survey: Preliminary Applications*, and *CGS International Graduate Admissions Survey: Final Applications, Admissions, and Enrollment* respectively. *Phase II* of the survey was eliminated. Additionally, the sample pool was expanded to include institutions that were not CGS members but were members of the Conference of Southern Graduate Schools (CSGS), the Midwestern Association of Graduate Schools (MAGS), the Northeastern Association of Graduate Schools (NAGS), or the Western Association of Graduate Schools (WAGS). These changes were intended to yield more comprehensive results, and make them consistent with the *CGS/GRE Survey of Graduate Enrollment & Degrees*.

The 2015 *CGS International Graduate Admissions Survey: Preliminary Applications* population consisted of 793 U.S. colleges and universities, 501 of which were CGS members as of January 2015 and 292 of which were not CGS members but were members of CSGS, MAGS, NAGS, or WAGS. Institutions were asked to report the number of applications for admission to graduate programs from prospective international students for Fall 2014 and Fall 2015. The survey was administered between February 4 and March 17, 2015. For most institutions, the survey was administered early in their application cycles, before final numbers were known. For this reason, application counts reported in this report should be considered preliminary, and may not reflect the final application counts that will be reported in the 2015 *CGS International Graduate Admissions Survey: Final Applications, Admissions, and Enrollment*.

Overall, 377 institutions (48%) responding to the survey conferred about 70% of the approximately 115,315 graduate degrees awarded to international students in the U.S. in 2012-13 (U.S. Department of Education). Response rates among certain types of institutions were higher than the overall 48% response rate. Specifically, eight of the ten (80%) institutions that award the largest numbers of master's and doctoral degrees to international students, and 80 of the 100 largest (80%) responded to the survey. These high response rates are important because collectively the 100 largest institutions confer 59% of all graduate degrees awarded annually to international students in the U.S.

The numbers of applications received reflects the sum of all data provided for each category. Data were not checked to identify errors in data submission and data were not imputed for non-responding institutions. Percentage changes were calculated based upon only those institutions providing data for both years being compared using preliminary Fall 2014 application data provided by the 2015 survey and preliminary Fall 2014 application data provided by the 2014 *Phase I* survey. The "Questionnaire and Definitions" document (www.cgsnet.org) includes definitions of countries of origin, regions of origin, Carnegie classifications, broad fields of study, as well as the questionnaire itself.