

Cross-border Academic Mobility in Medical Education:

Faculty and Student Exchange and Research Partnerships

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Introduction

Higher education has been transformed considerably by the forces of globalization and the resulting internationalization of policies and activities of higher education institutions. Higher education is now seen as a public good and a freely-traded commodity, pursued by investors with various motives ranging from profit-making to increasing the knowledge capacity and cultural understanding and enhancing access to quality education for those who lack it domestically.¹ In response to global competition and advances in information technology, exemplified by the attention given to worldwide university ranking systems, many higher education institutions seek to increase their global competitiveness. Key strategies include increasing cross-border higher education programs and curriculum, and strengthening their institutional connections by attracting international students and faculty.³ These strategies are not consistently implemented at a global scale, as they are often dependent on local contexts and priorities. Students are greatly influencing the cross-border education trend as they seek international higher education for a number of reasons ranging from a lack of access to high-quality programs at home to a desire for an international academic or cultural experience.¹ This global demand for international higher education is projected to increase from 1.8 million international students in 2000 to 7.2 million by 2025; students in Asia—particularly China and India—are driving this global demand.⁴

Internationalization within medical education systems in particular has been driven by a number of factors: the globalization of health care delivery and its influence on the maldistribution of health care workers, government pressures to utilize and promote higher education institutions for public good, improved communication channels within the medical education community including the development of common vocabularies, and organized initiatives for outcome-based education and standards.² There are many associations and institutions that organize and foster domestic and international clinical and research exchange opportunities for students in higher education. Several undergraduate medical schools have developed programs focused on a career in global health and scholarships or fellowships for medical students wishing to gain international research and training. Medical schools have the opportunity to respond to student demand for global health training and international rotations through curriculum integration and making international clinical rotations a default in the medical education experience.⁵ With these trends, it is important to know the impact on an international scale; the supply of cross-border medical education exchanges should be recorded and monitored.

This report presents data on the occurrence of particular academic activities resulting from this internationalization trend, namely the availability of academic and research opportunities in undergraduate medical education across national borders. It contributes to the available resources by

quantifying the presence of cross-border academic mobility within a select sample of undergraduate medical education programs internationally. Detailed are the number and characteristics of schools reporting cross-border student and faculty exchange and research partnerships.

Study Description

FAIMER distributes surveys annually to all schools participating in a data sharing agreement with the Educational Commission for Foreign Medical Graduates (ECFMG®), FAIMER's founder. These data sharing agreements are only with schools outside the United States and Canada. Survey respondents are typically deans, registrars, or other administrative staff. A recent survey contained items on cross-border partnerships in medical education. Participants were asked about the occurrence and amount of student and faculty exchanges and research partnerships across national boundaries.

Survey Results

227 medical schools were sent the survey on cross-border education, and slightly more than half of the schools responded (n=118; 52.0%). Of those responding, 49 (41.5%) of the medical schools are classified as private institutions, and 69 (58.5%) as public institutions. The year the responding schools were established ranged from 1200 to 2010: 33.9% started in 1950 or earlier; 30.5% between 1951 and 1989; and 35.6% in 1990 or later.

Table 1. Distribution of Medical School Respondents, by Geographic Region

| | Medical School Survey Respondents | Medical Schools Sent Follow-up Survey | Operational WDMS-Listed Medical Schools* |
|-------------------------|-----------------------------------|---------------------------------------|--|
| Geographic Region | n (%) | n (%) | N (%) |
| Africa | 4 (3.4) | 13 (5.7) | 193 (7.4) |
| Asia | 27 (22.9) | 66 (29.1) | 985 (37.7) |
| Caribbean | 20 (16.9) | 24 (10.6) | 119 (4.6) |
| Europe | 34 (28.8) | 62 (27.3) | 522 (20.0) |
| Middle East | 15 (12.7) | 24 (10.6) | 149 (5.7) |
| North America** | 4 (3.4) | 10 (4.4) | 265 (10.1) |
| Oceania/Pacific Islands | 9 (7.6) | 11 (4.8) | 33 (1.3) |
| South America | 5 (4.2) | 17 (7.5) | 348 (13.3) |
| TOTAL | 118 (100.0) | 227 (100.0) | 2614 (100.0) |

*The number of operational schools listed in the *World Directory of Medical Schools* on or before March 2, 2015.

**The number of medical schools listed in the *World Directory of Medical Schools* and located in North America include all those in Canada, the United States, and Mexico. Due to inclusion criteria, only medical schools in Mexico were sampled and thus responded to the survey.

Table 1 presents the geographic distribution of the responding medical schools, the overall sample, and the total operational medical schools listed in the *World Directory of Medical Schools* as of March 2, 2015, when the survey was distributed. The majority of both the surveyed and responding medical schools were located in Europe, Asia, the Caribbean and the Middle East. Over half of the responding European medical schools were located in five countries: the United Kingdom (n=8), Poland (7), Ireland (5), Hungary (3), and the Czech Republic (2). The countries with the greatest number of responding medical schools in the Asia and Oceania/Pacific Islands regions were Australia (n=7) and Japan (n=7).

Cross-border Partnerships in Undergraduate Medical Schools

Table 2 details the percentage of medical schools reporting participation in cross-border partnerships. The majority of schools in the response group reported having one or more forms of cross-border partnership at their institution.

Table 2. Medical Schools Reporting Participation in Cross-border Partnerships

| Partnership Type | Number of Participating Medical Schools (%) |
|------------------------------|---|
| Student Exchange (n=117) | 60 (51.3%) |
| Research Partnership (n=116) | 53 (46.5%) |
| Faculty Exchange (n=114) | 37 (31.9%) |

Cross-border Exchange of Students and Faculty

A little over half (51.3%) of responding schools reported participating in student exchange with a medical school in another country (n=117).¹ Of these 60 participating schools, 46 reported participating in undergraduate student exchange and 18 schools reported participating in post-graduate student exchange. Fewer schools reported participating in a cross-border exchange of faculty (31.9% of 116). These medical schools reported partnering with an average number of eight medical schools each (n=30; range=1-41; 7 schools did not report this information).

A higher proportion of public schools than private reported participating in both student and faculty cross-border exchanges (Figure 1). This relationship was also influenced by the year the school was established.

Figure 1. Cross-Border Exchange by School Type

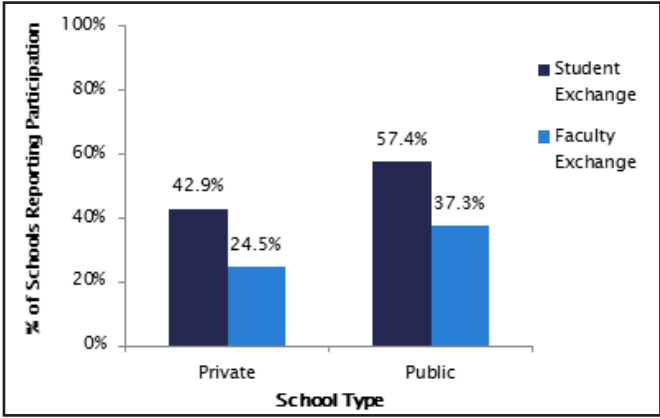
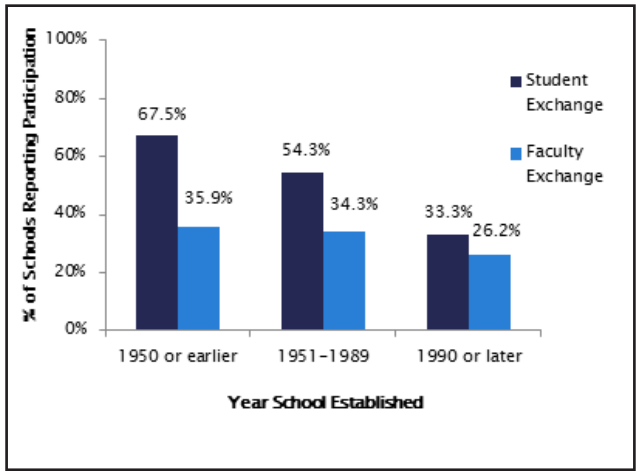


Figure 2. Cross-Border Exchange by Year School Established



The longer-established schools were more likely to report student exchange than the more recently established schools (Figure 2). There was not substantial variation across the starting year groups when looking at faculty exchange, but a larger proportion of older schools reported participating in student exchange cross-border. The relationship between school type and age of the school are interrelated, when considering that more of the older schools in the response group were public (90%), while more of the newer established schools were private (65.9%). This distribution reflects the same trends in the overall population of medical schools worldwide, with some regional differences.

¹ One school survey respondent did not include a response to this item.

Table 3. Regional Distribution of Research Partnerships by School Surveyed (n=37)*

| School Location | Location of Partnering Organization | | | | | | | |
|-----------------|-------------------------------------|-----------|-----------|-----------|-------------|---------------|----------|---------------|
| | Africa | Asia | Caribbean | Europe | Middle East | North America | Oceania | South America |
| Africa | | | | 1 | | 1 | | |
| Asia | | 4 | | 7 | | 4 | 1 | |
| Caribbean | | | 1 | 1 | | 5 | | |
| Europe | 2 | 6 | | 16 | 2 | 9 | 3 | 4 |
| Middle East | | | | 3 | | 3 | 1 | |
| North America** | | | | | | 1 | | |
| Oceania | | 1 | | 1 | | 1 | 1 | |
| South America | | | | 3 | | 3 | | |
| Total | 2 | 11 | 1 | 32 | 2 | 27 | 6 | 4 |

*Cells highlighted in grey show partnerships occurring within the same geographic region as the school surveyed; white cells represent research partnerships occurring in geographic regions that differ from the surveyed school.

**Due to inclusion criteria, only medical schools in Mexico were sampled and thus responded to the survey.

Cross-border Research Partnerships

A little less than half (46.5%) of respondents reported participating in a research partnership with a medical school in another country (n=114).² Of those specifying the names of the medical schools with which they partner, there were an average number of six medical school partners reported (n=37; range=1-32). Some schools described research with research centers, hospitals, universities, exchange initiatives and health systems, as well as other medical schools. Of the 53 medical schools reporting a research partnership, 37 detailed the names of their partnering institutions.

Table 3 details the regional distribution of these research partnerships. The majority of these research partnerships (72.9%) occurred between a school and institution located in different geographic regions. There was a high number of Europe-to-Europe partnerships. Schools reported the highest number of partnerships in Asia, Europe, and North America.

A higher proportion of public than private schools reported research partnerships with schools outside of their country (Figure 3). This relationship may be partially explained by relative access to research funding; in many countries, private schools may not be eligible to receive government research grants for which public schools are eligible. Finally, this effect may be due to the correlation between school type and age; older schools are more likely to be public schools, and more schools that were established earlier indicated having research partnerships than those established at a later date (see Figure 4).

Figure 3. Cross-Border Research Partnerships by School Type

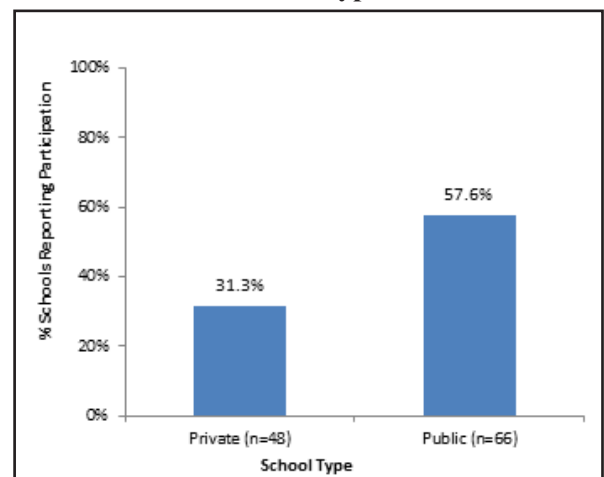
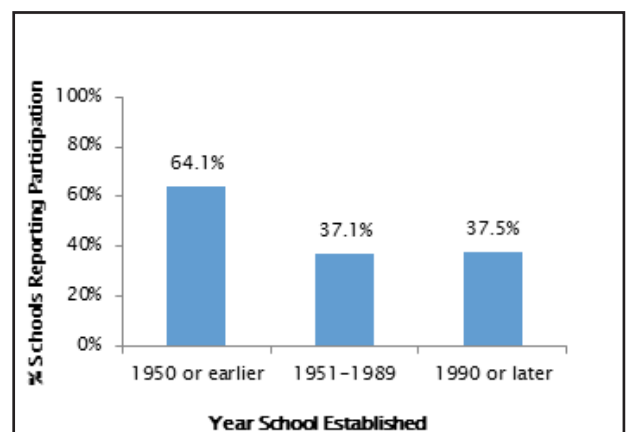


Figure 4. Cross-Border Research Partnerships by Year School Established



²Four schools reported they participated in research partnerships cross-border, but then only wrote in domestic medical schools with which they partner.

Summary

Cross-border academic exchange opportunities are an institutional strategy for global competition. This study found that the majority of schools responding to the survey had one or more forms of cross-border partnership at their institution, though the types varied in their frequency: while the majority of schools indicated participating in research partnerships and student exchange, only one-third exchanged faculty cross-border.

This study was limited in its scope and therefore the findings should not be used as a representation of cross-border participation for all international medical schools. The study included only a sample of international medical schools, and had a moderate response rate. The surveyed schools regularly had students who attempted ECFMG Certification, and this may have influenced their participation in cross-border exchange. Some surveys were incomplete, particularly when reporting the names of the institutions with which medical schools partner. The influences related to location of the medical school could not be examined due to the sample limits. Further triangulation of data could be performed through document analysis and surveying additional medical school officials for multiple perspectives on their cross-border activities. Additionally, this study did not examine the types or variety of student exchange, teaching exchange and research partnerships occurring between schools cross-border. Future research will examine the available cross-border medical programs offered at medical schools globally.

The application of global competitive strategies such as cross-border exchange activities is not universally applicable. Our study found that longer established and public medical schools—factors likely related to capacity, financial resources and institutional reputation—indicated having more cross-border participation than their counterparts. Nevertheless, these cross-border exchange activities will be pursued in the medical education field as globalization continues to make its impact, and institutional leaders, policy makers, students, and faculty seek and prioritize these opportunities.

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