Globalization of Higher Education

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Internationalization of Higher Education

Definition

“Internationalization at the national/sector/institutional levels is defined as the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education.”

The main components of internationalization of higher education are global competition for talents, recruitment of international students, development of international branch campuses, students, staff and scholars exchange programs, internationalization of the curriculum, and research and education partnerships between institutions regionally and internationally.
Mapping Internationalization on U.S. Campuses

Priority Activities for Internationalization

#1: Increasing study abroad for U.S. students
#2: Recruiting international students
#3: Partnerships with institutions abroad
#4: Internationalizing the curriculum/co-curriculum
#5: Faculty development

Reported overall level of institutional internationalization in recent years:

- Very high
- High
- Moderate
- Low
- Very low

<table>
<thead>
<tr>
<th>Year</th>
<th>Very High</th>
<th>High</th>
<th>Moderate</th>
<th>Low</th>
<th>Very Low</th>
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<tbody>
<tr>
<td>2011</td>
<td>6</td>
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<td>2016</td>
<td>8</td>
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Faculty policies and practices

The data suggest a gap between institutional measures to recruit international students and efforts to ensure that faculty are well prepared to support those students once they arrive on campus.

Professional development

Only slightly over 20% indicated that faculty development is among their institution’s top three internationalization priorities. However, internationalization-related professional development opportunities more available to faculty in 2016.

Hiring, tenure, and recognition

- More colleges and universities are intentionally seeking to hire faculty with an international orientation.
- Slight increase in the percentage of institutions that specify international work or experience as a consideration in faculty promotion and tenure decisions.
- Only one in 10 institutions are rewarding faculty members’ international engagement via one or both of these mechanisms.
Mapping Internationalization on U.S. Campuses

Curriculum, Co-curriculum, and Learning Outcomes

The overall proportion of institutions actively working to internationalize the undergraduate curriculum has remained nearly unchanged—at just over half—since 2011.

The 2016 data indicate a notable increase in internationally focused co-curricular programming.
Mapping Internationalization on U.S. Campuses

Student mobility

As noted previously, increasing study abroad and recruiting international students are, respectively, the #1 and #2 priority activities for internationalization across sectors.

Funding for various recruiting mechanisms is increasing, though undergraduate recruiting is a greater focus in terms of resource allocation than graduate student recruiting.

Nearly half of institutions have an international student recruiting plan.

58% of the recruiting plans include geographic targets. The top 3 target countries are China, India, and Vietnam, followed by South Korea, Brazil, Japan, and Saudi Arabia.

The percentage of institutions that provide scholarships or other financial aid for undergraduate international students increased.

A markedly higher percentage of institutions are engaging overseas student recruiters (agents)
Mapping Internationalization on U.S. Campuses

Collaboration and Partnerships

Institutional partnerships

- Nearly half of responding institutions reported that they have begun to develop international partnerships or have expanded the number of partner relationships in the last three years.
- Nearly a 25% reported that they do not currently maintain any international partnerships.
- Over 40% of institutions have articulated a formal strategy for international partnership development or are in the process of developing one.

- 30% of institutions employ a staff member whose primary responsibility is developing international partnerships.
- While academic institutions abroad are the most common partners for U.S. institutions, many are also engaging with other types of entities (nongovernmental organizations, foundations, city governments, research institutes etc.)
- China occupies the top spot—both for existing partnerships, and as a target for expanded activity.

Mapping Internationalization on U.S. Campuses

Collaborative degree programs

Collaborative degree programs provide a structured path for student mobility between international partner institutions. Such programs take two primary forms:

- Dual/double degree program: Students take courses and receive a degree or diploma from each participating institution.
- Joint degree program: Students receive a single diploma or degree endorsed by both participating institutions.

Enrollment patterns indicate that the mobility facilitated by collaborative degree programs is mostly one-way, suggesting that such programs are largely serving U.S. institutions as a mechanism for international student recruiting.
Mapping Internationalization on U.S. Campuses

Institutional presence abroad

Programs for students who live and remain outside the U.S. Some of these involve an institutional partner abroad, or operated independently by the U.S. institution. Such programs, often rely on technology to deliver course content - partially or in combination with in person instruction.

Branch campuses or other foreign outposts

While such entities have garnered a fair amount of media attention in recent years, they are operated by a narrow segment of U.S. institutions, mainly in the doctoral sector. Administrative offices are the most common type of outpost, followed by study centers for U.S. students and branch campuses. Numbers are small in all cases, however; the proportion of institutions operating each type of entity (with at least one full-time staff member abroad) hovers around just 5 percent.

Mapping Internationalization on U.S. Campuses

- Internationalization is increasingly an administrative-intensive endeavor, coordinated by a single office and/or a senior international officer.

- **In-house models dominate** when it comes to resources for internationalization. However, a notable proportion of institutions are also engaging with outside entities to further support.

- While **student mobility** has consistently been a focus of internationalization efforts, the 2016 data indicate an increasingly sharp emphasis on this area relative to other aspects of internationalization. This is reflected in stated priorities, as well as resource allocations for education abroad and international student recruiting.

- Though the curriculum and co-curriculum take a backseat to student mobility in terms of stated priorities for internationalization, an increasing percentage of institutions are implementing academic and co-curricular policies and programming that facilitate on-campus global learning on a broader scale and among a broader base of students.

- More institutions are offering internationally focused faculty professional development opportunities; however, still only about one in 10 specify international engagement as a consideration in promotion and tenure decisions. **Overall, the faculty-related data raise questions about the recognition of faculty as key drivers of internationalization.**

- International partnerships and activities abroad are garnering increased attention, energy, and support on many campuses. However, there is still a wide spectrum in terms of activity levels, as well as the extent of planning and intentionality surrounding global engagement.

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A comparison of overall percentages across categories indicates that for many institutions, internationalization efforts are still focused first and foremost on the external.

Number of international or foreign students (in thousands) – OECD 2017
There are now almost 8,000 courses being taught in English by leading universities in non-English speaking countries.
English-Taught Programs in Europe

In less than a decade, the number of English-taught bachelor’s programmes (ETBs) has grown from 55 in 2009 to just under 3,000 as of 2017.

ICEF Monitor (2017) ‘Fifty-fold increase in English-taught bachelor’s degrees in Europe’
English-Taught Programs in Israel

Technion Israel Institute of Technology
- Total number of English-taught programmes: 3
  - Bachelor's programmes: 2
  - Master's programmes: 1

Tel Aviv University
- Total number of English-taught programmes: 15
  - Bachelor's programmes: 2
  - Master's programmes: 13

Bar Ilan University
- Total number of English-taught programmes: 5
  - Bachelor's programmes: 1
  - Master's programmes: 4

Weizmann Institute of Science
- Total number of English-taught programmes: 8
  - Bachelor's programmes: 0
  - Master's programmes: 8

University of Haifa
- Total number of English-taught programmes: 20
  - Bachelor's programmes: 0
  - Master's programmes: 20

Hebrew University of JerUS & Candalem
- Total number of English-taught programmes: 13
  - Bachelor's programmes: 1
  - Master's programmes: 12

Ben Gurion University of the Negev
- Total number of English-taught programmes: 11
  - Bachelor's programmes: 2
  - Master's programmes: 9

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IBCs international branch campuses

Definition

Observatory for Borderless Higher Education (OBHE) defines an international branch campus (IBC) as an offshore operation of a higher education institution which meets the following criteria:

• Establishment operated in the name of the home institution
• Upon successful completion of the course program, which is fully taken at the unit abroad, students are awarded a degree from the foreign institution

Cross-Border Education Research Team (C-BERT) at the State University of New York at Albany, defines an international branch campus as:

• An entity that is owned, at least in part, by a foreign education provider
• Operated in the name of the foreign education provider; engages in at least some face-to-face teaching
• Provides access to an entire academic program that leads to a credential awarded by the foreign education provider

IBCs typical models

**Model A**
- Wholly funded by the institution (for example through stock offerings)
  - less common, mostly from early established IBCs
  - lack of requirements from partners
  - potentially profitable fields such as business

**Model B**
- Primarily from the government in the host country
- From organizations in the host or the home country
  - most common
  - financial contribution and shared risks
  - the expectations of the investors in terms of return

**Model C**
- Facilities provided
  - latest development
  - use of facilities provided by a company or a national government
  - found in the economically advanced states of the Gulf

Typical Organization of IBCs (U.S. IBCs)

• All IBCs are intricate organizations, **smaller microcosms of** the much larger and older **sending university**.

• No matter the size, IBCs typically **recreate curriculum and all of the supporting structures**: student affairs, wellness, finance, human resources, facilities management, information technology and computers, academic supports services, and grants management - in the host country.

• Typically, it is assumed that the **IBC is bound by the laws governing the home campus as well as the law of the land in the host country**. Campuses of public institutions also face a level of state regulation that limits certain kinds of expenditures they are permitted to make if taxpayer money is involved.

• The relationship with the host country’s Ministry of Education. Some give the IBS complete **autonomy in academic decisions** and nearly complete autonomy in administrative decision (Qatar) and some are in complete control of academic matter, including faculty hiring and admissions decisions (S. Korea)

# IBCs Goals, Pro’s and Con’s

<table>
<thead>
<tr>
<th>Goals</th>
<th>Advantages of IBC for Reaching Goals</th>
<th>Potential Risks</th>
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</table>
| Enhancing parent institution’s reputation | • Enhances global influence and recognition  
• Increases ability to recruit top quality students and faculty  
• Allows institution greater control over its brand and reputation relative to other forms of internationalization | • Failure of IBC and damage to the institution’s reputation  
• Greater financial cost relative to alternatives such as franchising or twinning arrangements |
| Creating research and academic opportunities | • Develops international research linkages with faculty and research centers  
• Enhances the parent institution’s ability to facilitate international academic experiences for students | No great risks, but research opportunities are less important for teaching-oriented institutions |
| Gaining access to student markets | • Protects or expands regional market share in areas that already have a high demand for the parent institution’s services  
• Serves excess demand  
• Offers something better or different than local alternatives | High tuition fees that make it difficult for IBCs to compete with local alternatives |
| Altruism                      | • Promotes religious ideals  
• Serves underserved markets                                                                                               | Conflict between altruistic missions and the practical need for financial sustainability |
| Financial gain                | • Earns additional revenue through tuition and management fees  
• Accesses new student markets that provide new sources of revenue  
• Indirectly benefits finances by improving reputation, which enhances institution’s ability to recruit tuition paying students | Failure of IBC with potential cost to institution of millions of dollars due to sunk costs related to building infrastructure, legal fees, program development, etc. |

66 new IBC were founded between 2011-2015

31 more countries with 2 or 1 IBCs

IBCs Home countries - 2017
IBCs Host countries (311 institutions)

Shift from Middle East (67) toward Asia (104)

95 more countries with 3 IBCs or less
Low failure opposed to the very high failure rates associated with entrepreneurial start-ups. Since 1950s, 27 IBCs have closed down (~ 10%)
Obstacles and Risks of IBCs

- Initial set-up costs
- Concerns about political freedom, human rights and free speech
- Maintaining academic freedom
- Funding methodology (research driven vs teaching)
- Regulation and legislation
- Cultural barrier
- Logistics difficulties
- Rising costs
- Low enrollments
- Have been shut down by accreditation bodies on quality grounds (none from Western countries)
- Pressure to show a profit or at least to break even can pose problems


IBC success - Georgia Tech Lorraine

1990

Over 3,000 undergraduate and graduate students

Metz, France

Undergraduate study
Graduate programs

- Instruction is in English
- Admissions are through Georgia Tech’s home campus.
- The faculty includes professors who are permanently assigned to GTL and professors who rotate in from the main campus in Atlanta.

- Mechanical engineering
- Electrical Engineering
- Computer Science

- Over 3,000 undergraduate and graduate students
- 368 publications and 19 patents by 15.6% of total Optics research output in Metz

- A joint research laboratory with the French Centre National de la Recherche Scientifique (CNRS), the GT-CNRS UMI 2958, was established in 2006, in the domains of telecommunications.
- In 2011 Peugeot Citroën establishes the Open Lab, based on the model of open innovation.
- In 2014, the Lafayette Institute, a $30 million facility, facilitating the research, development, and commercialization of innovations in optoelectronics, was established.
- In 2015 US National Science Foundation’s Innovation Corps (I-Corps) initiated – model that allows faculty to retain their academic positions while advancing the commercialization of their research

From education-focused institution GTL took on a research mission, which became fully institutionalized in 2006 with the establishment of UMI Lab. More recently, GTL has begun to assume commercialization and economic development functions.


368 publications and 19 patents by 15.6% of total Optics research output in Metz
From education-focused institution GTL took on a research mission, which became fully institutionalized in 2006 with the establishment of UMI Lab. More recently, GTL has begun to assume commercialization and economic development functions.
Georgia Tech’s twenty-five-year strategic plan identifies global engagement as an essential element in defining Georgia Tech for the next generation.

- **STRATEGIC GOAL 1: Expand the world’s footprint at Georgia Tech.**
  Georgia Tech seeks to leverage the strengths of our Atlanta campus to expand broad global partnerships that meet important global challenges, allowing us to do things we could not otherwise accomplish. We will bring the world to Georgia Tech through strategic alliances with universities, companies, institutions, and governmental and nongovernmental organizations that align with our mission.

- **STRATEGIC GOAL 2: Extend and leverage Georgia Tech’s impact around the globe.**
  We strive to position the Institute as a leader in establishing global innovation portals, research and education hubs, and select branch campuses. Georgia Tech will identify innovative programs and qualified students and faculty to become research and education partners both in international locations and in Atlanta. Through the use of distance learning and other technologies, Georgia Tech will be able to reach universities, corporations, and homes on a worldwide scale.

- **STRATEGIC GOAL 3: Embrace and support globally engaged students.**
  Already a recognized pioneer in educating globally engaged students, Georgia Tech is committed to ensuring that our students understand science and technology in the context of different social, economic, and cultural domains.

The home campuses of the world’s leading universities are filled with extraordinary resources in terms of people, facilities, culture, commercialization, and innovative programs. Those assets are almost impossible to replicate through satellite campuses. While Georgia Tech is one of the very few universities with a proven and successful branch campus (in France), many university and international partners are realizing the need for alternative models of wide-scale engagement.
Looking to the Future and Our Priorities

Expand the world’s footprint at Georgia Tech

• Develop a recruitment effort focused on attracting the best international students to campus
• Work toward a goal of 20 percent of on-campus sponsored research projects coming from international government, industry, university, and civil society sponsors
• Begin an ambitious effort to create Georgia Tech’s Global Village, the leading center in the Southeast for global partners in research, education, and economic development
• Increase the number of student and faculty recipients of prestigious international fellowships

Extend and leverage Georgia Tech’s impact around the globe

• Continue building global research, education, and economic development partnerships
• Strategically and substantially engage alumni living outside the United States
• Be open and responsive to new and unexpected international opportunities
• Should consider establishing an organization that assists international partners in planning, building, growing, and improving their own research, education, and economic development

Embrace and Support Globally Engaged Students

• Continue to integrate global competence outcomes into a larger share of the curricula
• Continue to increase foreign language instruction and proficiency as well as language support for international students
• Dual degree programs at the bachelor’s and master’s levels will be encouraged
IBC new campus
Duke Kushan University in China

2014-

- Partnership with Wuhan University
- 225 students in 2018
- 8 Undergraduate programs (from 2018)
  4 Master Programs

- Applied mathematics and computational sciences
- Material science/Physics
- Environmental Science/Chemistry
- Environmental Science/Public Policy
- Global Health/Biology
- Global Health/Public Policy
- Global China studies/History
- Political economy/Political science
- More majors are under development

- Instruction is in English
- Innovative curriculum designed to unique global setting
- Students spend their first 2 years on the Kunshan campus, come to Duke for 1 year and return to Kushan to complete their studies.
- Quarter of the instruction behind it coming from Duke University faculty
- DKU will hire total of ~120 full-time faculty for its undergraduate program

Officials intend to enroll 500 new students there each fall so its undergraduate program can ultimately serve 2,000 students at a time.

The undergraduate program at DKU is relatively small. As such, it attracts professors who are passionate about interacting with students personally and teaching in innovative ways.

IBC new campus
Duke Kushan University in China

From the start, the project has been controversial among both faculty and alumni who’ve questioned both the merit of Duke’s establishing a presence in an authoritarian country and the possibility that it would divert money and other resources from the Durham campus.

Pro’s

• To prepare students to work in a “globalized” economy
• Establishing a joint-venture with Kunshan and Wuhan University offers an opportunity to both catch up and become a leader as a 21st century global university.
• For the university to continue to be a top-tier institution, it needs to strengthen its international presence and to enhance its international reputation. DKU’s impact on Duke’s reputation will enhance its research and teaching by attracting talent from overseas.
• Financial gain. The city of Kunshan already has spent more than $100 million on construction costs. Duke expects to generate some $24.5-million from tuition.

Con's

- High financial investment. In all, Duke's investment is estimated at $42.5-million from 2011 to 2017. Part of that amount comes from reallocating existing budget expenditures, and part of it will be paid for by $10-million the university expects to raise from donors. An estimated $14.6-million will come from Duke's strategic funds, which technically could go to support other programs on its main campus.
- Fear of low enrollment
- Academic freedom and civil rights - Concerned about the ability of Duke professors to conduct politically sensitive research and teaching in China
In the past 20 years, Duke’s globalization efforts have grown from individual activities to larger-scale initiatives that collaboration between schools and with global partners.

Duke is already a very global university with an emerging emphasis on low and middle income regions of the world, which complements Duke’s long-standing partnerships in Europe, Japan and other high income regions.

In the early 2000s, Duke introduced strategies to strengthen the global dimensions of a Duke education by

- Increasing the percentage of international students on its home campus
- Developing interdisciplinary foreign language and area centers
- Enhancing study abroad opportunities
- Developing partnerships with international institutions

International representation in the undergraduate incoming class has grown from 1.5% in 1992 to 11% in 2012, with students coming from approximately 60 countries.

"...Duke has long recognized that we cannot be a great university without being an international university..."
Some of Duke’s highest-profile initiatives of the past decade have been global in nature:

- Creation of Duke-NUS Graduate Medical School by Duke School of Medicine (SoM) and the National University of Singapore in 2005
- Launch of the Fuqua School of Business’s operations with partners in Dubai, London, New Delhi, Shanghai and St. Petersburg in 2008
- The creation of Duke-Engage in 2007 (offers Duke undergraduates the opportunity to experience internationally)
- Partnership with the city of Kunshan and Wuhan University in China to create Duke Kunshan University (DKU) in 2012

**The Three Campus Vision**

Duke now has three campuses engaging, enriching and interacting with one another:

1. A home/founding campus in Durham
2. A world campus distributed across sites and partnerships around the globe
3. A global digital campus

Key to that integration will be the educational and research flow of faculty and students across all three and, in particular, the internationalization of the faculty, student body and curricular offerings on the Durham campus. Collectively, the three campuses will form a single, global Duke.
IBC strategy - Duke

Duke University’s 2016 Strategic Plan for the Decade Ahead: DRAFT September 2016

Leverage the global platforms

Must develop global academic leadership that matches the prominence achieved nationally.

The establishment of Duke-NUS Medical School and Duke Kunshan University marks significant steps to achieving this goal.

Duke will add to these operations a series of global nodes—small, portable offices located in such countries as Brazil, Germany, India, and South Africa, where there is a high level of Duke activity among students, faculty, and alumni.

• “Footprint” for Duke around the world to attract the best students and faculty
• Host scholars in residence
• Coordinate new research collaborations
• Provide summer courses, short-term learning or research experiences
• Conduct long-distance teaching and teleconferencing back to Duke’s main campus.
IBC strategy - Duke

Support local to global education

- Duke’s global aspirations also touch the educational mission through both US- and international-based Duke-Engage projects.
- Anticipate the bidirectional educational innovation to emerge from Duke-NUS Medical School and DKU. Make sure that pedagogical creativity and successes are shared between the two campuses. Facilitate opportunities for faculty and student exchanges.
- Continue work on connecting global experiences more closely to academic study.
- Review and propose ways in which global education can be better linked with academic courses.
- Improve the training that students receive before going abroad

<table>
<thead>
<tr>
<th>Programmatic Goal</th>
<th>Funding Goal (Millions)</th>
<th>Percent of Total</th>
<th>Details/Examples</th>
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<tbody>
<tr>
<td>GOAL 3: Strengthen Duke’s capacity to address</td>
<td>25.0</td>
<td>18.9%</td>
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<td>challenges - both locally and globally</td>
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<td>Build on Duke’s strong institutes and schools to</td>
<td>15.0</td>
<td>11.4%</td>
<td>Funding to support “collaboratories” in critical topical areas in which Duke is</td>
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<td>deepen Duke’s leadership in strategic areas that</td>
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<td>poised to make major contributions</td>
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<td>address local to global challenges</td>
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<td>Build local to global nodes of influence</td>
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<td>5.3%</td>
<td>Funding to support the creation and operation of Duke support centers in</td>
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<td>Washington DC and several international locations to facilitate the work of</td>
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<td>Duke faculty and students</td>
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<td>Strengthen mechanisms for outside engagement</td>
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<td>1.5%</td>
<td>Funding to extend the reach of the Sanford Policy Bridge program and to build</td>
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<td></td>
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<td>upon programs to share and communicate knowledge and creative ideas</td>
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<td>Support local to global education</td>
<td>0.5</td>
<td>0.4%</td>
<td>Funding to increase faculty and student exchange between Duke and DKU, expand</td>
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<td>the undergraduate Global Advisors program, and deepen pre- and post-</td>
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<td></td>
<td></td>
<td></td>
<td>Study Away education</td>
</tr>
<tr>
<td>Build local to global alumni engagement</td>
<td>0.5</td>
<td>0.4%</td>
<td>Funding in anticipation of the report from an alumni task force to advise the</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Provost on opportunities to deepen alumni engagement with Duke programs</td>
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IBCs Failures

- At the end of 2006, it was reported that University of Connecticut was working to establish a satellite branch in Dubai (UConn-Dubai) which would award the same degrees as UConn in the USA. In February 2007, it was reported that the plans had been put on hold due to UConn concerns about human rights issues [http://www.dubaifaqs.com/university-of-connecticut-dubai.php](http://www.dubaifaqs.com/university-of-connecticut-dubai.php)

- University of Montana planned to open a campus for 2,000 Chinese undergraduates in fall 2006. The campus, which would be funded by private investors has been mired in the Chinese Ministry approval process.

- Troy University has closed three branches in the past year, in Guam, Sri Lanka, and Germany

- Carnegie Mellon shut down a campus in Greece


IBC shutdown
Michigan State in Dubai, UAE c-study

- Business administration
- Child and youth development
- Computer and electrical engineering
- Construction project management
- Media management
- Master’s of human resources and labor relations (continued in Dubai)

The enrollment problem
- High Tuition ($7,920 per semester) - higher than at many other institutions in the region.
- High admissions standards
- High curriculum and course expectations
- Students with high enough English language skills
- Economic circumstances
- Nearly saturated market

Michigan State’s foundation had to fund between $1.3 and $1.7 million to fulfill contractual and legal obligations to its employees.

IBC shutdown
Suffolk University in Dakar, Senegal c-study

1999-2010
• English courses
• Undergraduate program

The business courses are taught by faculty from Boston who fly in to teach intensive two-week courses.

- High expenses on flying faculty (sending a $100,000 professor overseas is going to cost about $300,000)
- Enrollment of around 60, instead of 110.
- The school lost $700,000 to $1 million a year

Suffolk closed the satellite campus after losing about $10 million on the venture.

IBC shutdown - George Mason University in Ras al Khaymah, UAE c-study

2005-2009

- 5 Undergraduate programs
- 1 Graduate program
- Business, IT, Nursing, Pharmacy
- Master’s in business administration
- Only 120 undergraduate students (planned 2,000 students within the space of 10 years)
- 60 students in English language classes
- The university pulled out without producing a single graduate
- None of the faculty members came from the home campus.

Slow enrollment growth
- Poor marketing
- Problem finding students with excellent English skills
- Problem finding students with SAT scores comparable to the American standards (the only foreign school in the ME to require SAT scores)

Funding problems
- A government-supported foundation (EDRAK) reduced its subsidy by 50%
- EDRAK Refused to pay the cost of hiring a new vice president
- The investors wanted more profit than the university was providing and sooner than expected

Academic control
- Lack of local accreditation - limited mobility for students within the UAE
- EDRAK pushed to change the reporting structure breaking with the prior arrangement

George Mason does not anticipate significant financial losses from the endeavor

IBC shutdown – New York Institute of Technology (NYIT) in Bahrain c-study

2003-2013

3 Undergraduate programs

- Interior design
- Computer graphics
- Business Information Technology

In 2004 NYIT had to triple its intake capacity to fulfill the increasing demand. A new campus was built, more sections and classes were offered and the many part-time professors converted to full-timers. The university was running at an ideal capacity, where the number of the graduated students was equal to newly accepted freshmen.

Academic control

The Higher Education Council of Bahrain came up with a new set of regulations - standardizing courses, degrees and majors thus interfering with the Management and the Board’s regulations.

Manama (2013) NYIT Bahrain to close after final semester, Trade Arabia
# Models of International Initiatives

<table>
<thead>
<tr>
<th>“Complex International Science, Technology, and Innovation Partnerships” – CISTIPs</th>
<th>Traditional forms of cross-border university engagement/strategically partnering</th>
<th>Branch campuses</th>
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<tbody>
<tr>
<td>Limited-term capacity-build arrangement (the partnership may be terminated)</td>
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<td>Permanent offshore presence</td>
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<tr>
<td>Hybrid collaborative consultative efforts (services provided by one partner to the other)</td>
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<tr>
<td>Funding foreign institutions (allocate local taxpayer money to fund research)</td>
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<tr>
<td>Complexity (simultaneously address goals in education, research, innovation, institution building, and policy reform)</td>
<td>Focus on one of the aspects, (student exchanges, dual degree programs, or individual researcher collaboration)</td>
<td></td>
</tr>
<tr>
<td>Scale (they tend to be large-scale initiatives that may last up to 20 years, involve hundreds of people, cost tens to hundreds of millions of dollars)</td>
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International University Research Ventures (IURVs)

There are variations by location, longevity, and research theme, reflecting differences in goals, management and operations, but all IURVs involve a university systematically engaged in research in a host nation other than that of the university’s home country.

The drivers of host country:
- Scientific benefits
- Technological benefits
- Reputational benefits

The gain for home institution:
- Financial resources to pursue high quality research
- Access to special research opportunities
- Raw talent

Result of:
- Funding opportunities
- Emerging research problems
- New methods and instruments
- Interactions between scholars

Opposed to co-authorships or research projects between individual scientists, IURVs require managerial and administrative support of a certain magnitude and longevity.

IURVs do not carry the financial and educational quality risks associated with transnational educational campuses, yet tensions can still exist between the IURV host institution and the home university, for instance over intellectual property ownership, research conduct norms, staffing, and health and safety

International University Research Ventures (IURVs)

Examples of these international university research ventures (IURV) include research centers of such leading universities as the:

- Massachusetts Institute of Technology (MIT) – Multiple IURVs
- University of Cambridge and Technical University of Munich established at the CREATE campus in Singapore (CREATE 2017);
- R&D facilities at the campus of Georgia Institute of Technology in Lorraine, France
- Research programs of Carnegie Mellon University in Qatar (CMU 2017a) and Portugal (CMU 2017b)
- Fudan-Yale Biomedical Research Center in China (Yale University 2017)
- Berkeley Education Alliance for Research in Singapore (BEARS) 2012 between the University of California (UC) Berkeley, NTU, and NUS
- Tsinghua Berkeley Shenzhen Institute (TBSI) between Tsinghua University and UC Berkeley – established in 2012
- University of Michigan Health System–Peking University Health Science Center (UMHS-PUHSC) – a joint institute set up in 2010
International University Research Ventures (IURV)

### MIT International Science and Technology Initiatives (MISTI)

Advance MIT's outreach efforts through our partnerships with foreign companies, universities and research institutions

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- **24 IURV in 2016 @ 18 countries**
- **7 ceased operation**
- **10 new since 2011**

**Collaboration**

Join programs with research universities:
- Cambridge (UK)
- Tsinghua (China)

Creation of new institutions:
- Skolkovo (Russia)
- Masdar (Abu Dhabi)
- SUDT (Singapore)
MIT Portugal Program (MPP)

- 2006 -
  - 340 faculty (270 Portuguese)
  - 327 PhD students
  - 459 Master’s students (159 in Portugal, 300 at MIT)
- €79 million
- 4 PhD degrees
- 3 Executive Master's

- Engineering Design and Advanced Manufacturing
- Sustainable Energy Systems
- Transportation Systems
- Bio-Engineering Systems

Consortium model that linked MIT to an entire segment of the Portuguese higher education and research system (including the country's 7 leading universities, 15 national research laboratories, and industry)

- Create distributed critical-mass research clusters in priority areas
- Add innovation and entrepreneurship activities
- Contribute to internationalization and to attract international students

Education was seen as a central vehicle to emphasize innovation. Some programs were designed as a sequence of two-week modules, with students rotating throughout the country for different parts of the curriculum.

All MPP courses are offered in English and many are co-taught by Portuguese and MIT faculty, who also co-supervise all PhD students.
MIT and Masdar Abu Dhabi Institute Cooperative Program (MIT&MI)

- 2006-2016
- 91 newly hired faculty
- 490 students
- ~ $85 million
- 9 Master's Programs
- Interdisciplinary Ph.D.
- • Future Energy Systems
- • Water, Environment, and Health
- • Microsystems and Advanced Materials
- • To develop the first research university of the country
- • Solve fundamental development challenges
- • Provide knowledge and human capital base for knowledge-based economy

MIT played a key role in developing the original research and education portfolio. At the individual level, the MIT partnership was the key to attracting faculty, students, and administrative leadership.

New hires were offered to spend their first year at MIT while their laboratories were being set up at Masdar Institute. The faculty could take advantage of a research grant to launch collaborative projects with MIT continued for a second year at Masdar, thus stimulating strong research ties.

MIT was also key in recruiting the students by the MIT brand reputation and generous packages that included full tuition, a monthly stipend, housing, computers, and airfares.
Singapore University of Technology and Design in collaboration with MIT (SUTD-MIT)

2010- Third stage of Singapore - MIT Alliance

- 120 SUTD faculty
- 20 MIT faculty

Undergraduate pillar program
Masters of Science
Ph.D.

- Future Energy Systems
- Water, Environment, and Health
- Microsystems and Advanced Materials

- Forge strong integration into global knowledge and economic networks
- Utilize foreign talent on local research problems
- Transition from “efficiency” to “innovation economy”

An institution-building mode

SUTD added a dedicated undergraduate education component to the portfolio. SUTD is also unusual in that it operates outside the existing, strong university system and, in effect, provides an explicit counter-model to Singapore’s large public universities with their prevalent technical education.
The focus was on research, by funding a variety of smaller research projects, which later were consolidated into fewer but more resource-intense flagship projects. Faculty and researchers on both sides interacted primarily through videoconferences, occasional in person-meetings, and periodic visits (including full sabbaticals) at the partner institution.
The Cambridge-MIT Institute (CMI)

Obstacles

- Considerable institutional resistance to the idea that University of Cambridge was insufficient in some regards and might learn from a ‘young’ American engineering university like MIT

- CMI had to act somewhat minimally invasively and find activities that would come as an add-on, but would not substantially interfere with already existing activities

- Six Master's programs were partly modeled after MIT program and continued beyond the program termination in 2007. Yet, in their hybrid nature and crossing cross the disciplinary boundaries between science, engineering, management and policy and modeled after existing MIT programs, they did not have an obvious institutional home at Cambridge.

- While professional Master's programs were welcome, Cambridge considered it inappropriate to touch its PhD programs to promote innovation: Industrially oriented PhDs, as employed at MIT and suggested for the partnership, were not picked up.
MIT's rationales for engaging the partnerships

- Privileged **access to research sites**. For example, research on solar cell deployment or test-bed for integrated energy-transportation systems are better suited to the sites in Abu Dhabi or the Portuguese Azores Islands, than Massachusetts.

- Preferential **access to** some of the **best students and researchers** of a country.

- Large-scale collaborations frequently have a quasi-experimental character. MIT faculty, encouraged to try out new and hybrid approaches that would be hard to implement at MIT. For example some of the MIT faculty engaged in SUTD precisely because it offered an **opportunity to implement new ways of teaching** engineering differently.

- The partnerships allow MIT to raise **additional research funds** of substantial magnitude, ranging from tens to hundreds of millions over several years.

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Globalization strategy - MIT

"Strategic advances in global education and research are essential to sustaining the Institute as the world’s preeminent educational and research institution for scientific discovery and application of knowledge.” (MIT Global Council)

As the MIT campus has become more international, the MIT faculty and students are engaged in research, education, and service activities in more than 75 countries.

The trademarks of “global MIT”
- MIT as a builder of institutions and innovation ecosystems
- MIT’s “global classroom”
- MIT as a global problem-solver

Education
Half of the graduating seniors in 2016 reported having at least one international educational experience, up from 23% a decade earlier.

Research
Many MIT programs provide opportunities for faculty and students to carry out research internationally.

Online Education
Fee-bearing digital courses taught by MIT faculty and targeted to professionals have enrolled more than 15,000 learners from more than 110 countries since 2013.

Institution-building
MIT is also heavily involved in major international institution-building projects.

Alumni
Some 20,000 MIT alumni reside in 160 countries around the world.
The MIT international activities are motivated by **seven interlinked goals:**

- Preparing our students for productive lives and careers by providing meaningful opportunities for them to learn about the world;
- Assisting our faculty and students to carry out their research in the world and about the world;
- Enabling our faculty and students to collaborate with the world’s most outstanding researchers and gain access to the world’s most advanced scientific facilities and infrastructure;
- Supporting faculty efforts to help solve the world’s most important and challenging problems;
- Attracting the world’s most talented students, faculty and staff to the MIT campus;
- Finding new mechanisms to accelerate and amplify the global impact of MIT’s educational and research activities; and
- Strengthening the MIT campus by diversifying and expanding international sources of funding.

"If MIT is to remain at the forefront of higher education, research, and innovation in the 21st century, our geographic reach and aspirations must be global."

Richard K. Lester (2017) *A GLOBAL STRATEGY FOR MIT*
Globalization strategy - MIT

A majority of MIT faculty take part in international education, research, and service activities

- International research collaborations: MIT publications with international co-authors rise from 25% in 2001 to 50% in 2016.
- Almost 40% of the MIT faculty were supervising foreign-sponsored projects.
- More than 400 faculty have participated in at least one of the five big institution-building programs (SUTD, SMART, Masdar, Skoltech, MIT Portugal)

Faculty concerns

- MIT’s large international institution-building programs were perceived by some to have a negative impact on education at MIT as a result of faculty spending significant time away from campus.
- Faculty residence requirements roused concern.
- Other concerns focused on the tendency for MIT to ‘follow the money’ in selecting its international partnerships
Globalization strategy – MIT
RECOMMENDATIONS

Bringing MIT to the World

Build new MIT Partnerships for a Better World

- Establishing standing faculty/staff working groups, by region
- Holding a series of MIT regional summits, to increase MIT’s visibility
- Expanding regional seed funds and building new funds
- New Regional Priorities: Three regions now stand out for potential engagement in the future
  - Africa
  - Latin America (Mexico, Brazil...)
  - China

Expand MIT’s global classroom

- MIT should commit itself to providing an MIT-quality international experience to every undergraduate who desires one

Streamline and strengthen international educational assistance/institution-building programs

- Look for opportunities to consolidate and standardize key services
- Explore smaller-scale offerings accessible to smaller or poorer countries that are unable to afford customized, ‘full-function’ institution-building programs
- Expanding regional seed funds and building new funds
- Identify ways to deliver more services at MIT to reduce travel burdens on faculty and staff
- Strengthen efforts to share experiences and promote learning across the international institution
- Encourage departments, laboratories, centers, and schools to play a larger role in identifying and developing international projects

Globalization strategy – MIT

RECOMMENDATIONS

 Bringing World to the MIT

Develop a new MIT Global Leaders program

Global leadership development program that would build on MIT’s reputation as the world’s leading scientific and technological university.

The program would be designed for an international candidates ~ 25 to 35 years of age, with outstanding undergraduate performance and a demonstrated post-graduate track record of problem solving and leadership. The students would receive a full scholarship for three years. During this period they would

   (a) obtain an MIT master’s degree or enter a Ph.D. program in any field of their choosing, or otherwise follow a path enabling deep immersion in a field;

   (b) participate with their cohort in leadership development activities. Their focus would shift over time to designing and launching a practical project.

The three-year duration of the program would allow scholars to gain deep exposure to the MIT community and develop strong connections to it.

Review the cap on international undergraduate admissions

MIT's current policy limits the number of international undergraduate students who live abroad to 6% of annual undergraduate admissions. MIT last reviewed the current policy in 2008 financial crisis, and another review should be held

Richard K. Lester (2017) "A GLOBAL STRATEGY FOR MIT"
Strengthening Governance and Operations

- Establish a new external advisory committee for MIT’s international activities to provide focused, expert advice on programs, strategies, and plans
- Reconstitute Committee that is tasked with providing independent faculty advice on the full range of MIT’s international engagements
- Develop and implement a strategic communications plan for international engagements, focused on how best to present MIT’s international activities and aspirations to key domestic and international audiences
- Investigate new ways to support faculty international engagements with stronger operational processes, services, and tools

Learning about the world, helping to solve the world’s greatest problems, and working with international collaborators who share our curiosity and commitment to rigorous scientific inquiry are core values for MIT.

Globalization strategy – MIT
RECOMMENDATIONS

Recent domestic and international developments create potentially serious new risks

- International students, post-docs and visiting scholars may be less likely to apply to American universities, including MIT, because of uncertainties over immigration policies.
- International candidates for faculty positions may similarly become more reluctant to apply because of concerns about the environment for immigrants in the U.S.
- Universities elsewhere may become more attractive to outstanding student and faculty candidates.
- MIT faculty, staff, and students who are not U.S. citizens may be more reluctant to travel abroad professionally in light of uncertainties in U.S. border policy.
- The flow of research, educational and philanthropic funding to MIT from elsewhere may be adversely affected by the prospect of more adversarial relations between the U.S. and other countries.
- MIT’s international collaborations in and with important countries and regions including Mexico, China, Russia, and the Middle East may be disrupted by an increasingly adversarial political climate.
- MIT and other U.S. research universities may be targeted politically because they are associated with technologies that are perceived to have socially disruptive impacts.
Globalization strategy – MIT RECOMMENDATIONS

MIT could take several actions to mitigate the risks such as:

- Developing an effective communications strategy
  - Target international stakeholders, including international alums, national and local governments, prospective faculty and students, and others, and should also address domestic stakeholders.
  - Emphasize MIT’s autonomy and where appropriate should clearly distinguish between the university’s goals and those of governments.
  - Demonstrate that MIT is a welcoming and inclusive community that is ready to support those of its faculty, students, and staff who must struggle with immigration and travel issues.
- Building alliances and partnerships that will help make more robust international activities
  - Partnerships with leading international universities that share MIT’s values
  - Partnerships with large multinational corporations
  - Focus on building a network of some of the world’s most dynamic innovation hubs, in a different areas
- Linking MIT’s partnerships with international firms and governments
- Expanding the range of plans MIT has developed for international emergency situations.
- Strengthening MIT’s capacity to assess and address the socio-economic, socio-political, and ethical consequences of scientific and technological advances.