



**Plenary Address
at the
“Internationalization of US Education in the 21st Century:
The future of International and Foreign Language Studies” Conference**

**Given by Mark B. Rosenberg
on April 12, 2014**



Dr. Rosenberg was the plenary speaker at an important conference sponsored by the Coalition for International Education and the College of William and Mary on April 12, 2014. The conference was titled: "Internationalization of U.S. Education in the 21st Century: The Future of International and Foreign Language Studies" (A Research Conference on National Needs and Policy Implications).

This speech was written by Mark B. Rosenberg, Hilary Landorf and Jennifer Gebelein from Florida International University.

This gathering is a reminder of the advice that Justice Frankfurter shared with President Franklin Roosevelt upon his first election. When asked what he must do to address the crisis of the spreading depression, the Justice replied: "muster your battalions." So I want to thank the Coalition for International Education and the College of William & Mary for convening us and loading the conference with so many thoughtful people and topics.

Our mandate is to make recommendations on ensuring a globally competent citizenry and workforce, strengthening the ability of the United States to solve global problems, and producing international experts and knowledge for national needs.

This afternoon, we would like to share with you a perspective on key global trends that bear on challenges for higher education posed by globalization; then we will focus on strategies that we are deploying to ensure greater global competency for our students and our institution; and finally, we address the new opportunities for internationalization that arise as a consequence of the massification of information technology.

Global Trends

1. Information technology and scalability: Do we get this?

The multiples and scalability of information technology coupled with the growth of the Internet are of paradigmatic consequence. We are living in a time of "astonishing progress with digital technologies – those that have computer hardware, software and networks at their core. Digitization brings with it thorny challenges." (Erik Brynjolfsson and Andrew McAfee, *The Second Machine Age* New York: WW Norton, 2014).

As Eric Schmidt and Jared Cohen have pointed out: “It is a source of tremendous good and potentially dreadful evil, and we have only begun to witness its impact on the world stage” (p. 15). To put an exclamation point on their approach, the authors assert that the Internet is the world’s largest “ungoverned space.” (Eric Schmidt and Jared Cohen, *The New Digital Age* New York: Vintage Books, 2014)

Parallel to this development is another of significance: communicated technologies have proliferated such that within another decade most of the world’s population will have timely access to almost all of the world’s information (p. 17). Speed, computing power and digital images will be a hallmark of this new era.

Ubiquitous high speed communication technologies will change almost everything. Old and new institutions will be challenged. Disruption is the norm of the day. If we, as educational institutions, do not want to become extinct, we must evolve to meet these challenges. Governments will be threatened. They, in turn, will have unprecedented reach into citizens’ private lives. The financial system will become even more entwined with technology. Individuals and groups will be empowered in ways that were not previously possible. Their global reach will be as instantaneous and pervasive as the country where they reside.

Do we really get the implications for how we live and work? The YouTube video, “Did You Know: Shift Happens, 2014?” (<http://www.youtube.com/watch?v=XrJfDUzD7M>) graphically reminds us of our context and the powerful new drivers of change: Google and the 100 billion searches/month; YouTube itself is the second largest search engine in the world that also uploads 24 hours of video every minute; and the fact that if Facebook were a country, only China and India would be bigger in terms of population. One in six couples who married last year met on-line and one in five divorces is blamed on Facebook. These statistics underscore the scalability of technology and information access. From the individual to the multinational corporation, information sharing can now be instantaneous, or close to it. Boundaries are blurred or obliterated, be they physical delimiting territories or institutional demarcating one brand from another or even one tribe from another. As tools to communicate and transmit information and data evolve and blur lines, so should we identify strategies, techniques and approaches to harness these developments to improve the sensitivity of our students to this changing environment.

As Schmidt and Cohen point out, “the vast majority of us will increasingly find ourselves living, working and being governed in two worlds at once”: the physical – with all the adventure and predictable unpredictability that comes about as we mingle with humanity; and, the virtual – where we can create new identities and worlds that were not previously attainable.

For those of us trained in international relations and comparative approaches, including area studies, we will need to overhaul our conceptual and theoretical frameworks. And we will need to embrace skills-training that goes way beyond what we do today. We have obsessed on state formation, state to state relations, and institutional dynamics within and across states. We have learned about cultures and immersed ourselves in language training. We have utilized both quantitative and qualitative techniques to measure and predict behavior. We have largely done this through modest disciplinary frames that have rarely crossed knowledge frontiers into the science, mechanics and arts-and-crafts of communication technologies and social media.

But it is even more complicated. In May of 2001, I had a direct conversation with a top official of the US intelligence community. I asked him if the biggest challenge he had was keeping up with the exponential growth of technology. His response: no, it's not the "toys" that we are having trouble with; rather the challenge was "modeling the scenarios of our adversaries."

Just months later, full passenger airliners were used as devastating torpedoes to attack the US. So it's not just developing new analytical frameworks. The policy and analytical capacity to sustain a new approach to national security must be consistent with a country's values but equally adept at modeling and predicting new modern security threats be they conventional or non-conventional.

Digitization, high speed data collection, and analytics are clearly drivers of this new frontier. Our theoretical, conceptual, and analytical capabilities are falling way behind the physical and virtual realities that are aggressively moving forward. Disruptive technologies can help shape our future but are also a potential threat at many levels of social, educational and international ways of life. How we respond to and embrace those technological challenges will shape our future. Our overarching challenge, as leaders, is harnessing disruptive technologies for the benefit of education before they begin to assert negative disruptive powers in economy and society.

2. "Big Data"

An estimate that sets the stage: every two days, we create as much digital content as we did from the dawn of civilization to 2003. The amount of digital data doubles every three years. In the intelligence community this enormous flow of data is called the "fire hose problem," and there is a serious disconnect between our ability to acquire massive amounts of data and being able to process it in a timely, efficient, and logical manner. In fact, we are acquiring too much and, thus, sometimes the most useful bytes of information get left on the "cutting room floor" as we filter for what is useful and what is not. It is common place to refer to the concept as "jargon du jour" because there is a lot of attention focused on what we can and cannot do with "big data." This skepticism may be warranted. Here is an example of the "hype:" "...we are going to talk about

how it is going to transform the way we work , the way that we live and the way that we think.” (“Tackling Global Problems with Big Data,” Chatham House, March 25, 2013).

A McKinsey & Company study (“Harnessing big data to address the world’s problems” by Jonathan Bays) reports that Big Data can create value by enhancing the productivity and competitiveness of companies, and it can be used to tackle societal issues. In short, it is a new tool in the hands of decision-makers up to good or no-good that can be a formidable new application of information.

Big Data is everywhere – but there are three defining parameters that are relevant here. First, we can collect more Big Data than ever before (i.e. fire hose problem). Second, we can substitute our commitment to certainty with Big Data and replace it with correlations and insights at the macro level. Finally, with Big Data we can move away from the near obsession with causality and embrace correlation -- but we must be mindful of *how* we construct our models to get the best predictive results. We must filter out the noise in the data to acquire and correlate the most meaningful signals of society. This filtering lends itself more to the expertise that accompanies traditional approaches to international, comparative and language, and area studies.

Datification is a process that will permit us to datify elements of world affairs that are informational but have never been put into data format. Then new services can be developed and marketed. In fact, this type of marketing has already occurred in London where ads targeted female shoppers using facial recognition software. As for gender-specific ad targeting, in this case the camera system will look for female faces. Upon detecting a female face, the display will show an advertisement promoting a new women's education effort (Plan UK's [Because I Am a Girl](#) campaign). If a male face is detected, rather than show a full ad, the display will simply offer the Web address of the initiative. (<http://www.pcmag.com/article2/0,2817,2400473,00.asp>)

Prediction is enhanced, but there are costs. Who will forget “Minority Report” – a future-oriented movie where crimes are predicted and prevented in advance through high speed data processing. Creating social constructs, policies and increasing our ability to react to emergencies from datification is also paramount in our cultural evolution. Professor Mark Nixon, a leading expert in biometric techniques to identify people using closed circuit television (CCTV), has applied his facial recognition software plus body movement identification technology to help identify looters in the 2011 London riots. With processing power increasing as well as the application of artificial intelligence, we may soon be able to alert security personnel to suspicious behavior automatically before the person has done anything illegal! However, technology like this also potentially impinges on a person’s right to privacy. This is due to a lack of regulation over how CCTV is used and how the software is applied. Again, laws and policies are not keeping up with the high speed of technological advances.

But there are other issues aside from the loss of privacy that are adjuncts of datification. Information (and data) anywhere can instantly become information (and data) everywhere. Cybersecurity issues are now as important in many countries as traditional national security. We are entering a new era of international cyber warfare. Countries large and small have used this new form of engagement to achieve short and long term security goals. The US Cyber Command probably has a larger budget than the defense budgets of many countries. Cyber conflict can take many forms – strategic cyber-war, cyber-espionage, cyber-disruption, and cyber-terrorism. The stakes are high: it is commonly believed that China’s J-20 stealth airplane was developed in part as a consequence of the cyber-espionage carried out against the US manufacturers of the F-35 Joint Strike Fighter. What do we really know about cyber conflict? Do we have the interdisciplinary tools to identify, analyze, and respond to the opportunities and threats presented by this new approach to international affairs?

A major impediment to the use of big data and its adjuncts is the shortage of talent and training. McKinsey estimates that by 2018, the shortage could reach about 140,000 - 180,000 data-savvy managers and supporting technology personnel. We must respond to this and numerous new challenges by a willingness to modify – indeed, disrupt – our traditional approaches to international studies and foreign language training.

3. Order/disorder + communication technology + China and the rise of the “#Rest”

The growing complexity of world affairs in this context is also marked by the continuing debate about the nature of the international system and the role of the United States. Disorder is an unmistakable trend of this post-Cold War era. The power of any one country or coalition of countries to effect a “balance of power” is limited because the traditional trump cards of power – large standing armies, modern weapons and transportation, and superior resource endowments – are now losing consequence.

Robert Kaplan has described it best as the “erosion of America’s role as an organizing power.” According to *Global Trends 2030*, “...inequalities within countries will increase social tensions. Without completely disengaging, the US is no longer the ‘global policeman.’” How will this potential role-change impact world affairs? What is the best possible outcome? How will we engage to ultimately lead towards broader global cooperation (best case outcome)?

Consider the rising strife in the Middle East, prolonged bloodshed in Syria and the likely use of chemical weapons there, concerns for the use of nuclear weapons by both Iran and North Korea, the Russian takeover of Crimea, and the US public’s exhaustion with continuing war-like activities in Afghanistan. These conflict situations respond to deep-seated tensions and hostilities often involving both internal and external factors

that do not lend themselves to quick solutions. Any of these conflicts could immediately ignite regional and global hostilities that could have catastrophic impacts.

Complications abound. With advanced technology, one dissident can credibly threaten cities and nations with a strategically placed dirty bomb, or with a pinpoint cyber-attack on a power grid or a financial network. New communications technologies have enabled whole virtual worlds to emerge. Imagine the day when an on-line community organized through social media such as Facebook demands a permanent seat at the United Nations, or indeed threatens to shut down the banking sector of one of the world's financial centers. Or "Will technological breakthroughs be developed in time to boost economic productivity?" (*Global Trends 2030*). What about an on-line Chechnya, with agents and officers committed to waging a virtual cyber-war against Russian institutions – public and private alike – through high speed telecommunications. As described by Kaplan, "authority," once so secure and conveniently apportioned across the globe in institutional forms, seems in the process of "disintegrating into small bits, with sects and heresies – Salafist, cybercriminals and so on – entering from the side doors." Or indeed coming undetected right through the front or back door. The opportunities are real. The threats are real.

The inelegance of his description reflects the chaos and elasticity of our world affairs disorder. And regardless of what is coming next, Kaplan asserts that the "charmed circle of Western elites is decidedly not in control." This gathering certainly seems to confirm his assertion about the loss of control!

Undeniably, a central feature of this new and more complicated global arena is China. By the year 2040, it is estimated that the combined output of the US and Europe will amount to 20 percent of the world's GDP. China will have climbed to about 40 percent of global output by then, nearly \$123 trillion in production or about three times the globe's output in 2000. (Robert Fogel, "123 Trillion" *Foreign Policy*, January/February 2010). Moreover, Chinese telecommunications giants, with their own set of rules, may have firmly inserted themselves in most markets. Concerns about cyber security will blur because the operational rules will be predetermined. Other views see India emerging to eclipse China (not to be reviewed here, but simply mentioned as a placeholder for the growing presence of Asia in world affairs).

Accompanying these developments are others that bode well for many countries that previously had little hope for development, including Brazil, Mexico, Indonesia and the Philippines (see Paul Collier, *The Bottom Billion*, Oxford University, 2007). As the prospects for these countries and others brighten, concern spreads about the economic viability of the European Community and the continuing lethargy of the US economy.

Regardless of the improved outlook for the emerging economies and the new-found prosperity of their populations, China is now fast emerging as a globally dominant

country, and certainly will be by 2040. This fact alone must be a beacon for guiding action that bears on international understanding, collaboration and research.

In summary, any thoughtfulness about higher education, international studies and globalization must accommodate three major developments: information technology, big data, and the disorder and messiness of the 21st century global arena. As a consequence, these developments provide context for two major international education challenges ahead: global competence for students and global engagement for institutions.

Global Competence for Students: What Should Students Be Learning?

As a consequence, the traditional “liberal education,” that at once was viewed as international and global at the same time, may not provide the practical skills necessary to survive in this new 24/7 digital environment where information and data are ubiquitous. Remember here John Adams’ hope (in his Letter to Abigail Adams, May 12, 1780) that “I must study politics and war, that our sons may have liberty to study mathematics and philosophy.”

Many unanswered ironies accompany our early 21st century sojourn and this is one of them. Public universities now recognize the need to prepare students for success as citizens *and* workers in a highly competitive environment where the world of work is globalized because markets are now global. The movements toward service learning, expanded internships, and new learning techniques that emphasize modeling or hands-on experience are indicative of this recognition.

In this context, there is a rich international debate about student preparation, performance and measurement, and the experiences that are necessary to prepare students for this 21st century world of work. No doubt, part of this discussion must find ways to address performance gaps, particularly among and across racial, gender and ethnic groups in the STEM areas. But equally obvious, if less discussed, is the need to understand the local-global dynamic so that cooperation and collaboration across borders and boundaries can be enhanced.

At FIU, we approach global competence for students -- global learning -- from the viewpoint that universities should provide an education that is focused on the universal and the specific. Students must be able to understand global issues that bind (and fragment) humanity and that transcend borders. But they must also be able to understand local ideas, values and practices that are associated with diverse cultures and geographies. Given that Miami is a transnational city, the local and global are more immediately understood and rationalized than perhaps in most other US geographies.

That “Miami” is a harbinger of things to come in demographics for most regions and cities of the US is by now almost a truism.

What distinguishes the contemporary influence of globalization on higher education from past eras is the speed with which ideas move and change occurs. Students must learn how to flexibly respond to present and future change. To do this, they must learn how to analyze the interrelated forces that shape our world: historical influences, emerging trends, global dynamics, local needs, and the exponentiality of information technology. And, of course, we must prepare them for jobs that do not yet exist.

In this context, there are three robust learning outcomes occasioned by globalization that have implications for international studies:

- ✓ Global Awareness: knowledge of the interrelatedness of local, global, international, and intercultural issues, trends, and systems
- ✓ Global Perspective: the ability to conduct a multi-perspective analysis of local, global, international, and intercultural problems
- ✓ Global Engagement: the willingness to engage in local, global, international, and intercultural problem-solving.

We believe that students are better prepared for the world of work with this approach. They are also better prepared to fulfill civic responsibilities in the growing complexity of a 21st century world disorder that shows an even greater likelihood of rapid change and disruption as exponential technological change continues and the world shrinks.

We contend that students must be explicitly taught how to make connections across time and place, language and culture, scale and discipline in order to be competent global citizens. That is why all undergraduates at FIU enroll for a minimum of two courses that are infused with our global learning outcomes as a graduation requirement. Students take a global learning foundations course as part of their general education sequence and a second, discipline-specific global learning course in the context of their major program of study.

Foundations courses are thematic, problem-centered, and interdisciplinary. They include an integrated co-curricular learning experience, and are placed in categories throughout the general education curriculum. Courses such as “Artistic Expression in a Global Society,” “International Nutrition, Public Health, and Economic Development,” and “The Global Scientific Revolution and its Impact on Quality of Life” set the stage for students to make multi-perspective connections throughout their university career.

Discipline-specific global learning courses provide students with a global view of their major program of study. Through active learning strategies, these courses give students multiple opportunities to apply the knowledge, skills, and attitudes they gain in the

foundations courses. Discipline-specific global learning courses range from “Hurricane Engineering for Global Sustainability” to “Geography of the Global Food System,” and “World Nutrition.”

To date, there are over 140 global learning courses in 65 of 66 of FIU’s undergraduate programs (only Chemistry has chosen not to participate).

See Landorf, H. & Feldman, E. (in press). Using democratic deliberation in an internationalization effort in higher education. In R. Mizzi, T. Rocco, & S. Shore (Eds.), Lives on the periphery: Politics, practicalities, and possibilities in a changing world. New York: SUNY Press and Landorf, H. & Doscher, S.D. (2013). Global learning for global citizenship. In M. Walker and A. Boni (Eds.), Universities and human development. A sustainable imaginary for the XXI century (pp. 162-177). New York: Routledge Press.

Four years into our global learning initiative, we have found the following:

- ✓ Incoming FIU students score above national norms on survey assessment items measuring global awareness and global engagement: Students enter FIU already interested in connecting with people from other cultures, and with an understanding of the interconnectedness of global issues
- ✓ Global learning courses have a significant positive effect on students’ global awareness and perspective: Students’ global awareness and global perspective increase when they take global learning courses – provided that they enter these courses with some understanding of global issues and some willingness to engage
- ✓ Global Learning for Global Citizenship has a significant positive effect on students’ Global Citizenship and Community Engagement: Students’ experience with global learning at FIU leads to a significant positive effect on their “global citizenship” and “community engagement” as measured by the Global Perspective Inventory
- ✓ More than one is necessary: Multiple global learning experiences are essential for students to increase their global awareness, global perspective, and global engagement.

See Landorf, H. & Doscher, S.D. (2013). Case study: Florida International University. In M. Green (Ed.), Improving and Assessing Global Learning. Washington, D.C.: NAFSA, Association of International Educators).

Global Engagement for Institutions: Paradise Lost! / Paradise Found?

Globalization's impact on higher education is driving a new reality. Just a decade ago, higher education enjoyed a "paradise" of monopoly: we controlled learning, assessment and place. This paradise is now "lost" as a consequence of the by-products of globalization: rapidly diffusing education technologies and massification of access to learning (MOOCs); new pressure, nationally and internationally, to streamline admissions and course requirements, synchronize calendars, and ensure greater practical utility to traditional and new majors; the emergence of analytics-driven private sector just-in-time education companies; and the resultant commoditization of education – all disruptors of monopoly in the education marketplace. So, universities have lost the control over learning, assessment, and place.

The result? Universities and their stakeholders (faculties, professional staffs, fiduciaries) are subject to intensifying output accountability, performance funding, efficiencies – in many ways going through the same structural adjustments confronted today and decades ago by underperforming and inefficient countries and companies.

For public universities, this change dynamic is accompanied by declining state support for higher education, growing uncertainties over the value of a university education, and a demand for intensified accountability, productivity and efficiency even as the playing field is globalized. For private institutions of higher education, traditional notions of brand management and exclusivity are challenged as the need for new revenue and continued competitiveness with peers drives up the cost to unbearable levels. In either scenario – public or private--the exhaustion of traditional markets and the need for continuing investment and new revenues forces tough choices in a time of extreme uncertainty.

Internationalization? How can a university become even more deeply embedded into a globalizing world? The focus may be inward with an effort to infuse international and comparative perspectives throughout the teaching, research, and service missions of higher education (John Hudzik, NAFSA). Or it may be outward: with "...a strategic, coordinated process that seeks to align and integrate international policies, programs, and initiatives. It positions colleges and universities as more globally-oriented and internationally-connected" (American Council on Education).

This approach extends beyond specific dimensions of teaching, research and service. It calls for a change in existing mindsets, structures and learning management systems to allow the institution to contribute to the shaping of the emerging global knowledge and learning ecosystem (Gabriel Hawawini, Professor of Finance and former Dean of INSEAD, 2000-2006). Universities represent globalization because so many of their forces (seen and unseen) are now present in everyday institutional life. For the contemporary urban public research university, internationalization is not optional, and

it is more than an opportunity - it is an imperative. Thus, global engagement at the institutional level is no longer a sufficient condition for a 21st century learning environment. It is a necessary condition.

No single template suffices to capture the range of organizational approaches available for global institutional engagement. Both internal and external dynamics vary across our 4,000 institutions of higher education. While one size does not fit all, each academic unit at the institution could have a palette of options from which to choose, depending on their mission, human resource base, and market realities.

See (Meyer, A., Harker, P., and Hawawini, G. (2004) 'The globalization of business education, in H. Gatignon and J. Kimberly (eds.) The INSEAD-Wharton Alliance on Globalizing: Strategies for Building Successful Global Businesses, Cambridge: Cambridge University Press, p. 108).

Internationalization must not be top down, but the senior executive must be conversant with the “what” and the “why” of internationalization and be prepared to address its imperative. One of the keys to successful internationalization is a focus on teaching and learning. Internationalization must be seen as integral to academic quality, rather than as a cost center or entrepreneurial exercise. Scholarship and engagement activities must address global problems. (Example: FIU’s Global Learning for Global Citizenship, which includes Faculty Fellowships for engaged student-faculty research.)

Dedicated faculty must also be involved, for it is through their efforts that the rhetoric and reality normally meet. Initiatives must focus on garnering faculty support, and then the active engagement of faculty. This includes professional development, curriculum reform, and forging of high quality partnerships, strategic planning, and risk management. Clearly, a viable strategy that builds on inherent institutional strengths must be developed with the usual array of faculty exchange and research, two-way student experiences, possible joint degrees and/or certificates, and simulcast courses and simulations where students from participating institutions can benefit through technology from elements of the global experience.

An operations manager can help greatly in moving institutions forward. One of the best approaches to forging consensus and meaningful change in the internationalization of a university is the designation of a Senior International Officer who can help universities adopt a unified, holistic approach to internationalization, one that encompasses research, teaching, and engagement. Successful SIOs must have wide-ranging capacities that enable them to lead organizational change and curriculum development; establish relationships with diverse campus and international stakeholders; facilitate cross-sector connections; design efficient structures and processes; and, analyze data and communicate results for continuous improvement (de Wit, Hans, 2012, “The changing role of leadership in international education - University World News”).

However, even if a globalizing institution were to fully take advantage of technology, robust partnerships, intense faculty, and student exchange, it still might be missing one of the great new disruptive opportunities of the 21st century: namely, developing a capability to teach large groups of new off-shore students through expanded on-line education.

Teaching and learning are now globalized as a result of information technology. US universities are largely enamored with more traditional international outreach: exchange, study abroad, language training, satellitization through off-shore campuses. New and significant opportunities present themselves as a consequence of the rising global demand for higher education services. Who will fill this space? How will US universities fare in the new opportunities presented by on-line learning management systems that are uniquely a product of the rising demands for literacy and competence to improve quality of living and well-being?

So as we identify how best to improve our international education for the global realities that our students and citizens confront in this new century, we must also globalize our understanding and abilities to reach across borders and boundaries to share our knowledge to enhance cooperation and well-being. We must shape this brave new world before it shapes us.