

Measuring the Impact of International Experiences

CGS Webinar

June 16, 2016

2:00 PM EDT

Brian S. Mitchell

NSF Dean-in-Residence

Council of Graduate Schools

Max Vögler

Director

DFG North America

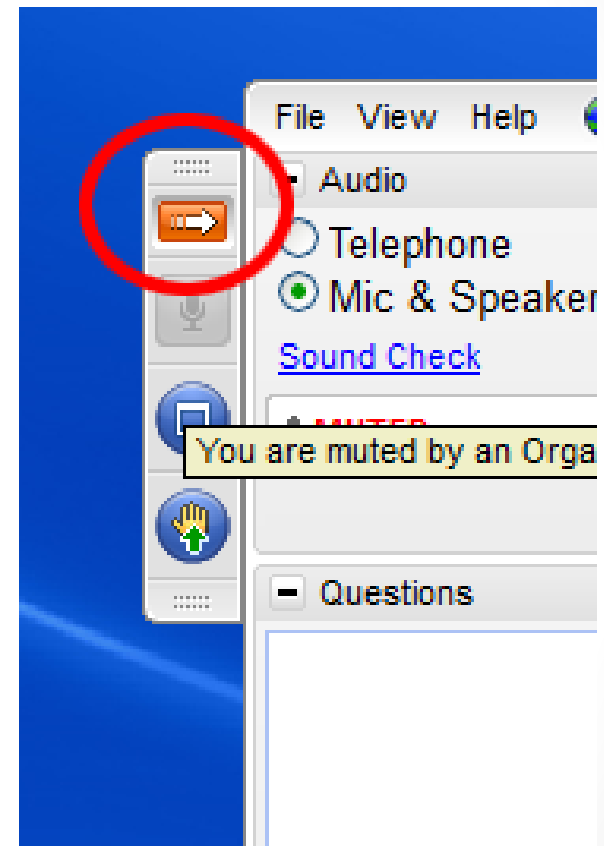


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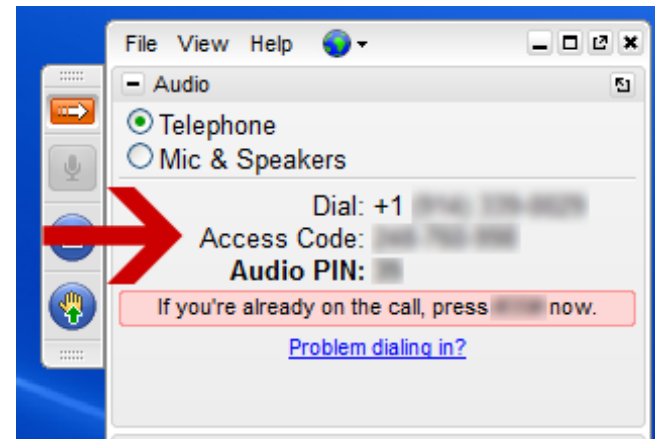
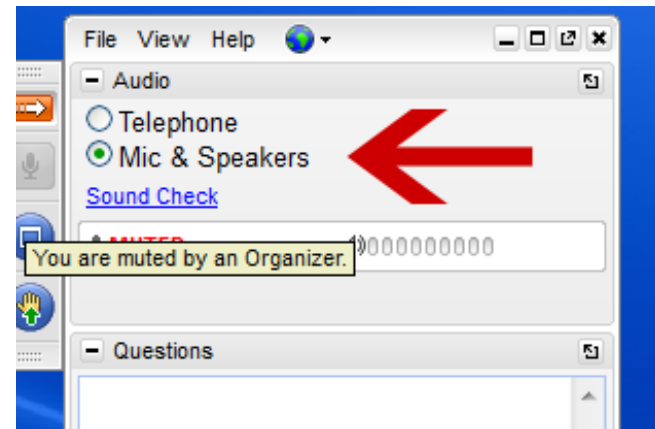
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Webinar Outline

- Workshop Description
- Workshop Key Findings
- Workshop Highlights
- Workshop Recommendations
- Resources
- Questions

Evaluating International Research Experiences for Graduate Students

February 16, 2016

Arlington, VA

CGS-DFG-NSF WORKSHOP

Workshop Agenda

What Do We Know?

Session I: Funding International Research Experiences: Two Program Evaluations

Session II: International Research Experiences: The Institutional Perspective

Panel Discussion: International Research Experiences: The Participant Perspective

Session IV: International Research Experiences: The PI Perspective

What Can We Do?

Session V: Tracking the Outcomes of International Research Experiences

Conversation Cafe: What Questions Should We Ask and How Should We Ask Them?

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Workshop Key Findings

- There is a need for more robust research and assessment data on international research experiences.
- Foundational research is needed on:
 - the value of international experiences,
 - their impact on global competencies and career development,
 - the effects of timing and duration,
 - and barriers to participation by under-represented groups.
- Participation increases likelihood of continuing international collaborations.
- There is a potential link between the networking opportunities international experiences provide and career success.

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Carter Epstein – Abt Associates

Ten Years of the Partnerships in International Research and Education (PIRE) Program

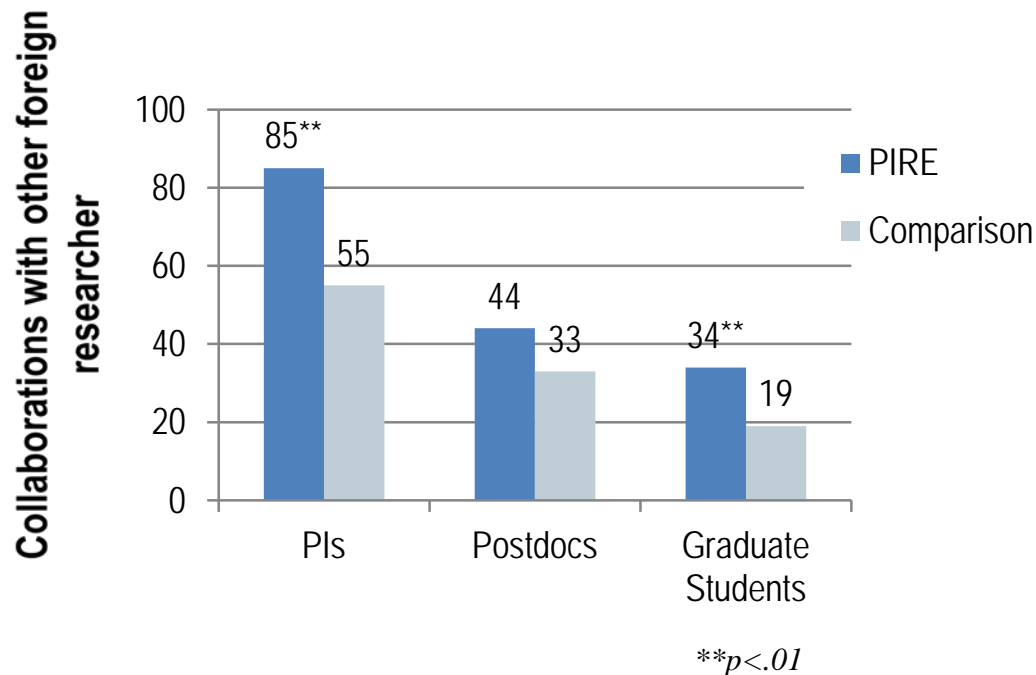
Sebastian Granderath – Deutsche Forschungsgemeinschaft (DFG)

The International Research Training Group (IRTG) Program 2015 Evaluation

AGENCY PROGRAM EVALUATIONS

Epstein: PIRE Evaluation

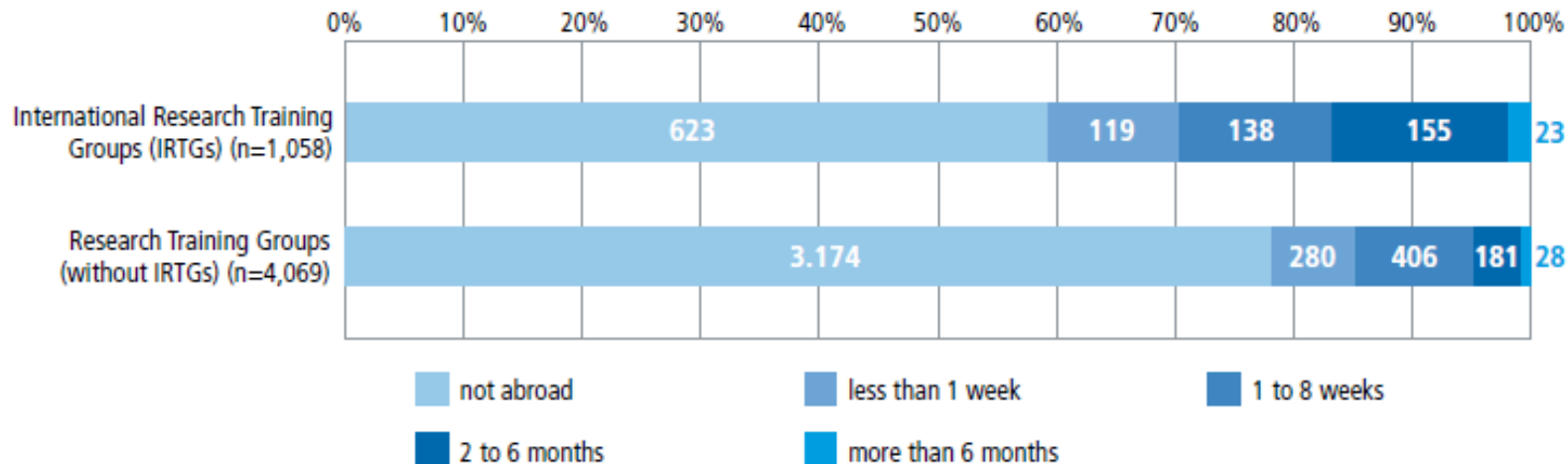
- Higher percentages of PIRE PIs and graduate students continued to collaborate with foreign researchers after the project had ended^a



^a i.e., after the award end date, or after the participant's role in project had concluded. Analyses restricted to those who reported a collaboration during the project with a foreign researcher.

Granderath: DFG IRTGs

- IRTGs provide an opportunity for longer-term international research experiences than RTGs



- Time to degree is not negatively impacted
- Publication intensity is equivalent

Karen DePauw – Virginia Tech

*International Research Experiences: Challenges and Opportunities
for Graduate Students*

Thomas Jørgensen – European University Association

FRINDOC: Evaluating the Institution

THE INSTITUTIONAL PERSPECTIVE

DePauw: Institutional Goals

- Institutional Barriers
 - financial aid limitations while students are abroad
 - time away from a student's primary research project
 - institutional concerns about return on investment
- Investigate innovative ways of providing international experiences to students who do not have travel opportunities, a.k.a. "internationalization at home."
- Universities should document the purpose of internationalization and establish guidelines for assessing the impact of internationalization efforts.

Jørgensen: FRINDOC

- “Framework for the Internationalisation of Doctoral Education” (still in development)
- Convergence of two trends in doctoral education
 - The professionalisation of management – doctoral schools, quality assurance
 - The importance of doctoral education for international strategies and research collaborations
- EUA wanted to find a structured way of talking about internationalisation of doctoral education, beyond the mobility discussion
- The project consortium created a framework with main dimensions and individual elements of the institutional development perspective
 - Mobility
 - Research Capacity
 - Institutional Structures
 - International Profile
- <http://www.eua.be/activities-services/projects/past-projects/internationalisation/FRINDOC.aspx>

Gerhard Erker – University of Münster
Lessons from IRTG in Chemistry

Judith Kroll – Penn State University
Lessons from PIRE: An international network for graduate research and training in cognitive neuroscience and linguistics

THE PRINCIPAL INVESTIGATOR PERSPECTIVE

Erker: Lessons from IRTG

IRTG in Chemistry with [Nagoya University](#); 60 doctoral students each spent 6 months in Japan; 35 students from Japan spent 6 months at the University of Münster over nine year project period.

- Even though most PhDs in Germany find industrial positions, those in the IRTG had an employment advantage because of their international experience.
- The cohort model provides the framework for future research collaborations and fosters mobility.
- The accelerated professional development helps participants achieve those collaborations (network) more quickly.

Kroll: Lessons from PIRE

Interdisciplinary program in cognitive psychology, linguistics, and cognitive neuroscience.

- Benefits to Students
 - Participants collect data that would otherwise be impossible to collect at the home institution
 - Professional development opportunities
 - Meet a new cohort of graduate students
- Benefits to the PIs
 - Form new collaborations
 - Students become the catalysts for new lines of collaborative research
 - A steady stream of visitors to our laboratories
 - Graduate recruitment tool

Kara Spiller, Assistant Professor - Drexel University

Andrea Stith, Assistant Director for Interdisciplinary Education - University of Colorado-Boulder

Lisa Deuse, IRTG Participant - Universities of Aachen/Pennsylvania

THE PARTICIPANT PERSPECTIVE

The Participant Perspective

- Common Observations
 - “Increased confidence” as a key outcome of their experiences
 - They would not have been able to go without financial support
- Their Recommendations
 - Minimum stay of six months desirable to achieve benefits
 - Survey participants before, during, and after stay
- *“My international experiences completely changed the way I think about science and scientists.”*
- *“...the experience ... made me more competitive on the job market and showed my subsequent employers that I can adapt to different data collection systems and environments.”*
- *“This experience ... was influential in geographical considerations when applying for jobs.”*

WHAT CAN WE DO?

Mary Besterfield-Sacre – University of Pittsburgh

Cheryl Matherly – University of Tulsa

Measuring the Impact of Global Preparedness and Competency in Students

Doris Rubio – University of Pittsburgh

A Career Success Model

TRACKING THE OUTCOMES OF INTERNATIONAL RESEARCH EXPERIENCES

Besterfield-Sacre/Matherly: Assessment Tools

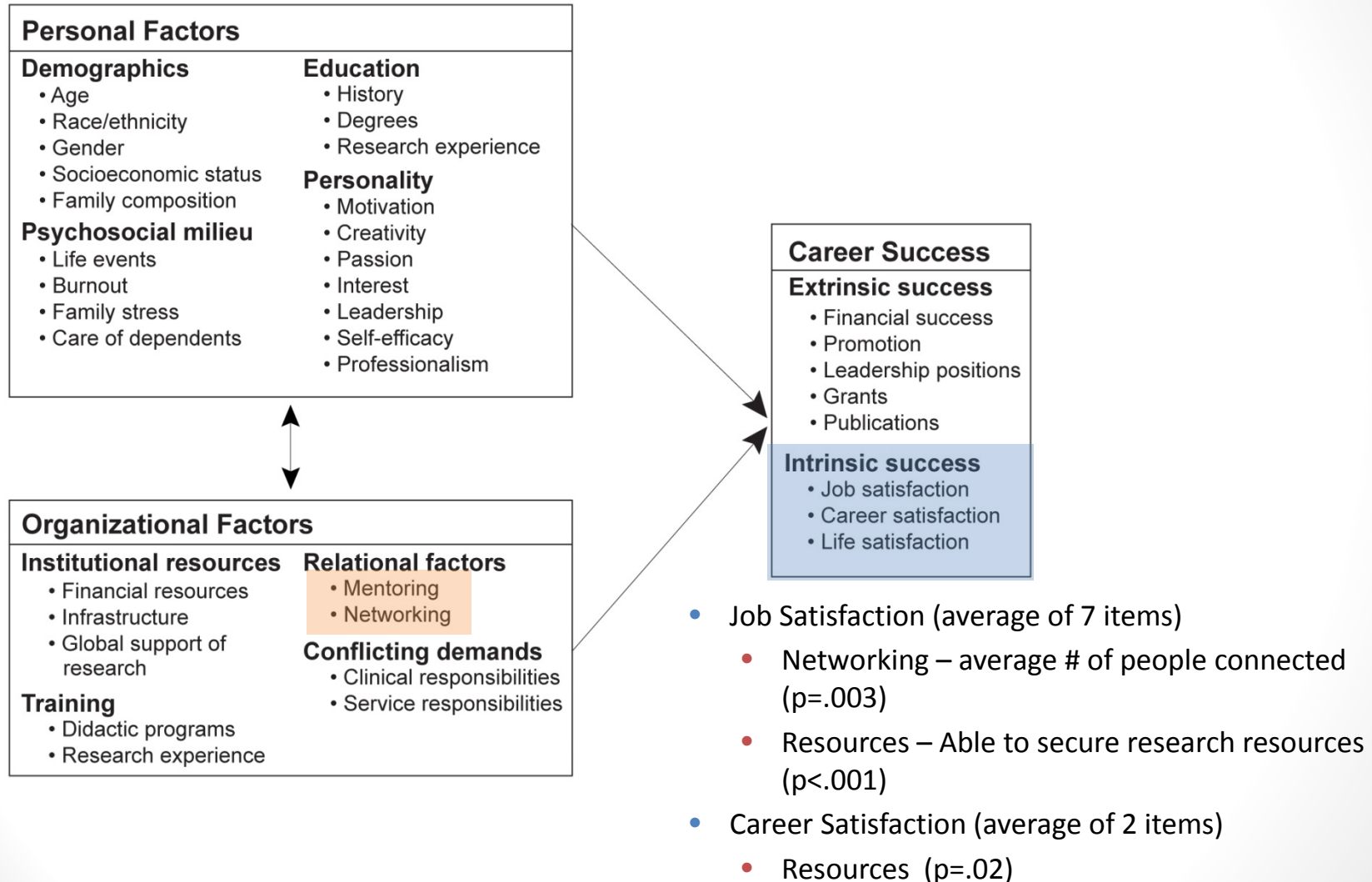
- What should we ask?
 - What are the desired outcomes or attributes of the student? of the program?
 - What is the impact we want to measure?
 - Then determine the instrument that best meets them.
- Where and when in the program?
 - Formative versus summative evaluation
- Are there models to adapt or adopt that we can use to leverage our work? Develop new tools only where necessary, because many already exist.
- See *Handbook of Intercultural Competencies* (Deardorff, 2009)

Besterfield-Sacre/Matherly: Example Assessment Tool

- Global Perspectives Inventory (Larry Braskamp et al.)
 - Quantitative
 - Concise
 - Valid & reliable

COGNITIVE	KNOWING	Degree of complexity of one's view of the importance of cultural context in judging what is important to know and value
	KNOWLEDGE	Degree of understanding and awareness of various cultures and their impact on our global society and level of proficiency in more than one language
INTRA- PERSONAL	IDENTITY	Level of awareness of one's unique identity and degree of acceptance of one's ethnic, racial, and gender dimensions of one's identity
	AFFECT	Level of respect for and acceptance of cultural perspectives different from one's own and degree of emotional confidence when living in complex situations, which reflects an "emotional intelligence" that is important in one's processing encounters with other cultures
INTER- PERSONAL	SOCIAL RESPONSIBILITY	Level of interdependence and social concern for others
	SOCIAL INTERACTION	Degree of engagement with others who are different from oneself and degree of cultural sensitivity in living in pluralistic settings

Rubio: Model for Career Success



Maresi Nerad – University of Washington

CONVERSATION CAFE

What questions would you like to see answered in the context of international research experiences for graduate students?

Value Added

- Does the research experience add value to graduate training and education, and if so, how?
 - Does it actually expand participants' networks of collaborators?
 - Does it give them access to new or different resources, facilities, people, or datasets?
 - Does it change the way a student approaches or conducts research?
 - How do these factors and outcomes vary by discipline?
- What is the return on investment to the student, advisor, institution, funding agency or society, and how do we distinguish between them?
- Are there competencies that are unique to international experiences and how could they be measured?

What questions would you like to see answered in the context of international research experiences for graduate students?

Career Impact

- How do the outcomes of an international research experience align with the students' professional development needs? Does it fill a gap?
- Does an international research experience favorably alter a student's career pathway?
- What are the long-term impacts of international experiences?
- How do employers perceive international experiences when hiring?

What questions would you like to see answered in the context of international research experiences for graduate students?

Barriers to Participation

- What are the strategies to incentivize/ensure adequate representation by and support of under-represented minority students?
- What are the deterrents and motivators to graduate students going abroad?
- How can technology contribute to or provide new forms of international research collaborations and experiences?

What questions would you like to see answered in the context of international research experiences for graduate students?

Timing and Duration

- Is graduate school the best time for an international research experience? Is it unique and sufficiently different from similar experiences at the undergraduate or post-doc level? If so, what are the differences?
- When is the optimal time for a graduate student to go abroad?
- How to best measure the comparative value of short, medium or long-term research stays (3, 6, or 12 or more months)?
- What are the influences of student age and prior experience on timing, duration, destination and purpose of the research visit?

From your perspective, what is the best approach to evaluate international research experience for graduate students?

All groups recommended a mixed method approach (both quantitative and qualitative) that includes longitudinal data collection and allows for differential analysis by demographics, discipline, and country. The specifically cited the following evaluative activities as critical:

- Both formative and summative evaluation
- Pre- and post-participation surveys
- Employer surveys
- Individual and group reflection (e.g., blogs, photo journals)
- Triangulating evidence (e.g., third-party ratings along with surveys to compare viewpoints)
- Measurement of specific indicators of intercultural adaptability.

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Workshop Recommendations

- **Federal agencies and organizations** that support international research collaborations – for either individuals or groups of students – should:
 - a. enable systematic reporting of student outcomes as part of the project evaluation.
 - b. also support foundational and longitudinal data collection and research studies that evaluate the long-term impact of international research experiences on participants' research careers and the global preparedness of the workforce.
 - c. provide statistics and information on students engaging in credit and non-credit activities abroad by degree level whenever possible.
- **Funding agencies and institutions** should support early career researchers who have previous international research experiences in order to build and maintain international professional research networks.
- **Institutions** that support international activities at the graduate level should incorporate long-term participant career tracking into their formative and summative assessment activities.
- **Principal investigators** on collaborative international research projects should have embedded assessment and evaluation protocols for measuring the impact of their activities on participant career development, future leaders' personal development, and global citizenry.
- **Graduate students** who participate in international experiences should be prepared not only to participate in long-term evaluation projects, but also to share their experiences with their peers and colleagues in formal and informal settings in order to demonstrate both the individual and collective good of their experiences.

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Resources

Presentations, background information, and Workshop Final Report and Executive Summary:

<http://cgsnet.org/2016-cgsnsf-workshop-evaluating-international-research-experiences-graduate-students>



Additional Resources

- **Nerad, M., & Blumenfield, T. (2012).** *Investigating the international experiences in STEM graduate education and beyond: Report from the february 2011 workshop to develop a research agenda.* Seattle, WA: Center for Innovation and Research in Graduate Education, University of Washington.
- **Deardorff, D. (2009),** *The SAGE Handbook of Intercultural Competence*
- **The World is the New Classroom: Non-Credit Education Abroad,** A Study of U.S. Student Participation in Non-Credit Education Abroad and U.S. Institutions' Data Collection Processes, Institute of International Education (2016)
- **Global Engineering Collaborative** - <http://geec.info/>

Advisory Committee

Brian S. Mitchell (Co-organizer)

Dean-in-Residence
Council of Graduate Schools/National Science
Foundation

Max Vögler (Co-organizer)

Director, DFG North America
German Research Foundation (DFG)

Anne L. Emig

Program Manager, International Science &
Engineering
National Science Foundation

Kevin Finneran

Director, Committee on Science, Engineering, and
Public Policy
The National Academies of Sciences, Engineering, and
Medicine

Kevin Hovland

Deputy Executive Director
NAFSA

Maureen McCarthy

Associate Director of Advancement and Best Practices
Council of Graduate Schools

Julia Kent

Assistant Vice President, Communications,
Advancement and Best Practices
Council of Graduate Schools

Maresi Nerad

Professor and Director, Center for Innovation and
Research in Graduate Education (CIRGE)
University of Washington

Henning Schroeder

Vice Provost and Dean of Graduate Education
University of Minnesota

Rick Tankersley

Program Manager, Division of Graduate Education
National Science Foundation

Brian S. Mitchell

bmitchell@cgs.nche.edu

Max Vögler

max.voegler@dfg.de

THANK YOU!

Speakers and Moderators

Mary Besterfield-Sacre

Associate Professor
University of Pittsburgh

Karen P. DePauw

Vice President and Dean of Graduate Education
Virginia Polytechnic Institute and State University

Lisa Deuse

IRTG Participant
Aachen/University of Pennsylvania

Carter Epstein

Abt Associates, Inc.

Gerhard Erker

Organisch-Chemische Institut
Westfälische Wilhelms-Universität Münster
Germany

Dean Evasius

Division Director, Division of Graduate Education
National Science Foundation

Sebastian Granderath

Program Director, International Research Training Groups
German Research Foundation (DFG)

Thomas Jørgensen

Head, Council for Doctoral Education
European University Association

Judith Kroll

Distinguished Professor of Psychology, Linguistics, and Women's
Studies
The Pennsylvania State University

Denise Manahan-Vaughan

Dean of Studies and Director of the International Graduate
School of Neuroscience Ruhr University Bochum, Germany

Cheryl Matherly

Vice Provost for Global Education
University of Tulsa

Suzanne Ortega

President
Council of Graduate Schools

Doris Rubio

Director, Center for Research on Health Care
University of Pittsburgh

Kara L. Spiller

Assistant Professor
Drexel University

Andrea Stith

Assistant Director for Interdisciplinary Education, BioFrontiers
University of Colorado

Participants

Rebecca L. Bellinger

Director, Office of Global Initiatives,
University of Maryland

Sigrid Berka

Executive Director, International Engineering Program
University of Rhode Island

Tami Blumenfield

Assistant Professor
Furman University

Brent Bridgeman

Distinguished Presidential Appointee
ETS

Darla Deardorff

Executive Director, Association of International
Education Administrators
Duke University

Annette Doll-Sellen

Director, DFG Office North America/New York
German Research Foundation (DFG)

Cassandra Dudka

Program Manager, International Science & Engineering
National Science Foundation

Cathleen Fisher

President
American Friends of the Alexander von Humboldt Society

Amy Flatten

Director of International Affairs
American Physical Society

Jon Gordon

RTI

Elizabeth Heitman

Associate Professor of Medicine and Anesthesiology
Vanderbilt University

Belinda Huang

Executive Director
National Postdoctoral Association

Brent K. Jesiek

Associate Professor
Purdue University

Nimmi Kannankutty

Deputy Division Director, Division of Graduate Education
National Science Foundation

Nina Lemmens

Director
German Academic Exchange Service (DAAD)

Libby Lyons

Office of International Science and Engineering
National Science Foundation

Julia Melkers

Associate Professor
Georgia Institute of Technology

Natalie A. Mello

Vice President for Member Services and Training
The Forum on Education Abroad

Bradley Miller

Chief International Officer and Director
American Chemical Society

Susan Morris

Director, Evaluation
Natural Sciences and Engineering Research Council of
Canada

Rick Nader

Vice Provost for International Affairs
University of North Texas

Barbara Natalizio

AAAS Fellow
National Science Foundation

Mitsuaki Nozaki

Director, Washington Office
Japan Society for the Promotion of Science

Nicole Parker

Mirzayan Fellow
The National Academies of Sciences, Engineering, and
Medicine

Keith Roper

Program Manager, Engineering Education and Centers
National Science Foundation

Tom Rudin

Director, Board on Higher Education and Workforce
The National Academies of Sciences, Engineering, and
Medicine

Taizo Yamada

Adviser, Washington Office
Japan Society for the Promotion of Science

Besterfield-Sacre/Matherly: Assessment Tools

... many already exist!

Title and Link	Assessment Target
Australian Second Language Proficiency Ratings (ASLPR)	Language proficiency
American Council on the Teaching of Foreign Languages (ACTFL) Proficiency	Language proficiency
Beliefs, Events, and Values Inventory (BEVI)	Personal disposition toward transformational experiences
Cross-Cultural Adaptability Inventory (CCAI)	Cross-cultural workplace adaptation
Culture in the Workplace Questionnaire	Cross-cultural workplace adaptation
Global Perspective Inventory (GPI)	Individual global perspective
Global Team Process Questionnaire (GTPQ)	Global teams effectiveness and productivity
International Assignment Profile (IAP)	Potential success for an international assignment
Intercultural Development Inventory (IDI)	Orientation to cultural differences
International Mobility Assessment (IMA)	Potential success for an international assignment
INCA Project	Intercultural competence
Intercultural Readiness Check (IRC)	Intercultural Skills
Objective Job Quotient System (OJQ)	Cross-cultural performance
Peterson Cultural Style Indicator (PCSI)	Cross-cultural awareness and effectiveness
Schwartz Value Survey (SVS)	Cross-cultural awareness and effectiveness
Tests for Hidden Bias	Unconscious prejudices

Adapted and updated from *Handbook of Intercultural Competencies* (Deardorff, 2009)