Award ID: 0801465
Project Characteristics

PI: Phillips, Colin - Reporting Year: 2012

NSF directorates:
Biological Sciences
Computer and Information Science and Engineering
Social, Behavioral, and Economic Sciences

Did you support any IGERT trainees during the current project year?
Yes

Considering the IGERT trainees as a group, how do they compare with graduate students you usually see in terms of their academic/research potential?
Somewhat better than our usual graduate students

How do trainees in your program earn their doctoral degrees?
Trainees earn their degrees from traditional single-discipline departments.
Trainees earn their degrees from multidisciplinary/interdisciplinary programs, centers, or units other than IGERT.
Other (certificates, etc.): Neuroscience & Cognitive Science Certificate Program

Does your IGERT project include undergraduate involvement?
No

If yes, were NSF IGERT funds used for undergraduate involvement?
No

Does your IGERT project include postdoctoral involvement?
No

If yes, were NSF IGERT funds used for postdoctorate involvement?

Indicate the amount of funds from the current year of IGERT support that will be carried over to the next year.
Total funds carried over to the next year: 598087

If carryover funds are entered (i.e., greater than 0), please provide an explanation for these funds:
Project funds are spent at a steady pace and the amount carried over amount will be used to cover a 6th year of the project, via a no-cost extension. The reasons for the carry-over funds are: 1) we had planned 36 student-years to be funded by 2012 and funded 31 to-date; the full stipend budget will be spent through the Y6 no-cost extension. 2) some non-stipend participant support carry-over reflects savings in the tuition and miscellaneous categories; this support is being used to continue to support trainees’ research expenditures as they proceed from fellowship years to dissertation stage; this is especially useful, as many of the research skills and projects developed during the 2-year fellowship period are deployed in the following 2 years.

Participant support costs carried over to the next year: 395964
Stipends carried over to the next year: 191752

Award ID: 0801465
Research Achievements

PI: Phillips, Colin - Reporting Year: 2012

First achievement:
Our efforts to provide students with computational modeling skills to enhance their experimental research has begun to yield concrete results in this year of the project. This was a major objective of our IGERT. In 2009-10 we
made new faculty appointments to support this goal, and this allowed us to offer new foundational courses in computational modeling in 2010-2011. Now, in 2012 we see a sharp change in students’ use of computational models in support of their experimental studies. Annie Gagliardi and Yakov Kronrod have written papers on learning models that will be presented at the 2012 Cognitive Science Society conference. Pedro Alcocer has written a paper on computational models of memory access that will appear in the journal Topics in Cognitive Science. Many other students are now using computational tools in ways that would not have been possible in our program two years ago.

Second achievement:
Our efforts to provide students with computational modeling skills to enhance their experimental research has begun to yield concrete results in this year of the project. This was a major objective of our IGERT. In 2009-10 we made new faculty appointments to support this goal, and this allowed us to offer new foundational courses in computational modeling in 2010-2011. Now, in 2012 we see a sharp change in students’ use of computational models in support of their experimental studies. Annie Gagliardi and Yakov Kronrod have written papers on learning models that will be presented at the 2012 Cognitive Science Society conference. Pedro Alcocer has written a paper on computational models of memory access that will appear in the journal Topics in Cognitive Science. Many other students are now using computational tools in ways that would not have been possible in our program two years ago.

Third achievement:
A team of students has been combining linguistic, psychological, and quantitative skills to investigate how linguistic information is encoded and accessed in memory, using the interpretation of pronouns as a model system. Dave Kush, Shevaun Lewis, Dan Parker, and Sol Lago have tested comprehenders’ use of content-addressable vs. structure-guided access mechanisms. Predictions for this work are informed by Parker’s computational modeling studies. Sol Lago and Wing Yee Chow have used novel quantitative tools to investigate whether pronoun interpretation reactivates word form information in addition to word meaning information. Their results received the best student paper award at the leading psycholinguistics conference in 2011.

Award ID: 0801465
Education Achievements
PI: Phillips, Colin - Reporting Year: 2012

First achievement:
A leading goal of the past two years has been to strengthen training and research opportunities for students in computational modeling. This year a group of new faculty in 3 departments has made this a reality. Naomi Feldman (Linguistics) has started regular computational psycholinguistics lab meetings, attended by around 12 students from Linguistics and Computer Science. Jordan Boyd-Graber (iSchool) serves as rotation advisor for IGERT students Maria Sol Lago and Pedro Alcocer, and he leads the Computational Linguistics and Information Processing meetings that are attended by students from all involved departments. Hal Daumé (Computer Science), Boyd-Graber and Feldman will teach a cross-departmental computational linguistics IGERT seminar in Spring 2013. Students are now more comfortable moving between these 3 departments, and plans are underway to restructure the relevant components of the computer science curriculum to make them more suitable for a cross-department audience.

Second achievement:
In response to feedback from students and our advisory board, we instituted a successful new student reporting system this year. Students maintain a record of their activities in research, training, outreach, and career development, and this serves as the basis for semesterly meetings with advisors, and regular written feedback. These reports provide students with clearer guidelines on what is expected at different stages of their PhDs, and
draws their attention to training elements that are highly valued. For example, it lays out clear expectations for the elements of a successful research rotation, including (i) building new skills, (ii) interacting with new research communities, and (iii) developing specific research products. Faculty members meet as a group to review student progress. This also helps faculty to understand what a wider range of students are doing. This process has greatly improved communication in the program.

Third achievement:
An IGERT seminar on Input and Outcomes in Language Acquisition, examining the relative contributions of the learner and the environment in first language acquisition, was co-taught by Meredith Rowe (Human Development) and Jeff Lidz (Linguistics). The course aims to bridge two traditions in the study of language learning that rarely connect. One tradition aims to explain the uniform success in learners’ mastery of specific linguistic constructions. The other is motivated by evidence from education research that children’s language learning outcomes, as reflected in coarse-grained measures, are profoundly impacted by input and socioeconomic status. A mark of the success of this course is that participation was 3 times greater than the number of registered students, including students and faculty from 6 departments.

Award ID: 0801465
Trainee Achievements
PI: Phillips, Colin - Reporting Year: 2012

First achievement:
Students have begun to successfully apply for jobs, and the benefits of their interdisciplinary training have been apparent. Based on her work combining fieldwork, psychological experimentation, and computational modeling, Annie Gagliardi was offered a tenure-track faculty position. She declined the position to take an NSF postdoc award at Harvard that will allow her to further develop her fieldwork and experimentation on understudied languages. Pedro Alcocer secured an industry position in computational research. Pedro’s main background is in linguistics and cognitive neuroscience, but his interdisciplinary computational training made him particularly attractive to employers. Brian Dillon started a tenure-track faculty position at the U of Massachusetts, where he is at the heart of efforts to build interdisciplinary connections of the kind that he helped to create as an IGERT trainee. Akira Omaki started a tenure-track position at Johns Hopkins with similar goals.

Second achievement:
Many students won awards related to their interdisciplinary training. Erika Hussey was an award winner in the IGERT student poster/talk competition, and both she and Wing Yee Chow won dissertation fellowships for their research. Sol Lago and Wing Yee Chow won a best paper award at the leading psycholinguistics conference in 2011. Shevaun Lewis was recognized with the graduate student service award from our division at the University of Maryland, in recognition of her role in building student leadership in the IGERT program.

Third achievement:
In addition to the many professional presentations and papers that IGERT students authored, this year saw a sharp increase in student leadership in outreach activities, with many students participating in events with high school, middle school, and elementary school students, or presenting their work in public settings. One thing that we have consistently learned is that outreach activities are very beneficial for students’ interdisciplinary training, because talking to a non-academic audience calls on similar skills to talking to a diverse scientific audience.
First Barrier
Issue/challenge:
At the beginning of our IGERT program we assumed that students would uniformly recognize program goals, benefits, and expectations. We expected the program to establish ‘values’ that students would adopt by being exposed to good models, based on seeing similar processes happen in individual groups and departments. We found that this did not scale up to a community that spans many different departments and scientific traditions/cultures. Student understanding of expectations turned out to be varied, they also were unsure of whether they were making good progress, and faculty understanding of the expectations on their advisees and cross-dept mentees was even more uneven. We learned through focus groups and discussions during our 2011 Advisory Board meeting that students and faculty were unsure of IGERT program requirements and even less of research rotation requirements. Other students simply wanted more direct feedback on their progress.
Response:
We made this issue our top priority for 2011-2012. The approach was threefold: 1) creating an online progress report that students maintain and that serves as a basis for discussions with advisors and program leaders; 2) requiring students’ advisors to review the document with the student, and 3) organizing an annual faculty meeting to discuss student progress. This has greatly improved awareness and implementation of program expectation and values. It has helped to strengthen some student-advisor relationships. It has also helped to highlight student needs that we would not otherwise have been aware of. For example, Susan Teubner-Rhodes (Psychology) expressed concern about her limited teaching experience. We responded by creating a pilot interdisciplinary seminar for advanced undergraduates, offered as a cross-listed course between Psychology and Linguistics. This is the first course that these departments have jointly offered, and Susan will be the first instructor.

Second Barrier
Issue/challenge:
The program has faced a long-standing and not entirely inaccurate perception that the College of Arts and Humanities (ARHU) at large, and the Linguistics Department, in particular, are the drivers of the Language Science initiative at the University of Maryland. This is a natural consequence of the IGERT program being housed in the Linguistics department and the program administration residing in the same department. Also, ARHU made substantial financial commitments to allow international students to participate in IGERT activities; this allowed more ARHU students to participate in the program, but further fueled the perception of imbalance. A change in reality and in perception had to occur through out the institution in order to encourage broad ‘ownership’ of the Language Science initiative that has grown out of IGERT.
Response:
We addressed this challenge on several fronts. First, regular presentations clarified to students and faculty the goal of broadening the program and ensuring long-term sustainability. Students showed initiative by fundraising for Language Science-related activities. Language Science Day 2011 was funded by non-IGERT funds from 10 departments and 2 research centers. Students created an umbrella organization for language science students, which is eligible to apply for institutional support. New faculty appointed in 6 departments have shown strong interest in collaboration and co-teaching. This has greatly broadened participation. The university’s new President visited Linguistics in 2011 and learned about the Language Science initiative. Thanks to this and to our advisory board’s annual discussions with deans and administrators, the initiative is now poised to change from a grass-roots effort to a a major institutional research priority.

Third Barrier
Issue/challenge:
The goals of our program are not only to train a specific group of students, but also to lead to sustainable institutional change, and to serve as a model for interdisciplinary language science. This goal is also relevant for ensuring broad buy-in from faculty and administrators. Our advisory board recommended that we redouble our
efforts in ‘branding’ our efforts under the heading of Language Science. Building awareness has been an ongoing
classification, and there are still many things that we need to do better, but progress has been made on a number of
heads.
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heads.

Award ID: 0801465
Outreach Activities

PI: Phillips, Colin - Reporting Year: 2012

Outreach Activity 1
Title: AAAS 2012 symposium in Vancouver by Nan Bernstein-Ratner
Name of media outlet or organization for which outreach was done: American Association for the Advancement of Science
Date of activity: 02/18/2012
Type of activity: Media
Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved:
Nan Bernstein Ratner led a AAAS symposium on "Late children at risk worldwide" on the theme of identifying children at risk for language disorders, in any language of the world.

Outreach Activity 2
Title: Amy Weinberg's leadership in connecting basic science to policy and national security priorities
Name of media outlet or organization for which outreach was done: US Government & Dept of Defense
Date of activity: 05/18/2012
Type of activity: Government
Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved:
IGERT Co-PI Amy Weinberg, Deputy Director of the Center for Advanced Study of Language, organized "Enlighten", a conference bringing together scientists and policy-makers with an interest in language science. One among numerous similar activities.
Outreach Activity 3
Title: Berwyn Heights Elementary STEM Fair
Name of media outlet or organization for which outreach was done: Berwyn Heights Elementary School Science Fair
Date of activity: 12/08/2011
Type of activity: K-12
Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved:
Multiple volunteers from multiple Language science departments volunteered as judges at the science fair for 3rd, 4th, and 5th grade. This was the first annual involvement for IGERT in this event.

Outreach Activity 4
Title: Berwyn Heights Elementary STEM Fair
Name of media outlet or organization for which outreach was done: Berwyn Heights Elementary School Science Fair
Date of activity: 12/08/2011
Type of activity: K-12
Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved:
Multiple volunteers from multiple Language science departments volunteered as judges at the science fair for 3rd, 4th, and 5th grade. This was the first annual involvement for IGERT in this event.

Outreach Activity 5
Title: Colin Phillips' public science talk in Abu Dhabi
Name of media outlet or organization for which outreach was done: NYU Abu Dhabi MEG Center
Date of activity: 04/23/2012
Type of activity: Other: Opening of Research Center
Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved:
Invited talk at the opening of the NYU Abu Dhabi MEG Center: Colin Phillips (LING) "Linguistic Illusions: where you see them, where you don't"

Outreach Activity 6
Title: Development Discovery Night - Infant Network Event for Families
Name of media outlet or organization for which outreach was done: The Infant and Child Studies Consortium
Date of activity: 05/18/2012
Outreach Activity 7
Title: Field Trip for 80 High School Students
Name of media outlet or organization for which outreach was done: Northwood High School, Silver Spring, MD
Date of activity: 02/24/2012
Type of activity: K-12
Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved: 15 IGERT participants led a morning-long series of hands-on activities for 80 AP-Psychology students from Northwood High School, a local school with a very diverse student population.

Outreach Activity 8
Title: Lecture at Northwood Highschool
Name of media outlet or organization for which outreach was done: Northwood High School, Silver Spring, MD
Date of activity: 01/26/2012
Type of activity: K-12
Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved: Professor Jeff Lidz and IGERT students Yakov Kronrod and Susan Teubner-Rhodes visited Northwood HS and delivered a 3-part talk on Structure in Language, Child Language Acquisition, and Language in the Brain to 90 students.

Outreach Activity 9
Title: Lectures at Montgomery Blair Highschool
Name of media outlet or organization for which outreach was done: Local Highschool in Silver Spring MD
Date of activity: 12/20/2011
Type of activity: K-12
Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved: Yakov Kronrod visited to hold the first of many interactive discussions on an overview of modern linguistic
This was the kickoff event by a UMD IGERT member at Montgomery Blair High School and started what we see as a long-term collaboration.

Outreach Activity 10
Title: Maryland Day Community Outreach
Name of media outlet or organization for which outreach was done: General Public
Date of activity: 04/28/2012
Type of activity: Informal Science
Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved:
This is the first annual Cognitive, Neuro, and Language Science Maryland Day tent. 13 varied outreach events are taking place engaging the public as a coherent, unified, and strong body representing many groups, departments, and centers.

Outreach Activity 11
Title: Meet the Scientist: Rochelle Newman (HESP) "Babies' Making Sense of Sounds"
Name of media outlet or organization for which outreach was done: General Public in DC
Date of activity: 04/28/2012
Type of activity: Informal Science
Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved:
Meet the scientist public event in Washington DC part of the USA Science & Engineering Festival. IGERT professor Rochelle Newman is giving a talk at this event.

Outreach Activity 12
Title: Mike Long's work with CASA de Maryland
Name of media outlet or organization for which outreach was done: CASA de Maryland
Date of activity: 01/01/2012
Type of activity: Other: Adult education
Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved:
IGERT co-PI Mike Long and his students developed curricula for English language programs for Hispanic immigrants through CASA de Maryland.

Outreach Activity 13
Title:
Outreach Activity 14
Title:
University Park Career Day
Name of media outlet or organization for which outreach was done:
University Park, MD
Date of activity:
05/16/2012
Type of activity:
K-12
Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved:
Several students will take part in the event. It will involve talking about careers as scientists to elementary school kids. This will also be the first year that the Language Science community is involved with this program.

Outreach Activity 15
Title:
University Park Elementary School Science Fair
Name of media outlet or organization for which outreach was done:
University Park Elementary
Date of activity:
02/01/2012
Type of activity:
K-12
Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved:
Several Language Science students volunteered as judges for the science fair. This was the first year that IGERT had gotten involved in working with this school.

Outreach Activity 16
Title:
VL2 workshop on EEG and MEG by Wing Yee Chow and Sol Lago
Name of media outlet or organization for which outreach was done:
Visual Language and Learning (VL2) Science of Learning Center
Date of activity:
09/01/2011
Type of activity:
Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved:

Wing Yee Chow and Sol Lago taught a two-hour workshop on EEG and MEG to a group of fourteen students in the NSF-funded Visual Language and Learning (VL2) Science of Learning Center at Gallaudet University. The students came from 9 universities.

Award ID: 0801465
NSF Highlights
PI: Phillips, Colin - Reporting Year: 2012

Uncovering predictors of language learning speed in two-year olds

If a video is associated with the Highlight, please provide a URL link to the video:
http://ling.umd.edu/labs/acquisition/stimuli/PRC.mp4

Primary Strategic Goal:
Discovery: Foster research that will advance the frontiers of knowledge, emphasizing areas of greatest opportunity and potential benefit and establishing the Nation as a global leader in fundamental transformational science and engineering.

Secondary Strategic Goal:
Learning: Cultivate a world-class, broadly inclusive science and engineering workforce and expand the scientific literacy of all citizens.

Describe the achievement / result that is the Highlight:

Recent research in child language acquisition has utilized fine-grained measures of processing abilities to better characterize the underlying knowledge that children use to interpret sentences. New findings by Megan Sutton and her colleagues at the University of Maryland demonstrate that individual differences in syntactic processing speed predict individual differences in pronoun interpretation. These results support the view that pronoun interpretation is driven in large measure by syntactic factors. Not only do 2½ year-old children interpret sentences containing pronouns in the same manner that adults do, but the grammatical knowledge that leads to these interpretations is the same as adults’ as well. Sutton is a trainee in Maryland’s “Biological and Computational Foundations of Language Diversity” program, which is supported by NSF’s Integrative Graduate Education and Research Traineeship (IGERT) program. By integrating methodological and analytical techniques that span the fields of linguistics, psychology, and human development, her research is some of the first to use measures of individual differences in sentence processing to uncover the nature of young children’s syntactic development. Sentences often present ambiguities. For example, the sentence “While she was in the garage, Jane fixed the car” can have multiple interpretations, depending on whether the pronoun ‘she’ refers to Jane or to another woman. Interestingly, the same range of possible interpretations is not available for the seemingly similar sentence “She was in the garage while Jane fixed the car,” which requires the pronoun to refer to someone other than Jane. The origins of this asymmetry have played a critical role in linguistic theory since the late 1960s, with research revealing cross-linguistic uniformity in this dimension and acquisition at least by age 3. Using data from children’s eye-movements while they hear such sentences, Sutton and her colleagues have shown that by the age of 30 months, children’s interpretations are adult-like. By exploring the time course of these eye movements and comparing with lexical and syntactic measures of processing speed, they have demonstrated the role of syntax,
over and above lexical processing, in driving children’s interpretations of pronouns. This finding supports the continuity of linguistic representations across development. This work has several important implications. First, it demonstrates that it is possible to correlate individual differences across several tasks in order to reason about the mental computations involved in sentence understanding. Second, it helps to establish that even infant’s linguistic representations share fundamental properties with adults’. Finally, because this work depends on measures of individual differences, it is possible to link syntactic development with features of the environment or features of the child’s extra-linguistic cognition that might be determinative of the observed variability. Ultimately, this work paves the way for understanding the origins of individual differences in normal and abnormal language development.

How does this activity address the primary and secondary NSF Strategic Goals you indicated above?

Discovery: this work advances our understanding of critical milestones in language development in young children. Learning: this research was made possible through cross-training of PhD students in multiple scientific fields, including Linguistics, Human Development, and Psychology.

Images Uploaded
Image 1 information
Image Title: Children's differences in word processing (left) predict syntactic abilities (right)
Does NSF have permission to use this image?
Yes
Image credits: Jeffrey Lidz
Description of image:

Image 2 information
Image Title: Toddlers' gaze patterns reveal sophisticated sentence comprehension abilities
Does NSF have permission to use this image?
Yes
Image credits: Jeffrey Lidz
Description of image:
Reporting Year: 2012

Award ID: 0801465
IGERT Project Features - Trainee Preparation in Multidisciplinary/Interdisciplinary Research
PI: Phillips, Colin - Reporting Year: 2012

Practice 1
Efforts towards long-term sustainability of our program, and establishing our theme as a major research strength of the university, have been a key factor in the success of the program. Institutional commitment impacts faculty commitment, which in turn affects the breadth and depth of support for students who engage in ambitious and
'risky' interdisciplinary training. Our goal from the outset has been to use the IGERT program as a seed for a broader, long-term initiative in language science. As it has become clearer that this initiative is taking off, commitment to the goals of the IGERT program has grown. Faculty now regard this as a long-term investment, rather than simply a short-term way of securing extra student funding. Also, the institution's commitment to the broader efforts has supported many new faculty hires, which have also benefited student training.

Measure 1
Group feedback
Approval for public use: Yes
Practice 2
Most students receive regular mentoring from their academic advisors, but closer investigation revealed that practices vary widely, even within the same department. Additionally, students expressed uncertainty about their individual standing in the IGERT program. As a response we designed an online self-assessment system that students update each semester, and that serves as the basis for focused discussions with advisors and rotation mentors, and for written feedback from program faculty. Students lead this process, and hence play a more active role in their own assessment. This process has greatly facilitated student-faculty dialog in many cases, raising topics that otherwise might not be discussed. (Incidentally, it makes the NSF reporting easier for students, as the NSF survey responses are a subpart of the students' self-assessment.)

Measure 2
Group feedback
Approval for public use: Yes
Practice 3
Interdisciplinary student training is greatly facilitated by having students work together in cross-department teams. This is important because (i) it forces students to get to know one another better, and (ii) it allows students to feel that they have a unique contribution. We have used this to good effect in three settings. In courses, cross-department student teams work on projects that rely on combined skills, as in a course by Hal Daumé (Computer Science) that brought together CS and Linguistics students. In program organization, students greatly benefit from participation in student leadership teams. In outreach activities, students benefit from working together to design presentations for broader audiences.

Measure 3
Group feedback
Approval for public use:

Mark the following components of multidisciplinary/interdisciplinary research preparation that apply to the majority of IGERT trainees involved in your project during this reporting period. Response
Trainees undertook formal coursework/training in research methods, practices, and instrumentation in their primary discipline equivalent to traditional graduate students. Yes
Trainees had practical, hands-on laboratory and/or field experience in conducting research across the breadth of disciplines in the IGERT program. Yes
Trainees undertook formal coursework/training across the breadth of disciplines encompassed by the IGERT project. Yes
Trainees undertook formal coursework/training in both the ethical conduct of research and ethical conduct related to the themes encompassed by your IGERT project. Yes
Other preparation to conduct high-quality research. No
No components of Trainee Preparation in Multidisciplinary/Interdisciplinary Research applied during this reporting period. No
Briefly describe up to three formal training activities (e.g. coursework, workshop, professional speaker) for preparing IGERT trainees to effectively communicate science to general audiences.

**Activity 1**
All IGERT students give at least one presentation per year to a cross-department speaker series, organized by the students. Most students also give presentations to a broad audience as a part of the annual Language Science Day (September), and most also lead some activities in our annual Winter Storm two-week workshop.
Approval for public use: Yes

**Activity 2**
All IGERT students are involved in one or more outreach activities. In most instances this gives students the opportunity to present their work to a high school students or to a general public audience. Students find these activities highly rewarding. The main high school events are accompanied by evaluation activities in which students discuss what did and did not work well in getting high schoolers engaged in their science.
Approval for public use: Yes

**Activity 3**
All IGERT students must write an initial research proposal and regular progress reports that explain the overall goals of their work and their recent progress to an interdisciplinary audience.
Approval for public use: Yes

Mark the following components of professional skills development that apply to the majority of IGERT trainees involved in your project during this reporting period.

<table>
<thead>
<tr>
<th>Component</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainees undertook coursework/training that included regular faculty critique of and feedback on professional writing.</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees authored, submitted, or published research papers in refereed journals.</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees undertook coursework/training (e.g., brown bags, seminars) that included regular critique of and feedback on professional speaking/presentation skills.</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees made presentations at academic/scientific professional conferences or meetings.</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees presented results from their IGERT project to professional, nonacademic audiences (e.g., industry, government).</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees undertook coursework/training to develop media-based or information technology-based communication skills.</td>
<td>No</td>
</tr>
<tr>
<td>Trainees produced multimedia materials, Web sites, or other cyber-enabled tools to communicate the results of their IGERT activities to external audiences.</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees used multimedia materials, Web sites, or other cyber-enabled tools as part of their interdisciplinary scientific training and collaboration.</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees received training in team-building and project management skills.</td>
<td>No</td>
</tr>
</tbody>
</table>
Trainees received training in effective time and task management. Yes
Trainees **participated as members of teams** engaged in joint research, education, and/or outreach efforts. Yes
Trainees **led teams** engaged in research, education, and/or outreach efforts. Yes

**Other preparation in professional skills development.**
- Series of 4 career development workshops, including a presentation on non-academic careers in science policy. Yes

No components of Trainee Preparation in Professional Skills applied during this reporting period. No

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**Award ID:** 0801465  
**IGERT Project Features - Trainee Preparation for STEM Careers**  
**PI:** Phillips, Colin - Reporting Year: 2012

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**Mark the following components that apply to the majority of IGERT trainees involved in your project during this reporting period.**

<table>
<thead>
<tr>
<th>Component</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainees received training or instruction (e.g., courses, workshops) in effective teaching practices.</td>
<td>No</td>
</tr>
<tr>
<td>Trainees developed and presented course and/or curriculum materials.</td>
<td>No</td>
</tr>
<tr>
<td>Trainees served as mentors to others (e.g., graduate students, undergraduates, laboratory technicians).</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees received training/mentoring in grant proposal preparation.</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees authored/coauthored and submitted grant proposals.</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees received training/instruction on the interaction between academic research and industrial technical requirements.</td>
<td>No</td>
</tr>
<tr>
<td>Trainees received training/instruction for applying their research to address public policy concerns or issues.</td>
<td>No</td>
</tr>
<tr>
<td>Trainees had internships (off-campus, research, educational, and/or work experiences) in nonacademic settings (e.g., industry, government).</td>
<td>No</td>
</tr>
<tr>
<td>Trainees had professional interactions other than internships with nonacademic employers (e.g. industry, government) in order to learn about career opportunities and requirements.</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees communicated, worked, or collaborated with scientists of other nationalities.</td>
<td>Yes</td>
</tr>
<tr>
<td>Other preparation for careers in academia. : Trainees took on active leadership roles in the program, learning and demonstrating skills that would help them in their future academic careers.</td>
<td>Yes</td>
</tr>
<tr>
<td>Other preparation for nonacademic careers (e.g., industry, government). : Trainees had the opportunity to learn about working in a non-academic environment through a Winter Storm panel on translational research.</td>
<td>Yes</td>
</tr>
</tbody>
</table>

No components of Trainee Preparation for STEM Careers applied during this reporting period. No

---

**Award ID:** 0801465
Do you have an overall, active plan with a specific set of goals and timelines for the recruitment and retention of trainees, including specifics for broadening participation of groups underrepresented in science and engineering?

Yes

Regardless of your response to the previous question, please describe up to three of the promising tactics and results for recruiting qualified trainees to your IGERT project during this reporting period.

Tactic 1
We found that individual mentoring and pairing of students with the faculty and student mentors that can best help their career development is conducive to success in recruiting and retaining all students, including those from underrepresented minorities. Providing students with strong role model mentors can be very effective, and co-mentoring has added value, including cross-department mentoring.

Result 1
Two of our new IGERT fellows in 2012 benefited from cross-department co-mentoring. 1) Rachael Richardson - advisors: Bill Idsardi and Naomi Feldman (Linguistics) and Carol Espy-Wilson (Electrical Engineering). 2) Katie Leech - advisors Meredith Rowe (Human Development), Jeff Lidz (Linguistics), and Yi Ting Huang (Hearing and Speech).

Approval for public use: Yes

Tactic 2
Cross-department engagement in recruiting is attractive to top students.

Result 2
Collaboration between Hearing & Speech and Linguistics allowed us to recruit a student who was courted by institutions with far deeper pockets and greater cachet.

Approval for public use: Yes

Tactic 3
Students choose graduate education programs based not only on the department's ranking but also based on the student's perceived chances for success in that education program and prospects for successful employment upon graduation. More generally, students need career mentoring, and it needs to be tailored to individual needs.

Result 3
Engagement with individual career goals has helped students to secure attractive positions, such as Pedro Alcocer's placement in industry, in a company that that will value his combined talents in linguistics and computation.

Approval for public use: Yes

Please describe the extent to which each of the following practices have been productive for recruiting trainees overall to your IGERT project during this reporting period.

<table>
<thead>
<tr>
<th>Practice</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationships with NSF programs that can provide an undergraduate pool of potential IGERT trainees (e.g., REUs, NSF Centers)</td>
<td>NA</td>
</tr>
<tr>
<td>Relationships with faculty and programs at other academic institutions</td>
<td>Productive</td>
</tr>
<tr>
<td>Use of recruiting resources on your campus (e.g., career service office, graduate studies office)</td>
<td>Somewhat productive</td>
</tr>
</tbody>
</table>
Collaboration with other IGERT projects on recruitment  
Use of professional meetings, conferences, associations to communicate with, reach out to, and market to potential IGERT Trainees  
Other: IGERT students forming personal connections through their rotations and collaborations in other departments.

Please describe the extent to which each of the following practices have been productive for recruiting underrepresented minority and women trainees to your IGERT project during this reporting period.

<table>
<thead>
<tr>
<th>Practice</th>
<th>Underrepresented Minorities</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationships with NSF programs that specifically focus on broadening participation of underrepresented minorities or women in STEM (e.g., LSAMP, AGEP, TCUP, or ADVANCE)</td>
<td>NA</td>
<td>Not productive</td>
</tr>
<tr>
<td>Use of resources on your campus (e.g., academic advancement programs, offices for campus diversity, or minority and women's student groups)</td>
<td>Not productive</td>
<td>Not productive</td>
</tr>
<tr>
<td>Interaction with professional associations, organizations, or committees serving underrepresented minority communities or women (e.g., National Action Council for Minorities in Engineering, Society of Women Engineers, committees in professional societies focused on minority communities and women)</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Bridge programs for entering graduate students</td>
<td>Productive</td>
<td>Productive</td>
</tr>
<tr>
<td>Mentoring or advising arrangements that take advantage of underrepresented minorities or women faculty or graduate students on campus</td>
<td>Productive</td>
<td>Productive</td>
</tr>
<tr>
<td>Relationships with faculty and programs at minority-serving academic institutions (e.g., historically black colleges and universities, Hispanic-serving institutions, or tribal colleges)</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Collaboration with other IGERT projects on recruitment</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Other: Student interactions with visiting faculty/speakers.</td>
<td>Productive</td>
<td>Productive</td>
</tr>
</tbody>
</table>

Award ID: 0801465  
IGERT Project Features - International Opportunities  
PI: Phillips, Colin - Reporting Year: 2012

According to NSF records, this project does not have explicit funding for an international component.

Training Experience/Component 1  
Giovanna Morini spent two months conducting research in Singapore, supported by an NSF EAPSI award. One project examined effects of dialects on word identification, and two other projects examined infants' segmentation abilities across dialects & adult voice discrimination abilities. This trip required Giovanna to learn to work in a very unfamiliar linguistic and cultural setting.

Training Experience/Component 2
Ann Gagliardi continued her series of studies at the University of Tromsø, Norway on children's learning of noun classes. The task of developing and carrying out experiments with children in a less familiar language, and in a setting where participant availability cannot be taken for granted, develops skills that are useful in many kinds of cross-language research.

**Training Experience/Component 3**
Dave Kush conducted 'lab fieldwork' in Delhi, India on Hindi language comprehension. The task of running experiments in India is substantially more demanding than it is to carry out the same studies in our lab in the US.

**Research/Educational Achievement 1**
Susan Teubner-Rhodes' research on Catalan-Spanish bilinguals in Barcelona led to conference presentations, with journal articles in preparation. The same is the case for Dave Kush's research in India.

**Research/Educational Achievement 2**
Ann Gagliardi's many international experiences helped her to secure a tenure-track job offer (declined) and an NSF postdoc award that she will use to conduct research at Harvard on the learning of Mayan languages of Central America.

**Research/Educational Achievement 3**

Is international participation required for all trainees involved in your IGERT project?
No

Did one or more trainees from your IGERT project engage in an international experience through the project during this reporting period?
Yes

**Specific International Experiences - Experience Detail 1**

**Country:**
India

**Trainees involved:**
Dave Kush

Which of the following international actions or work in this country involved trainees?  
Response
Trainees attended conferences/workshops.  
No
Trainees undertook coursework/training.  
No
Trainees worked, conducted research/field work, or interned in industrial settings.  
No
Trainees worked, conducted research/field work, or interned in academic settings.  
Yes
Trainees worked, conducted research/field work, or interned in other settings (e.g., national laboratories, nongovernmental organizations).  
No
Other international actions/work.  
No

**Specific International Experiences - Experience Detail 2**

**Country:**
Korea, South

**Trainees involved:**
Sunyoung Lee-Ellis

Which of the following international actions or work in this country involved trainees?  
Response
Trainees attended conferences/workshops.  
Yes
Trainees undertook coursework/training.  
No
Trainees worked, conducted research/field work, or interned in industrial settings. No
Trainees worked, conducted research/field work, or interned in academic settings. No
Trainees worked, conducted research/field work, or interned in other settings (e.g., national laboratories, nongovernmental organizations). No
Other international actions/work.

Specific International Experiences - Experience Detail 3

Country:
Singapore

Trainees involved:
Giovanna Morini

Which of the following international actions or work in this country involved trainees? Response
Trainees attended conferences/workshops. No
Trainees undertook coursework/training. Yes
Trainees worked, conducted research/field work, or interned in industrial settings. No
Trainees worked, conducted research/field work, or interned in academic settings. Yes
Trainees worked, conducted research/field work, or interned in other settings (e.g., national laboratories, nongovernmental organizations). No
Other international actions/work. No

Specific International Experiences - Experience Detail 4

Country:
France

Trainees involved:
Susan Teubner-Rhodes

Which of the following international actions or work in this country involved trainees? Response
Trainees attended conferences/workshops. Yes
Trainees undertook coursework/training. No
Trainees worked, conducted research/field work, or interned in industrial settings. No
Trainees worked, conducted research/field work, or interned in academic settings. No
Trainees worked, conducted research/field work, or interned in other settings (e.g., national laboratories, nongovernmental organizations). No
Other international actions/work. No

Specific International Experiences - Experience Detail 5

Country:
Germany

Trainees involved:
Dave Kush
Daniel Parker
Megan Sutton

Which of the following international actions or work in this country involved trainees? Response
Trainees attended conferences/workshops. Yes
Trainees undertook coursework/training. No
Trainees worked, conducted research/field work, or interned in industrial settings. No
Trainees worked, conducted research/field work, or interned in academic settings. No
Trainees worked, conducted research/field work, or interned in other settings (e.g., national laboratories, nongovernmental organizations). No
Other international actions/work. No

Specific International Experiences - Experience Detail 6

Country:
Norway

Trainees involved:
Ann Gagliardi
Candise Lin

Which of the following international actions or work in this country involved trainees? Response
Trainees attended conferences/workshops. Yes
Trainees undertook coursework/training. No
Trainees worked, conducted research/field work, or interned in industrial settings. No
Trainees worked, conducted research/field work, or interned in academic settings. Yes
Trainees worked, conducted research/field work, or interned in other settings (e.g., national laboratories, nongovernmental organizations). No
Other international actions/work. No

Specific International Experiences - Experience Detail 7

Country:
Spain

Trainees involved:
Susan Teubner-Rhodes

Which of the following international actions or work in this country involved trainees? Response
Trainees attended conferences/workshops. No
Trainees undertook coursework/training. No
Trainees worked, conducted research/field work, or interned in industrial settings. No
Trainees worked, conducted research/field work, or interned in academic settings. Yes
Trainees worked, conducted research/field work, or interned in other settings (e.g., national laboratories, nongovernmental organizations). No
Other international actions/work. No

Specific International Experiences - Experience Detail 8

Country:
United Kingdom

Trainees involved:
Ann Gagliardi
Candise Lin

Which of the following international actions or work in this country involved trainees? Response

Page 111 of 144
Were there active partnerships/collaborations outside of your university through your IGERT project during this reporting period?

Yes

**Academic Partner 1**

**Active Status**

Yes

**Partner Name**

Gallaudet University

**Type of partner**

- Ph.D.-granting institution
- Minority-serving institution

**Funding arrangement for this partner**

Partner provides funding to the IGERT project specifically for IGERT Trainees in any way (e.g., internships, travel, training).

Partner provides funding to the IGERT project for research, curriculum, or other project activities, but not directly for trainees.

**Activities for this partner/institution**

**Facilities:** IGERT trainees use a partner organization's facilities for project activities.

**Collaborative Research/Teaching:** Partner organization's personnel work with IGERT project staff on collaborative research/teaching.

**Personnel Exchange:** IGERT Trainees and/or partner organization personnel use each other's facilities or work at each other's sites on an ad hoc or as-needed basis.
Maryland student So-one Hwang has partnered with deaf students and faculty from Gallaudet to form a project team that is investigating the perception of time-reversed sign language (speakers watch videos of signers in which successive chunks of 100ms, 200ms etc. of video are played backwards; the results are strikingly comprehensible). This provides a powerful tool for understanding the temporal integration windows for language perception. The U of Maryland sponsored a 3-day seminar in November 2009 by prominent sign language researcher Karen Emmorey, which attracted a broad audience of deaf and hearing researchers, and exposed Maryland language experts to current sign language research. Gallaudet students have participated in multiple IGERT events, including Winter Storm and outreach activities. PI Colin Phillips has joined the advisory board of Gallaudet's NSF VL2 Science of Learning Center.

**Academic Partner 2**

*Active Status*

Yes

*Partner Name*

Northwood High School

*Type of partner*

K-12 institution

*Funding arrangement for this partner*

No funding/direct financial interaction is involved in this partnership.

*Activities for this partner/institution*

**Collaborative Research/Teaching:** Partner organization's personnel work with IGERT project staff on collaborative research/teaching.

**Activities for this partner/institution**

Our program’s partnership with Northwood High School continues to expand and improve. NHS is a local school that has a 70% minority student population. IGERT co-PI Jeff Lidz made a presentation to around 150 students at NHS. Around 90 NHS students visited the U of Maryland for a half-day series of interactive workshops. The high school students gained exposure to a college experience, which is new for many of them, and learn valuable lessons about the link between research data and research conclusions. The IGERT students who led the 10 concurrent activities gained a broader perspective on the science that they are already engaged in, and learned how to get non-experts excited about research. This year's event benefited from an ongoing formative assessment process. In addition, this year IGERT students participated in visits to NHS to give presentations to students as a part of the AP Psychology curriculum. Students on both sides continue to find the partnership to be energizing.

**Academic Partner 3**

*Active Status*

Yes

*Partner Name*

IGERT programs at Johns Hopkins U & UPenn

*Type of partner*

Ph.D.-granting institution

*Funding arrangement for this partner*

No funding/direct financial interaction is involved in this partnership.
Activities for this partner/institution

Collaborative Research/Teaching: Partner organization's personnel work with IGERT project staff on collaborative research/teaching.

Activities for this partner/institution

There are 3 IGERT programs in the mid-Atlantic region with a focus on different aspects of language science. As a part of our Winter Storm workshop we held a 1-day “I-95 Summit” on the learning of sound systems, that brought together faculty and students from the three IGERT programs who work on related problems from different perspectives.

Academic Partner 4

Active Status

Yes

Partner Name

Beijing Normal University

Type of partner

Ph.D.-granting institution
Foreign-based institution

Funding arrangement for this partner

Partner provides funding to the IGERT project for research, curriculum, or other project activities, but not directly for trainees.

Activities for this partner/institution

Facilities: IGERT trainees use a partner organization's facilities for project activities.

Collaborative Research/Teaching: Partner organization's personnel work with IGERT project staff on collaborative research/teaching.

Activities for this partner/institution

Two of the lab groups that participate in our IGERT program sent students to Beijing Normal University for summer research projects, leading to a number of research presentations and papers.

Academic Partner 5

Active Status

Yes

Partner Name

Federal University of Rio de Janeiro

Type of partner

Ph.D.-granting institution
Foreign-based institution

Funding arrangement for this partner

No funding/direct financial interaction is involved in this partnership.

Activities for this partner/institution

Facilities: IGERT trainees use a partner organization's facilities for project activities.
Activities for this partner/institution
Our partnership with UFRJ led to a research visit by graduate student Pedro Alcocer and undergraduate assistant Chris O’Brien, which generated useful results and has already led to conference presentations.

**Academic Partner 6**

Active Status
Yes

Partner Name
Hiroshima University

Type of partner
Ph.D.-granting institution
Foreign-based institution

Funding arrangement for this partner
No funding/direct financial interaction is involved in this partnership.

Activities for this partner/institution
Facilities: IGERT trainees use a partner organization's facilities for project activities.

Personnel Exchange: IGERT Trainees and/or partner organization personnel use each other's facilities or work at each other's sites on an ad hoc or as-needed basis.

(i) Research in Hiroshima by U of Maryland students led to conference presentations. (ii) The existing partnership between the Maryland and Hiroshima groups helped the Hiroshima group to secure reciprocal funding from the Japanese counterpart of NSF to support research visits to the US. (iii) The Maryland group is assisting their Hiroshima colleagues in establishing a new US-style PhD program in "Resilience of Mind and Brain".

**Academic Partner 7**

Active Status
Yes

Partner Name
University of Tromsø

Type of partner
Ph.D.-granting institution
Foreign-based institution

Funding arrangement for this partner
Other :Partial support from partnership between Norwegian Science Foundation and NSF's Graduate Research Fellowship program

Activities for this partner/institution
Facilities: IGERT trainees use a partner organization's facilities for project activities.

Collaborative Research/Teaching: Partner organization's personnel work with IGERT project staff on collaborative research/teaching.
Personnel Exchange: IGERT Trainees and/or partner organization personnel use each other's facilities or work at each other's sites on an ad hoc or as-needed basis.

Activities for this partner/institution
IGERT trainee Annie Gagliardi has spent two summers conducting fieldwork on language development in Dagestan, Russia, but the environment there has become too dangerous for her to return. As a result, we developed a new partnership with the University of Tromsø, in the far north of Norway, which hosts a national center of excellence in language and has one of Europe’s leading language research groups. The outcome to-date of this partnership is that Gagliardi has secured a supplemental award through NSF’s Graduate Research Fellowship program, which this year started a new partnership with the Norwegian Science Foundation. This award will allow Gagliardi to spend part of Fall 2010 working in the lab of Prof Marit Westergaard in Tromsø.

Academic Partner 8
Active Status
Yes

Partner Name
University of Potsdam

Type of partner
Ph.D.-granting institution
Foreign-based institution

Funding arrangement for this partner
No funding/direct financial interaction is involved in this partnership.

Activities for this partner/institution
Facilities: IGERT trainees use a partner organization's facilities for project activities.
Personnel Exchange: IGERT Trainees and/or partner organization personnel use each other's facilities or work at each other's sites on an ad hoc or as-needed basis.

Activities for this partner/institution
Brian Dillon completed the computational modeling research for his dissertation through working with Prof. Shravan Vasishth and his students for a month in 2011. In 2012 a group of IGERT students and graduates participated in a joint workshop at Potsdam to debate memory access mechanisms in language comprehension.

Academic Partner 9
Active Status
Yes

Partner Name
University of Barcelona

Type of partner
Ph.D.-granting institution

Funding arrangement for this partner
No funding/direct financial interaction is involved in this partnership.
Facilities: IGERT trainees use a partner organization's facilities for project activities.
Personnel Exchange: IGERT Trainees and/or partner organization personnel use each other's facilities or work at each other's sites on an ad hoc or as-needed basis.

Activities for this partner/institution
Susan Teubner-Rhodes implemented studies on bilingual language processing (Spanish/Catalan) in collaboration with U of Barcelona faculty and researchers from the Center for Advanced Study of Language at the U of Maryland. This led to multiple joint presentations.

Academic Partner 10
Active Status
Yes
Partner Name
Montgomery-Blair High School
Type of partner
K-12 institution

Funding arrangement for this partner
No funding/direct financial interaction is involved in this partnership.

Activities for this partner/institution
Collaborative Research/Teaching: Partner organization's personnel work with IGERT project staff on collaborative research/teaching.

Activities for this partner/institution
IGERT students and faculty partnered with high school students who were forming a new linguistics club, arranging speaker visits at the school and student visits to university labs.

Academic Partner 11
Active Status
Yes
Partner Name
Kenmoor Middle School
Type of partner
K-12 institution

Funding arrangement for this partner
No funding/direct financial interaction is involved in this partnership.

Activities for this partner/institution
Collaborative Research/Teaching: Partner organization's personnel work with IGERT project staff on collaborative research/teaching.

Activities for this partner/institution
IGERT students led events designed to train middle school students in critical thinking and scientific reasoning skills.
Academic Partner 13

Active Status
Yes

Partner Name
South China Normal University

Type of partner
Ph.D.-granting institution
Foreign-based institution

Funding arrangement for this partner
No funding/direct financial interaction is involved in this partnership.

Activities for this partner/institution
Facilities: IGERT trainees use a partner organization's facilities for project activities.
Collaborative Research/Teaching: Partner organization's personnel work with IGERT project staff on collaborative research/teaching.
Personnel Exchange: IGERT Trainees and/or partner organization personnel use each other's facilities or work at each other's sites on an ad hoc or as-needed basis.

Activities for this partner/institution
Wing Yee Chow (Linguistics) spearheaded a new partnership with Prof. Suiping Wang (Psychology, SCNU), using event-related brain potentials and eye-tracking methods to investigate language comprehension. This led to multiple joint presentations, and further studies to be carried out in 2012.

Academic Partner 14

Active Status
Yes

Partner Name
Brigham Young University

**Type of partner**
Ph.D.-granting institution

**Funding arrangement for this partner**
No funding/direct financial interaction is involved in this partnership.

**Activities for this partner/institution**

**Facilities:** IGERT trainees use a partner organization's facilities for project activities.

**Collaborative Research/Teaching:** Partner organization's personnel work with IGERT project staff on collaborative research/teaching.

**Personnel Exchange:** IGERT Trainees and/or partner organization personnel use each other's facilities or work at each other's sites on an ad hoc or as-needed basis.

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Prof. Kira Gor (Second Language Acquisition) partnered with Prof. Grant Lundberg (Germanic & Slavic, BYU) for studies on advanced English-speaking learners of Russian. BYU has strong programs for advanced foreign language learning, serving students who are preparing to be LDS missionaries. Two IGERT students traveled to Salt Lake City to conduct experiments at BYU.

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National Institutes of Health

**Type of government agency**
U.S. Federal laboratory or research facility

**Funding arrangement for this partner**
Partner provides funding to the IGERT project specifically for IGERT Trainees in any way (e.g., internships, travel, training).
Partner provides funding to the IGERT project for research, curriculum, or other project activities, but not directly for trainees.

**Activities for this partner/institution**

**Facilities:** IGERT trainees use a partner organization's facilities for project activities.

**Collaborative Research/Teaching:** Partner organization's personnel work with IGERT project staff on collaborative research/teaching.

**Personnel Exchange:** IGERT Trainees and/or partner organization personnel use each other's facilities or work at each other's sites on an ad hoc or as-needed basis.

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IGERT affiliate Nuria Abdulsabur has completed functional MRI brain imaging studies on language comprehension. IGERT trainee Joshua Riley has been able to use this partnership as the basis for a lab rotation involving research on stuttering and ‘foreign accent syndrome’.

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Government Partner 2
Active Status
Yes

Partner Name
Center for Advanced Study of Language

Type of government agency
U.S. Federal laboratory or research facility

Funding arrangement for this partner
Partner provides funding to the IGERT project for research, curriculum, or other project activities, but not directly for trainees.
Other: CASL provides research supervision and financial support for projects involving IGERT trainees. It also provides partial funding and research supervision for some IGERT Associate students who are full participants in our program.

Activities for this partner/institution
Facilities: IGERT trainees use a partner organization's facilities for project activities.
Collaborative Research/Teaching: Partner organization's personnel work with IGERT project staff on collaborative research/teaching.
Personnel Exchange: IGERT Trainees and/or partner organization personnel use each other's facilities or work at each other's sites on an ad hoc or as-needed basis.
Internships: IGERT Trainees work in a partner's facilities specifically as interns.

Activities for this partner/institution
Links between our IGERT project and CASL: (i) A research project involving two IGERT students (Erika Hussey, Susan Teubner-Rhodes) and faculty from Psychology (Michael Dougherty) and CASL (Jared Novick) led to a research presentation at an international psycholinguistics conference. (ii) CASL played a key role in securing new faculty with language expertise for the Dept of Psychology, by co-sponsoring an appointment for Dr Robert Slevc (Rice University). This will enhance the participation of both CASL and Psychology in our program’s future efforts. (iii) CASL’s support has enabled the establishment of the new Maryland Neuroimaging Center, which will expand brain imaging opportunities for IGERT participants. The center is funded in part by an NSF Major Research Instrumentation award, on which 3 of the 5 co-PIs are IGERT faculty. (iv) CASL has co-sponsored a number of IGERT-led events, including the now annual fall Language Science Day, and community outreach through Maryland Day.

Award ID: 0801465
IGERT Project Features - Project Evaluation
PI: Phillips, Colin - Reporting Year: 2012

Do you have an overall plan with milestones and timelines for measuring progress toward attaining key IGERT project goals?
Yes
If your IGERT project paid for professional evaluation services external to the IGERT institution or used expertise internal to your institution to aid in the evaluation process, please share contact information.
Organization/individual name
Sharon La Voy
Address
Office of Institutional Research, Planning and Assessment, 1101 Mitchell Building, College Park, MD 20742
E-mail address
slavoy@umd.edu
Phone
3014053828
Web site
www.irpa.umd.edu
Was this an external evaluation service provider?
No
Please describe a key insight, and your response to it (if any), that has been identified through assessment and evaluation during this reporting period.
Insight/Learning
During the current reporting period we have carried out three assessment activities: a focus group regarding the students' research rotations, a Winter Storm workshop survey, and a best interdisciplinary teaching practices survey. The report from the research rotations focus group revealed uncertainty among students (and advisors, alike) regarding the precise requirements of a rotation and also, regarding the way the rotation should align with the student's general research plans.
Response
We addressed the issue by drafting clear guidelines including required meetings with the faculty and rotation advisors, and regular updates on progress. Students are reminded of these guidelines when they complete twice-yearly self-assessments (begun in December 2011), and must then discuss the document with their advisor(s). This ensures that all parties involved are aware of the requirements, have shared expectations, and that the rotation does not conflict with any plans the student and their academic advisor have otherwise developed. Additionally, the IGERT program coordinator is available to meet with students to discuss their rotation plans, as needed.

Award ID: 0801465
IGERT Project Features - Institutional Impacts
PI: Phillips, Colin - Reporting Year: 2012

Please consider your responses to the following in light of changes/impacts that have occurred in your institution as a result of your IGERT project during this reporting period.

<table>
<thead>
<tr>
<th>Response</th>
<th>The institution(s) involved in your IGERT project has/have been successful in obtaining large-scale Federal grants (e.g., STC, ERC, MRSEC).</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Interdisciplinary/multidisciplinary courses have been developed for IGERT Trainees and Associates.</td>
</tr>
<tr>
<td>Yes</td>
<td>Interdisciplinary/multidisciplinary courses are being delivered to IGERT Trainees and Associates.</td>
</tr>
<tr>
<td>Yes</td>
<td>Interdisciplinary/multidisciplinary courses that have been developed for IGERT are being delivered to non-IGERT students.</td>
</tr>
</tbody>
</table>
New certificate or degree programs have been developed and are available on the IGERT campus(es). No
Department curriculum or policy changes took place to emphasize or require interdisciplinary/multidisciplinary preparation for all graduate students. Yes
Institutional changes that support and encourage team multidisciplinary/interdisciplinary course development and teaching have occurred. Yes
Institutional changes that support and encourage team-based graduate student learning and assessment have occurred. Yes
Institutional changes that support and encourage graduate students to gain laboratory and research experiences across disciplines have occurred. Yes
Institutional changes incorporating improved recruitment and retention policies and practices for underrepresented groups and women based on IGERT have occurred. No
Other: Interdisciplinary/multidisciplinary courses have been developed and taught by IGERT trainees and associates. Yes

Please describe a demonstrable institutional change (if any) that has occurred during this reporting period due to IGERT
This year the IGERT program has served as a catalyst for several important institutional changes at the University of Maryland. Advocacy by the IGERT's external advisory board, and a series of faculty presentations to senior administrators on the broader prospects for an interdisciplinary science of language have been very effective. The university is now interested in establishing Language Science as one of its primary research emphases. The team leading IGERT has been invited by the Vice President for Research to apply for official status as a Campus Research Initiative, with associated funding for planning new initiatives. Institutional change has also been visible in the growth in co-taught courses, and the first cross-department senior seminar, led by an IGERT student. Deans have also put much support behind an effort to make a series of high profile faculty appointments in IGERT-related areas, as part of a university wide 'cluster hire' competition.

Award ID: 0801465
Comments
PI: Phillips, Colin - Reporting Year: 2012

No data has been entered.
Printed: May 02, 2012

Award ID: 0801465
Publications, Patents, and Presentations
PI: Phillips, Colin - Reporting Year: 2012
Journal Articles in Refereed Publications


Scharinger, M., Monahan, P. J., and Idsardi, W. J. (2011). You had me at Hello: Rapid extraction of dialect information from spoken words. Neuroimage, 56(4), 2329-2338. PMID: 21511041


Journal Articles in Non-Refereed Publications


Books


Book Chapters


Bastiaanse & C. K. Thompson (Eds.), Perspectives on agrammatism. Sussex, UK: Psychology Press.


**Conference Publications**


Conference Presentations


Chow, W. Y., Phillips, C., & Wang, S. (2012, March). Turning the 'Dumb N400' into the 'Smart N400': What role-reversed sentences tell us about the time-course of
predictions. Talk at the 25th Annual CUNY Conference on Human Sentence Processing, CUNY Graduate Center, New York.


DeKeyser, R. (2011, September). The interaction between individual differences and other variables provides an exceptional window into the nature of language learning processes. Guiora Round Table, Max Planck Institute for Psycholinguistics, Nijmegen, The Netherlands.


*Gagliardi, A. (2012, January). Distinguishing input from intake in Tsez noun class acquisition. Talk given at the LSA annual meeting, Portland, OR.


Huang, Y., Hopfinger, J., & Gordon, P. (2011, November). Does the N400 reflect lexical access, integration, or both? Poster presented at the 2011 Neurobiology of Language Conference, Annapolis, MD.

*Hussey, E. K., *Teubner-Rhodes, S. E., Harbison, J. I., Dougherty, M. R., Bunting, M. F.,


Lasnik, H. (2011). The notion of derivations in linguistics: Syntax. 50 Years of Linguistics at MIT, MIT.


Lewis, S., Hacquard, V., & Lidz, J. (2012, April). The pragmatics of belief reports in development. Talk at the 30th West Coast Conference on Formal Linguistics (WCCFL), Santa Cruz, CA.


Invited presentation for Five Colleges Language Consortium conference. Mt. Holyoake College, MA.


Newman, R. S. (2011, October). Infants' early perceptual abilities and how these relate to later language outcomes. Invited talk, George Washington University.


Pietroski, P. (2011, August). Meanings as Instructions to Build Concepts. Five Lectures (8 hours), Beihang University (Beijing University of Aeronautics and Astronautics).


Schnell-Anzola, B., Rowe, M. L., Pan, B. A., & LeVine, R. A. (2011, July). Does maternal schooling and literacy play the same role in mother-child communication in low-income US and Venezuelan families? In M. L. Rowe, P. Uccelli, & J. Test et al. (Chairs), From baby talk to academic language: A festschrift poster symposium in honor of Catherine Snow. Symposium held at the Triennial Meeting of the International
Slevc, L. R., & Martin, R. C. (2011, October). Short-term memory, agrammatism, and syntactic agreement. Talk given at the Academy of Aphasia annual meeting, Montreal, QC, Canada.

Slevc, L. R. (2011, June). Neuroscience for musicians. Invited seminar series at the Exploring the Mind through Music conference, Rice University and Shepherd School of Music, Houston, TX.


