



**The IGERT Program Evaluation:
A Focus Group Study on the IGERT Faculty Perceptions**

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By:
Amanda N. Bowsher
Sharon A. La Voy
Office of Institutional Research, Planning, and Assessment
University of Maryland

Introduction

This report is the result of one assessment in a larger study designed to evaluate Maryland's Integrative Graduate Education and Research Traineeship (IGERT) program in language science. The evaluation seeks to determine the effectiveness of the program in terms of its goals. It also seeks to obtain information that offers insight into the program's most beneficial components and those that could be refined to enhance IGERT's impact. The program evaluation is led by the Director of Assessment in Institutional Research, Planning, and Assessment (IRPA) and a graduate assistant.

Focus groups allow evaluators to explore salient issues pertinent to participants by providing them an opportunity to express their thoughts, opinions, and experiences in their own words. On November 9, 2012 and November 16, 2012, program evaluators conducted two focus group discussions with IGERT-affiliated faculty members. The focus groups were designed to capture data on participants' (a) involvement with IGERT; (b) perceptions of IGERT's impact on students' abilities to conduct interdisciplinary research; (c) experiences with IGERT-affiliated courses and activities; (d) perceptions of IGERT's impact on their academic departments and the university community; and (e) future involvement and aspects of the program they would like to see maintained (see Appendix for protocol).

Data provided in this report represent participants' perceptions of their experiences with IGERT. As always, use caution when generalizing qualitative data beyond this focus group.

Methods

In consultation with IGERT administrators, program evaluators formed the research team responsible for the protocol development, data collection, and analyses of the focus group study.

The focus group protocol was vetted by program evaluators and IGERT program leadership to ensure questions were: (1) clear and understandable; (2) broad, non-leading and open-ended; and (3) capable of capturing a range of issues. Questions were ordered, prioritized, and assigned approximate time limits for discussion based on their complexity and importance. The focus groups were designed to last approximately 60-90 minutes. Program evaluators developed the focus group script, including information about the confidentiality of the session and the informed consent form, as detailed in the IRB agreement.

Data Collection

IGERT faculty members were invited to participate in the focus groups via email. All faculty members who responded and could attend the entire focus group were permitted to participate.

The focus groups were staffed by two or three trained research team members and were audio recorded. One team member served as a discussion facilitator and the others served as note-takers. The facilitator followed the protocol to ensure all topics were covered. The facilitator began by reading a script to communicate necessary information about the discussion. Attendees were informed of the confidentiality of the session and asked to sign a consent form. After initiating the audio recording, the facilitator began the discussion.

Data Analysis

Student employees in the IRPA office transcribed the audio recordings of the completed focus group discussions. Another student employee reviewed the script to verify its accuracy. One evaluator analyzed focus group data using qualitative coding procedures. After reading the transcript and generating a list of common themes, the researcher assigned each theme a code. A second evaluator audited the analyses to confirm that themes were properly assigned and to ensure that the report accurately reflects the focus group discussions.

Participants

Six faculty members participated in the first focus group and four participated in the second. Participants represented several departments, including four faculty from Linguistics, four from Hearing and Speech Sciences, one from Human Development, and one from the iSchool. Some participants were currently or had previously been members of IGERT's executive board. Participants had various levels of faculty rank and at least one was in an administrative role within his/her department.

Results

The following focus group results are grouped into three topic areas: (1) impact of IGERT on faculty and students; (2) the role of IGERT across campus, including relationships between IGERT and departments, and the relationship between IGERT and the language science community; and (3) IGERT moving forward, including participants' perceptions of IGERT activities and their expectations for their future roles in the program.

Impact of IGERT

Faculty Impact

Focus group participants described several ways in which their participation in IGERT has affected their work as faculty members. While they noted that, in general, the program has put more events and opportunities on their already-full calendars, for most participants, IGERT has also positively impacted their research agendas, and advising and teaching experiences.

Time commitments. Though participants described being involved in IGERT in various capacities from advising students, to serving on IGERT boards, to teaching interdisciplinary seminars, they identified lack of time as the most substantial barrier to participating in as many IGERT functions as they might like. One faculty member said that s/he feels like "someone who is in a big candy shop with like a penny to spend," due to the increasing volume of interesting activities and events on campus, including those associated with IGERT. Other participants echoed similar sentiments, emphasizing that they have "tons of time commitments" and that there are "too many things to get involved in at any one time." One faculty member noted that the IGERT community is "lively," which is an "indication of success," but the number of events and activities require him/her to be much more "choosy" about what to attend.

Research, collaboration and mentorship. Focus group participants reported that IGERT has positively impacted their own academic work, but to varying extents. For instance, several faculty members noted that the program has “broadened” their research agendas and made them aware of other people doing interesting work on campus with whom they might collaborate on future research. Some of these relationships have led to new projects and publications. By collaborating with a graduate student through IGERT, one faculty member was able to publish research s/he may not have published otherwise. The program facilitated completion of other research projects for this individual, as well:

I co-edited this volume with this guy [...] who is what I sort of call pre-IGERT, but it was the same sort of thing and that created a small industry and some of the people who were supported by the IGERT I worked with to write a couple of papers that frankly, I wouldn't have even been able to conceive of writing. So it's had an impact on me in that way.

For other faculty members, IGERT has had minimal direct impact on their research. One participant said that although the program has “unfortunately” not affected his/her research, it has “broadened [his/her] intellectual horizons, just because of the talks [and] the collaboration.” This individual suspected that IGERT may not have impacted his/her research agenda because s/he has not hosted a student rotation, which might “stretch” his/her research.

In addition to advancing some faculty members' research agendas, focus group participants reported that the program (especially its Thursday lunch talks) has provided junior faculty with opportunities for networking and mentorship.

I think from a junior faculty perspective, it has been helpful just to talk to other faculty in other departments [...] because we have a small department, and so it is nice to have a cohort of folks who are going through similar things and just to know how they've handled things. So from a mentorship perspective, I feel like I get mentorship from folks in other departments but also from colleagues who are going through the same things that I am going through.

Advising students. Focus group participants who had advised IGERT students said that the new perspectives students brought into their research groups were “very helpful,” but advising student rotations can be time consuming.

I think the challenge is sometimes they, I mean they come because they want to do a project and [...] they want to learn something, but the learning process takes a little bit of time to acquire the skills to do the research and so it takes time. I think it generally works out well because the students are really motivated to learn and so they are willing to put in the time. It takes some time out of ... it takes some of my time as well. Sometimes I think about how many students can I practically host in the lab or make face time with.

Another faculty member expressed disappointment that his/her work with IGERT students has not yet produced publications:

[My work with IGERT students] hasn't led to any published research yet, which I don't know if that, that probably isn't the goal, but that's something I was sort of hoping to get

out of it. Sorry, but that was a little disappointing. [...] People spent some time and we sort of did some interesting stuff, but then it just sort of fizzled out once the time was up.

IGERT courses. Many focus group participants reported either teaching or participating in IGERT interdisciplinary seminars. Those who taught classes in which students from multiple departments were enrolled described how the variety of perspectives enriched the learning process, created interesting discussions, and challenged them as instructors. For example:

[...] the course that I co-taught was sort of, was very interdisciplinary theoretically so that was interesting in that we brought students together from I think six departments to talk about [the topic] from other theoretical perspectives. So that was interesting and challenging because there were a lot of people in the room that really had completely different frameworks and it was fun to see sort of how that played out and to try to figure out what the barrier ... what the differences and similarities and what not were.

Several participants were pleased that IGERT seminars brought together Computer Science and Linguistics students and one participant said there were “some nice projects” that emerged from one such seminar. Others reported that their seminars typically attract students exclusively from one discipline, specifically Linguistics or Computer Science, and in some cases, these more homogeneous classrooms made it difficult for them to meet their teaching goals.

I think it would be nice to have more of a mixture. So far, students enrolled in that course have been exclusively, I believe, from Linguistics. So in terms of really reaching the larger language science community, I'm not sure it's doing so. It's certainly not—I envisioned it as teaching linguists math but also teaching computational people linguistics or psycholinguistics. That can only happen if computational people are interested.

One unique aspect of the IGERT interdisciplinary seminars is that in addition to serving enrolled students, these courses often provide networking and intellectual development opportunities for interested faculty.

I know IGERT is not really dedicated to retooling or refreshing old minds, but it was really a high point of my semester to sit in on that seminar and to carve out time reliably for it in a week because, you know, as we get further along in our careers, it becomes so much harder to sit down and have that kind of class-long experience, and it was just so attractive. The kind of thing that you really wanted to do, even as somebody who doesn't take classes anymore. I think it had benefits beyond the intended benefits to the students. I think it had benefits to the faculty.

Student Impact

Focus group participants noted several dimensions along which the program has impacted IGERT students, and in some cases, non-IGERT students. In particular, faculty members perceived that IGERT offers students increased exposure to the language science community through events, activities, and program requirements. The program also fosters students' development as interdisciplinary researchers through its courses, lectures, and opportunities for students to expand and present their research to the larger language science

community. In addition, participants described how IGERT gives students many service-related, administrative opportunities and responsibilities. Faculty members perceived, however, that similar to their own experiences, IGERT adds to students' workloads and some faculty members have advised particular students to select their responsibilities carefully.

Language science events and opportunities. According to most focus group participants, IGERT has provided those involved, especially students from small academic departments, with more exposure to the language science community and with opportunities to observe and participate in interdisciplinary research.

I think that the program, in general, has been fantastic for all of the students in our department that are language students, because it gives them more courses, it gives them more talks, and a whole bunch of more language-related stuff on campus than we could possibly offer in our department with just three faculty that do this kind of work. So it's been great. And then for those two students in particular that have been funded by it, it's been even better, just in terms of having more required research experience, having more collaborations with people in other departments out of necessity rather than just possibility.

IGERT activities have also prompted some students to get involved with new projects or to join new research labs.

So I led a Winter Storm group [...] and that led the students in that group to come up with the project. And they actually implemented that project. It was a pretty ambitious project and it has students from different departments. I think there are four students involved, and I think myself and one other faculty member, and it is truly an interdisciplinary project [...]. So I think that would not have been possible on this campus had it not been for that IGERT Winter Storm group that kind of led it.

Learning new research skills and methods. Faculty members perceived that courses associated with IGERT offer students the curricular support they need to further their coursework in another discipline and/or to incorporate different methods into their research.

[...] So one [IGERT student] actually took my class without ever having taken calculus, I believe, and [...] was getting tutored on calculus during my class by classmates and so [went] on to [calculus-based] statistics afterwards—taught herself calculus within a weekend. She has really come a hugely long way [...]; she has taken so many computational classes after basically having no background in that area and now is using the types of sophisticated models [...]. So in terms of what the students are getting out of this, I think they are learning a huge amount and they are able to be active in areas where there is no way they would have been able to be active in.

[...] the other thing that really came out of [the IGERT course] was just learning more details about different methods. Because some the methods are similar even across areas and some of them are very different. I think that was really useful for the students, I mean as part of this, in terms of this whole, getting training in different labs you can get some of that from being in a class where you're learning about a whole bunch of different types of, different approaches to the same kind of questions.

Communicating research. Participants noted that IGERT benefits students by creating opportunities for them to observe faculty members from different disciplines debate language science issues and by prompting them to practice presenting and defending their own research to interdisciplinary audiences. For instance, as previously mentioned, in some IGERT interdisciplinary seminars, students are able to observe faculty from different backgrounds debate their ideas.

In particular, what I think some students got out of [the seminar], was the way in which people defend their arguments was very different than it has always been, I think. So, I thought that one went really well.

Although focus group participants perceived that students benefitted from observing faculty discussions in interdisciplinary seminars, they also said that faculty sometimes dominated the discussions and that students can be “a little bit cowed” about participating.

If anything, I felt sorry for the students, because there were about six to eight students enrolled, but each week about 25 people showed up and crowded the room. [...] And [...] the faculty sometimes had to sit back and really just stop themselves, or not, because they risked running away with the class. [...] It was almost too successful in a way and made me wonder if one almost had to gape the number of faculty who wanted to keep coming and participate. [...] I think that was a mixed blessing for the students and they certainly got something out of listening to all of that argumentation, but probably didn't get to bolster their own comfort in discussion as much.

Many faculty members attributed the program's positive effects on student research to IGERT activities other than interdisciplinary seminars—such as student lunch talks and Language Science Day presentations—that require students to present their research to colleagues from disciplines other than their own.

[...] I think what IGERT is really good at doing is forcing students to present their work in a way that is very accessible to the wider community. And I have definitely seen with my students and students in the Linguistics department getting much, much better at making their assumptions clearer and making the topics more accessible.

[...] It's hard to become a professional in your own field and to also be asked to become at least proficient, if not professional, in other areas is a really tough thing to ask of someone. But like I say if you judge it by what's happening to the best people that are coming out of this, I think it has been really, really good and it has been really successful. And I think part of this is [...] these lunches, you know where people are expected to sit up in front of a bunch of people that they may not share common ground with and explain the basis of their research. The same thing is true with Language Science Day. The same thing is just true of the amount of social interaction that I think exists among the IGERT student community and I think that that is all for the good. I mean that is a real success story.

Defining interdisciplinary research. By and large, focus group participants agreed that the IGERT program has had substantial, positive impacts on students' abilities to conduct

interdisciplinary research, but some wondered if how the program defines “interdisciplinary” research might hinder student learning, in some instances.

With regard to the lab rotation requirements, several faculty members agreed that “because of the pressures of doing [their] lab rotations somewhere else” (i.e., outside their department), IGERT students might not take advantage of the diversity of the faculty within their departments. None of the participants seemed fully confident that they knew the lab rotation requirements, and many seemed to think students must complete rotations outside their home academic department. One participant suggested that the lab rotation should be outside the student’s or advisor’s “native discipline” rather than outside the department, but another commented that this change may not be enough.

Yeah, but I wonder, even just changing the wording, I don't know if that quite solves it, in part because this is the student's research program, so I think we do give the students leeway in how they dictate what kind of topics and what kinds of training they want to get under their belt. So, yeah, I think in part it is driven by the student. The student might feel more comfort going to something that they themselves know. Some students are more adventurous than others.

Focus group participants discussed how what constitutes interdisciplinary work might vary by student, department and circumstance. For instance, one faculty member noted that for students whose background is in a related but different discipline from their graduate work, interdisciplinary research involves “actually digging into their home department.”

[...] depending on the student's background, the IGERT program is useful in fostering an interdisciplinary perspective for a student who has just [had experience in our particular discipline]. It forces them to stretch out. But the problem is for the students from a related field who have entered the department and are an IGERT fellow. [...] they're unable to get into the culture of the department because the IGERT, by design, requires lab rotations outside of the department, not outside of the faculty advisor's lab. So what happens is, for example, I'm thinking of one specific student who came from a related field [...] into our department, and she's an IGERT fellow, and so she's required to rotate around different departments which means I have not seen her in any departmental course or activity, and she's going to get a doctoral degree in [our field] without even having put her toe in any departmental course or activity. And that, that's what IGERT pulls away from the department.

This participant went on to note, however, that the “interdisciplines eventually do become disciplines” and when they do, “we can take more for granted in terms of a background training.”

Minimal impact on some students’ research. Though nearly all focus group participants agreed that the program has, in some ways, positively impacted IGERT students’ abilities to conduct interdisciplinary research, one faculty member said that s/he has not yet seen IGERT students translating what they have learned through the program into their research.

I don't think [IGERT has] had much of an effect on my students other than when folks from the outside come in and do stuff with us. And I know that some folks have gone to Winter Storm, and I haven't seen demonstrative effects from that. And I think it's great,

and they're learning new stuff and getting exposed to new stuff, but I haven't seen much of an impact of that yet.

Service to the community. Focus group participants emphasized that similar to their own experiences with IGERT, the program offers students many service-related opportunities, which come with additional responsibilities and time commitments. Faculty members perceived that the administrative responsibilities students take on as a result of IGERT simultaneously help prepare them for similar responsibilities they will have as faculty members, and take time away from other important activities.

I think there is something to be said for all of the students having to work together to organize so many things. I mean I don't know how much this contributes to their interdisciplinary training and research, but [...] they're working with other students from different departments and just their larger perspective about academia in general and all of that I think is probably a really good experience that they may not think about so much in terms of training, but you know there is so much committee work. They do so much, the students do, that is not research, I mean in terms of organizational things and I think that is probably a really good experience in the long run that doesn't get thought about so much maybe.

The committee work and the organizing work they are doing is definitely a strength of the IGERT program. If they were just in a department they wouldn't get that cross-campus socialization and service, but let's just hope that it is not at the cost of more focused research.

I think that there is a huge time commitment via student to IGERT which is very positive, but it is also true that the one thing I find graduate students can't do very well right now is just waste time and think. You know, they are so busy doing so many things that, I think, sometimes I get the feeling that their life is overly hectic.

One participant expressed concern that although students benefit from the administrative work they do through IGERT, in terms of their marketability after graduation, “this all counts as service, but one additional publication counts a lot more.” Faculty members reported worrying about student “burn out” and whether the students are able to meet their research goals when they spend so much time doing service-related activities. Participants noted that the program takes “a lot of organizing” that “seems to fall on the students.” One faculty member suggested that IGERT might benefit from another full-time or part-time administrative employee who could take over some of the event coordination.

Focus group participants appeared to be unfamiliar with IGERT's requirements for student committee participation. Some faculty members noticed a “changing of the guards” with respect to student responsibilities that they thought might correspond with when the students receive IGERT funding. Others said they “see the same names popping up,” which they attributed to either the “nature of [student] personalities” or to the fact that some students select committees that are more “in the background.”

Faculty advice about student involvement in IGERT. Given the amount of time and energy IGERT requires of students, some focus group participants said they talk directly with

their students about managing their responsibilities, including those associated with IGERT. For instance, one faculty member noted that s/he advised students “to strategically pick committees that were [going to] have most of the work at a time when it was more doable.” Another reported discouraging a student from participating in IGERT altogether, due to her research interests.

[...] I had a student and she was interested or thinking about pursuing the IGERT and given her other interests I actually advised her to think twice because in order to become proficient in the area that she clearly wants to pursue. I thought there were other things that would be worth pursuing than IGERT things. I didn't mean to say that she shouldn't have fun, but you know the idea of taking on another, what is it, a three to four course commitment, I think actually would have led her down a wrong path given what she states her interests are. So I have discouraged people from participating in some IGERT events. And, in fact, within Linguistics that is actually a hard thing to do because it is such a sexy path to go down. Plus, there is money if you're one of the lucky chosen, so I think that it has its challenges even within, I believe, the Linguistics department. There are some parts of the department where it is a no-brainer. So if you're in the psycho or computational side it is an obvious fit, but if you are in the syntax, semantics, or phonology side then it is not so clear whether or not you want to put that many eggs in that basket because there are only so many hours in a day. And graduate students have a harder time saying no than faculty do, and faculty have a very hard time saying no.

One faculty member spoke more generally about colleagues who are less involved in IGERT not actively “discouraging” students from participating in the program, but sending messages that say, essentially, “Eh, if you want to do that, you know, go ahead.” Another noted that s/he has heard faculty and students discussing questions such as:

'[IGERT] is all well and good, but should I really be spending my time on this and is it going to bring me, as a computational or an engineering person, further in achieving my goals?'

Effects on non-IGERT students. The IGERT program appears to have different effects on non-IGERT students by department. For example, two faculty members from Linguistics noted that non-IGERT students in the department might feel “a bit neglected.”

[...] we are going around patting ourselves on the back about what a good idea [IGERT] was, but it's had a dark side in the Linguistics department. And that is that people who are not IGERT involved feel marginalized, or can feel marginalized. And given that the department has various wings, this is something, I think, for the department to watch out for in the future. I think that so far it is not a problem. I mean, you can't complain about the success of the program, but it does breed the feeling of exclusion among other students. Not faculty actually, I haven't seen it among faculty, but students who feel like they're not as valued as students who do this other thing.

I mean it is weird because there is this divide where if you're doing experimental work, then you're definitely going to do IGERT. If you're doing theoretical work then somehow there is this feeling that IGERT is not for you, which is not what IGERT is telling the students. But that is the perception that they are having, that if they are doing theoretical work it is not going to be interesting. It is going to be too hard to try to translate whatever

they're doing to a larger community. So I think there is this tension for students who are not, who choose not to be in the IGERT program, not to participate of feeling a little neglected.

Several participants from other departments agreed with the idea that this is “probably uniquely a Linguistics problem.” One faculty member commented that students in his/her program “tend to think of [IGERT] more as elective, so we don't get that sort of schism.” Others noted that non-language students in their departments know very little about the program and are minimally impacted by it.

The Role of IGERT across Campus

Faculty members discussed the varying relationships between IGERT and their academic departments, including perceived benefits and challenges the program brings to their units. They also described the evolving and symbiotic relationship between IGERT and the larger language science community on campus.

Relationships between IGERT and Departments

Faculty reported a number of positive aspects of the relationship between IGERT and their academic units. For instance, one participant noted that his/her department has supported involvement in IGERT by allowing him/her to co-teach an interdisciplinary seminar for credit. Others reported that IGERT has influenced some departments by prompting them to put more emphasis on social activities, which build community and foster collaboration. The program also provides another funding source for students and for recruiting new faculty.

[...] Administratively, it's been helping me to sort of say, you know, "Come here, because look at the environment you'll be in." And people have been very quick to affirm that, that that's an aspect of the campus that they think is, to use [another faculty member's] term, “sexy.”

One faculty member mentioned how IGERT has affected his/her department by bringing together faculty who might typically be in different disciplines.

Well, I think for [my departmental colleague] and me, in many institutions, in order to do the work that other students are doing within the Linguistics department with us, you would need to go between departments. [...] I think that's one of the things that the institution does, it puts us in the same department.

Not surprisingly, the benefits and challenges to the relationships between IGERT and specific academic units differed by department and by individual. Though participants discussed several positive aspects of the relationship between their departments and IGERT, some faculty members, especially those outside the Linguistics department, noted that their departmental colleagues may not be familiar with IGERT and may not expect it to be a priority. This causes IGERT-affiliated faculty to carefully allocate their time between program and departmental opportunities and responsibilities.

Just being in [a department other than Linguistics] it is difficult at times when a lot of the folks in your own department have no idea what IGERT is all about or don't see that as

necessarily what should be your priority, you know. In terms of attending things, and when you're scheduling your busy life, so that can be problematic sometimes.

And I do have to think twice almost always whether to commit myself to something or not. We have so many of our own committees and other time-consuming talks and seminars, and I have two internal seminars that I'm supposed to go to every week. So it is always just sort of a toss-up. And personally I am tempted just to choose what I think is most interesting at the time, and hope that it is all going to work out okay. But sometimes you get comments, "Oh, I didn't see you at the..." you know internal thing or I don't know. So it is challenging personally. I don't know that there is any sort of negativity there because of IGERT in my department. [...] I think that in general, most people that know about it probably think it is good for me that I have that. And I do things to make people more aware when it seems relevant.

[...] I have a senior colleague that is also involved in IGERT [...] and I think she thinks that's all great, but there are other senior colleagues who are sort of peripherally aware because of things like I am asking to teach a class that's not going to serve any of our students and stuff like that. But no one has ever... People say things like, "Oh, that is great, you know that you have this other community." I don't think it is looked at negatively, I just think it's not really totally understood.

Even within academic units, faculty members' perceptions of the relationship between IGERT and their departments differ. One faculty member perceived that IGERT may have created some "tension" in his/her small department, "[...] kind of a looming presence of a big language science community maybe butting into our small department [...]" S/he felt that, due at least in part to IGERT, some of his/her colleagues think there is "too much basic science just flooding into our department that is divorced from the clinical applications." Another faculty member from the same department took a more neutral stance, commenting that "in terms of the actual functioning of the department, compared to pre-IGERT days, I don't see much of a difference."

Faculty from other departments noted that they have not sensed any negativity from non-IGERT faculty in their department and that IGERT has had little impact on departmental activities.

IGERT and the Linguistics Department. As one might expect, faculty from the Linguistics department, the home of IGERT, described a different relationship between their department and IGERT than faculty from other disciplines. One Linguistics faculty member said IGERT has "reinforced the interdisciplinary nature of the department" and it has been the "jewel or crown" of the interdisciplinary initiative in the department. S/he also noted, however, that the emphasis on interdisciplinary work in Linguistics has detracted from discipline-centered work.

It's not that good work isn't being done in the disciplines, as well as the interdisciplines, it's that you don't get the feeling that it's valued by the department as much.

Well, I think that it's interesting that once we sink all of these resources into interdisciplinary, it kinda makes it seem like the best research. It is sort of an objective

fact that the best research is very interdisciplinary, but maybe you re-examine that assumption and maybe you could have very good research.

This Linguistics faculty member went on to discuss how the emphasis on interdisciplinary research in the IGERT program has led to an ongoing conversation within the department about the future relationship between the department and language science.

It's an intellectual as well as an institutional issue for the Linguistics department, and I think the discussion has been very positive, and is going in new directions, but it can be touchy. [...] let me start by saying that I think the whole department has supported the language science initiative, [...] and it's not even been half-hearted. You know, the department has put money where its mouth is in supporting the language science initiative. But I know that there are reservations in some parts of the departments that the work that they consider of equal, if not more importance, would be swamped and will be basically marginalized. So that discussion I think is ongoing. It was prompted by the IGERT because the IGERT was always seen, at least within the department as the front end of a larger language science initiative. And, you know, people are beginning to wonder if they want to succeed. You know, "be careful what you wish for because you might get it?" So that's, and so that just had a real impact, among the faculty at least, in thinking about the future directions of the department and where it wants to go, and how it will try to preserve what it thinks of as some of its strengths, as well as going into directions that it thinks are important intellectually and institutionally.

Relationship between IGERT and Language Science Community

IGERT was designed to build on and support the existing language science community on campus. Focus group participants emphasized that the language science community and its "interrelationships between faculties and different disciplines and students" were in place before IGERT and were helpful in securing the NSF grant. Though the language science community existed prior to IGERT, focus group participants noted that the program has successfully developed a "blurriness" between the two initiatives; that is, at the beginning of the IGERT program, there was a "clear line" between language science events and IGERT events, but now the communities are "merged."

Focus group participants called IGERT the "spearhead" of the larger language science initiative on campus, largely because the program has more resources to devote to language science activities than other entities. Others described IGERT as the "funding mechanism" that provides financial support for language science events. One faculty member characterized the relationship between IGERT and the language science community in the following way:

I might say that I think of them as facets of an enriched whole. So, you know, the IGERT brings things to the language sciences community that it otherwise wouldn't have, but it is just sort of an added facet to it.

Focus group participants also discussed how IGERT leaders have played an instrumental role in developing the Maryland Neuroimaging Center, a valuable resource for the language science community on campus.

Although faculty seemed to agree that IGERT has functioned to provide and secure resources for the existing language science community, they also described how the program has enriched the community. One faculty member noted that IGERT has done something “remarkable” and that it has the potential to affect the way people study language in the Linguistics department and across campus.

Probably we have a once in a lifetime shot at developing a language science community on campus, and that's largely due to the IGERT, and largely due to the activities of two or three people who spearheaded the IGERT [...]. [If leadership of CASL and IGERT programs continue as it has], then what will happen is, together, there is a really decent chance that there will be a language science initiative that is campus wide. If that succeeds, its impact, its possible impact, I don't know about any others but in Linguistics, it's immeasurable. It will change the way that, I think, people think of the discipline, and I think, frankly, I think it will change the way people think about the study of language. Because never before, or again, if it doesn't succeed, will so many different disciplines committed to the study of language be funded at a level that's worth trying to see if this whole thing could actually float. It's an unbelievable achievement in my opinion.

Another faculty member argued that IGERT has already made some lasting changes across campus that facilitate an interdisciplinary approach to the study of language. Some faculty believe that these changes, such as allowing both instructors in team-taught classes to receive instructional credit, will likely remain even without future IGERT grant funds.

I think that, not to suggest to people that fund IGERTs that [the funding is] trivial [...] but I think it's going to be tough to squeeze the toothpaste back into the tube. I think that it will be harder to get events with, perhaps with food in them, if there's no money or things like that, but I think there has been a change in culture that would be tough to completely undo just because the program infrastructure wasn't there anymore, or the IGERT infrastructure wasn't there anymore. So I think it makes a lasting change. Whether or not the same momentum can be built and continue to steamroll, that's another story. I think it has changed things. And I like to think that maybe when you succeed at something interdisciplinary, even with chump change, it does change the way in which they look at some of this stuff, and even things like, you know, and God bless [the individuals] who made some of the arguments that team teaching get double credit, but being here for 30 years, that is not trivial. I mean it is so hard to do that on every single level in the system when you represent teaching effort. And so, you know [...] that might seem like the most trivial and stupid thing in the world but it's actually huge.

Although nearly all participants described IGERT and the language science community as almost indistinguishable, one faculty member from the Computer Science department described a different perspective. Most people in Computer Science, s/he said, “don't really understand what IGERT is. They understand the language sciences, but IGERT is an acronym that they might hear and ignore.” Another faculty member from outside Computer Science described how the “computational folks” have formed their own language science community apart from IGERT:

[...] something that came up in talking to someone from Computer Science was, actually, the Computer Science language folks actually see themselves as a language science

community. Right, they've got a lot of diversity, or we've, I guess, got a lot of diversity within the computational linguistics group, and, you know, range across departments. And so, I think it sometimes...we think we've got this great language science community and then computational folks think we've got this great language science community and it's hard to make people realize, I think, that the other side isn't quite as strong as they think.

IGERT Impact on Campus Community

One of the goals of IGERT is to promote a culture of interdisciplinary research across the university. Results from our focus groups do not suggest that IGERT has had this type of impact outside the language science community, which, as reported above, participants perceive IGERT has strengthened and expanded. With regard to the relationship between IGERT and the university at large, one faculty member commented that winning the IGERT grant is a unique achievement that many other groups on campus have applied for, but been denied. This faculty member said s/he does not believe “the uniqueness of the achievement [of IGERT]” is fully appreciated among campus administrators, who s/he perceives are driven by financial over intellectual concerns.

They care about money, and maybe that's what they have to care about. And fortunately, they are moved to support this after some indications that there might be broad base, how should I put it, a large dark pool of untapped resources that you might be able to dip into. But as a leadership, I have been progressively more and more disappointed in the leadership of the campus as an intellectual group. They have no intellectual aspirations.

Although some participants discussed how campus has “all sorts of reward systems that are not in place for doing the right sorts of things,” they also noted a shift toward placing more emphasis on collaboration and interdisciplinary work in tenure and promotion decisions. They did not, however, comment on whether this emphasis has been spurred by IGERT.

Yeah it's a big deal, and the campus has been relatively good in...I mean it makes a big difference for promotion to tenure. And the campus has been good at coming to understand that out of the College of Arts & Humanities, a single-authored paper or book is no longer the standard. There's a lot of interdisciplinary work; we expect a lot of interdisciplinary work, and in fact we're encouraging a lot of interdisciplinary work. And I think the campus is coming to appreciate that. That they've done well.

IGERT Moving Forward

With regard to the future of IGERT, focus group participants commented on the programmatic activities they perceive to be most effective in fostering interdisciplinary research and how they expect their roles within IGERT and within the language science community to evolve over time.

IGERT activities. Faculty identified five effective IGERT activities they would like to see retained as the program moves forward. They spoke enthusiastically about Winter Storm, student lab rotations, and lunch talks, and recommended that Language Science Day be retained, but scaled back. One faculty member also advocated for continuing to hold the interdisciplinary seminars.

[...] the other thing that's been really successful [...] is the interdisciplinary seminars. They have been real successes, and it's gotten people across campus to meet and talk to one another that frankly would probably never met or talked to one another. [...] It's not easy on this campus to actually run interdisciplinary courses, so to have successful modelers of this on the campus, especially if you want something like a language science community to thrive institutionally, it's important that these kinds of courses be given and succeed. And they have.

Participants described Winter Storm as “the crowning achievement of activities,” “a massive success,” and “an unbelievable cool thing, a great idea” that’s “being carried out even better than [...] anyone hoped it could be.” Faculty discussed how Winter Storm has successfully generated an ongoing toolkits series, as well as continuing interdisciplinary projects. One participant commented:

Well particularly if it's the question of what enables [students] to do cross-disciplinary research, because it really provides tools, and I do agree that it is way, way more effective than I could have imagined something like that would be, you know, written down on a piece of paper.

Though focus group participants agreed that Winter Storm has been “unbelievably successful,” they also mentioned that the program requires “a lot of organization” and it “would perhaps be most endangered if there was no infrastructure behind it.” Several faculty members commented that Winter Storm is held at a “very precious” time and that the workshop may be a more effective use of time for newer students than late-stage students or junior faculty.

I think Winter Storm is really good for beginning students who are just starting to get involved in conducting research. I wonder though for more advanced students, this is very, very precious time between semesters where they can be conducting research, and I feel like having to be, have such involvement in all the activities associated with Winter Storm is a little much. And I feel like that carries over also to the junior faculty that would like to be involved but that is also very, very precious time, right?

Although some participants tossed around the idea of holding the workshop in summer rather than winter term, due to summer travel and other commitments, they ultimately settled on the idea that “there just is not a perfect time.”

Several faculty members commented that the lab rotations are a strength of the IGERT program and that even though they can be time-consuming for faculty, they have been successful in training students to do interdisciplinary research.

I think the lab rotations are pretty good. At least in my limited experience with them, in part because I work with my students one-on-one, my lab isn't that big. And so I think I can see what did they know before and what do they know in order to do the research that they proposed or that they are working on. [...] to do the research or to gain a new skill set, you just have to do a project. It is like an apprenticeship within a new lab and so ... and then usually when they commit to this, it is a commitment on their part and at least the folks that I've worked with, they are pretty gung ho about it. So I think it is pretty successful.

Faculty members repeatedly mentioned the benefits students gain from having to “pitch their work at a level that is accessible to a lot of people” during the IGERT lunch talks; however, they also discussed the added responsibility of providing lunch for attendees on a weekly basis. Some participants perceived that “it is a lot to have to cook for fifty people” and suggested “scaling down” the requirement that students bring lunch. One faculty member went on to describe the logistics behind providing lunch:

They have to go shopping, they have to buy and bring all the stuff. Not all of them might have a car. That definitely I feel is an extra burden. Since we know it is every Thursday maybe we could just have a mechanism of delivery. Or simple, or something like that. I feel that is definitely a burden on students, taking away from either the research and service. It doesn't count as either but it is good two, three hours into their week.

Focus group participants described Language Science Day as “a nice way to check in” and a “good time for us to hang out together.” One faculty member said the event is worth the time and effort because “it puts people together and gives them a free lunch,” but it’s not as “unbelievably great” as Winter Storm. Another said that even though “it is a nice way to get together,” it may not be interesting enough to hold in the distant future. Several participants suggested scaling back Language Science Day, perhaps to just an afternoon and an evening party, without lunch. Others, as represented by the following quote, questioned whether the benefits of the event outweigh the work that goes into its planning:

[...] when I think of, from a distance when I view how much time they've spent and effort, the students and the committee have spent putting that day together, and what we get out of it, I think it is a toss-up. Beyond the funding, whether it is worth the effort put into it, I'm not sure, but it is definitely nice. I mean, having it as half of the day might be part of the problem, where you know it is so much time. They have to organize lunch, they have to have space. It just looks like a lot of organizing that those students are taking on and so in terms of class benefit, I don't know that if we didn't have the funding that that should continue.

Ongoing faculty roles. When asked what they expect their future roles in IGERT to be, focus group participants reported that they anticipate either continuing their current level of involvement or becoming more involved in the program if called upon to do so. Their plans, by and large, tended to be more general than specific and reflected the varying stages of their academic careers. For instance, one participant expected to step down from his/her departmental administrative role and reported looking forward to taking advantage of “all the great stuff going on.” A junior faculty member said s/he came to UMD in part because of IGERT and the language science community, and s/he planned to incorporate more interdisciplinary collaboration into his/her research program. One Computer Science faculty member said s/he hopes to have one of his/her graduate students become more “tightly integrated in IGERT.” Two faculty members reported planning to co-teach an IGERT interdisciplinary seminar together.

One faculty member, who was on campus before IGERT, wondered whether the next generation would “pick up” the language science initiative.

In some ways, it's going to be easier than I thought, and in some ways it's going to be harder. It's going to be easier because people we hired [...] are people who already are

doing stuff that the IGERT had hoped to make possible, right? It's going to be harder because, frankly, second generations often don't have the enthusiasm of the first. And I think those are just the facts. I don't think that's bad, I think that's just why you need the institutional infrastructure there so that you don't have to be as crazy as the people who put it there, but I think that it's going to be a big challenge.

S/he went on to note that the “bar of success” is often higher for the generation that continues an initiative than it was for the generation that created the initiative. The opportunities associated with IGERT, s/he perceived, could be “stultifying” as much as “invigorating” and might intimidate junior faculty.

[...] I know that the people who have led the IGERT have tried to create an environment where the goodies are there for the taking rather than being intimidating. But I'm sure that it works in both ways, I'm sure that's true of graduate students too. When they walk in and they're not sure what they have to do, the bar's higher, there's more expected of them, more time commitments that are expected of them, and you know, I think it's an open question whether or not this succeeds in the long run. The reason disciplines exist is so that there are very comfortable places to be, you know? It makes sense to be in a discipline. Interdisciplines aim to become disciplines.

Summary

IGERT Impact

- Focus group participants reported that IGERT has positively impacted their work by creating opportunities to meet and collaborate with other language science faculty and graduate students on interdisciplinary research. The program also provides junior faculty with opportunities for networking and mentoring. Despite these benefits, participants noted that IGERT adds to their workload and they are often unable to attend all the programmatic events and activities they might like.
- Faculty members reported benefitting from the chance to engage in discussions with colleagues during IGERT interdisciplinary seminars they either teach or attend.

Student Impact

- According to focus group participants, the program has positively impacted IGERT students' abilities to conduct interdisciplinary research by providing them opportunities to attend language science events and collaborate with other faculty and students across campus; and teaching them the academic skills they need to do further work outside their home disciplines.
- IGERT also positively impacts students' development as interdisciplinary researchers by offering opportunities to observe faculty members from various disciplines defend their ideas, and with forums for presenting their own research to diverse audiences.
- Faculty members said the lab rotations have prompted students to become involved in interdisciplinary projects. Though they perceived these rotations were successful, they also emphasized that the rotations require students and faculty to invest a significant amount of time and energy and often do not culminate in publications. In addition,

participants had some concerns about what should qualify as “interdisciplinary” research for the required lab rotations.

- IGERT students appear to spend a lot of time serving on committees and organizing programmatic events and even though faculty members suspected this administrative experience might help prepare students for future faculty roles, they worried that the time and energy devoted to these activities would come at the expense of more marketable pursuits, such as research. Some faculty members encourage students who are interested in IGERT to carefully consider their career goals before making a commitment to the program.

IGERT across Campus

- The relationship between IGERT and individual departments differs across academic units. Faculty members from departments other than Linguistics noted that some of their colleagues are not familiar with IGERT and do not understand their responsibilities to the program. The opposite phenomenon occurs in the Linguistics department—some Linguistics faculty noted that the focus on interdisciplinary work in Linguistics, and the IGERT program, makes disciplinary work less appealing or rewarding. The prominence of the IGERT program may also marginalize non-IGERT Linguistics students.
- Focus group participants perceived that IGERT and the language science community have “merged.” IGERT has bolstered pre-existing language science events and added new opportunities to strengthen the community. Faculty noted that IGERT provides and advocates for additional resources for interdisciplinary research in the language sciences.
- Some participants perceived that regardless of whether the IGERT program continues to be funded by NSF, the program has had a lasting, positive impact on the interdisciplinary study of language on campus.

IGERT Moving Forward

- Faculty members said that IGERT should work to retain Winter Storm, student lab rotations, lunch talks, and interdisciplinary seminars, and should retain, but scale back, Language Science Day.
- Focus group participants expected they would continue to be involved in the IGERT program in the future either through attending more events, advising IGERT students, or taking on more interdisciplinary language science research.

Appendix

Focus Group Protocol

Topics of Interest

- Involvement in IGERT
 - IGERT impact on students' abilities to conduct interdisciplinary research
 - Experience teaching IGERT-affiliated courses and perception of most/least effective IGERT activities
 - IGERT impact on culture and activities of academic departments and university community
 - Future involvement and aspects of program to maintain beyond the life of the grant
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Description of the IGERT Program and Its Goals

The IGERT program is an interdisciplinary program in Biological and Computational Foundations of Language Diversity, which is supported by the National Science Foundation's prestigious Integrative Graduate Education and Research Training (IGERT) program. The IGERT program is designed for highly motivated students who seek broad interdisciplinary training that is not normally available within an individual program. The IGERT program's main goal is to strengthen the language science community at University of Maryland by offering students and faculty venues and resources for interdisciplinary training and collaborative research.

Focus Group Script

Hello, my name is _____. I am _____ (TELL BRIEFLY WHO YOU ARE HERE AT UM). I will be moderating our discussion today about your experiences in the IGERT program. These are my colleagues Sharon La Voy, who will be helping moderate the discussion, and Erica Zippert, who will be taking notes. (EITHER INTRODUCE THE NOTE TAKER, OR LET THEM INTRODUCE THEMSELVES.) I'm going to read the following information from a script to ensure that I communicate all of the necessary information about our discussion. Many of you may be very familiar with the IGERT program. I will read a brief description of the program and its goals [READ ABOVE DESCRIPTION OF IGERT PROGRAM AND GOALS]

This is a focus group, which is a research method useful for gaining information about a topic in a comfortable environment. As participants we ask you to maintain the confidentiality of today's discussion and not share the content with anyone outside the focus group. With your permission, we will be tape recording the session so that the notes will accurately reflect the conversation. Your identity will be kept confidential. We will summarize your responses, no names included, and present our findings, again no names included, to the IGERT program staff. The IGERT program leadership may also present results to agencies funding the project and members of the academic community.

Now I would like you to write your first name on both sides of the card in front of you. These are the names we will use to talk with each other during today's session, but will not be recorded with the focus group data: we will use only the numbers on your card to protect confidentiality.

In order for this to be a productive session, we ask that you speak clearly and one at a time, and that you think about the questions and answer candidly. Keep in mind you don't have to answer every question. While at times you may disagree with the comments made by others, we ask that you respect their right to say what they think. We also want to acknowledge that you may have seen the previous focus group reports or heard about the results. It is important that you try to set aside those opinions. We would like this focus group to reflect your own responses and opinions, regardless of what you have heard from the student focus group. At this point, if you would like to leave and not participate in the focus group, feel free to do so now. [IF ANYONE GETS UP, THANK THEM FOR THEIR TIME.]

This focus group is a part of a larger study to assess the effectiveness of the IGERT program. As NSF states, IGERT is an "experiment in graduate education," and participating in the assessment process is an important part of the educational research effort.

At this point, I will distribute a consent form about the IGERT assessment project. [DISTRIBUTE CONSENT FORM AND GIVE TIME TO READ AND SIGN]. If you feel comfortable doing so, sign the form indicating that you understand the purpose and procedure of the IGERT assessment, and that you agree to participate. If you have any questions about this study, we can be reached through the person in charge of this project, Sharon La Voy. Sharon's contact information is included on the consent form. [HAVE PARTICIPANTS RETURN SIGNED INFORMED CONSENT FORMS. IF ANYONE DOES NOT WANT TO SIGN, AND CHOOSES TO LEAVE, THANK THEM FOR THEIR TIME.]

At this time, I will start the tape and we will begin our discussion. To begin, please state the name you have written on the card and the name of your academic department and program.

1. The first set of questions relates to your involvement with the IGERT program, but as we understand it, the distinction between activities associated with the IGERT program and those associated with the broader language science community are deliberately blurred. Are you able to distinguish between your involvement in IGERT and in the language science community?
 - a. Please tell us about your involvement in the IGERT program.
 - a. *What is your perception of how the IGERT program expects you to involved?*
 1. *[probe] What does being "involved" in IGERT mean to you?*
 2. *[probe] In what activities does an involved faculty member engage? What responsibilities do they assume?*
 - b. *Please describe any challenges or barriers to you or your colleagues' involvement with IGERT.*

2. The next few questions focus on how IGERT has impacted students' abilities to conduct interdisciplinary research.
 - a. *Tell us about your experience advising or assisting student interdisciplinary research teams, student lab rotations, or other cross-departmental activities since you began your involvement with IGERT.*
 - i. *[probe] From your perspective, how have these activities contributed to students' interdisciplinary research abilities?*
 - b. *Please describe your experience teaching IGERT-affiliated courses. By IGERT-affiliated, I'm referring to courses taught in your department or others that enrolled students from the IGERT program.*
 - ii. *[probe] How have these courses affected students' understanding of interdisciplinary research?*
 - c. *Which IGERT activities have been the most and least effective in helping students learn to conduct interdisciplinary language research?*
 - iii. *Are you aware of any products (e.g., publications, presentations) that have emerged as a result of your work with IGERT students?*
3. The next set of questions addresses how IGERT has affected the culture and activities of your academic program and of the university community.
 - a. *How has your participation in IGERT activities influenced the students in your program who are involved in the IGERT program? How has it affected those not involved in the program?*
 - b. *How has IGERT affected your research agenda?*
 - c. *How has your participation in IGERT activities influenced the climate or norms in your program?*
 - d. *What do your departmental colleagues know about your involvement in IGERT? What are their perceptions of your participation in the program?*
 - e. *How has IGERT/Language Science impacted the broader university climate with respect to interdisciplinary research?*
4. We'll wrap up with a couple final questions.
 - a. *Thinking about your future involvement in the language science community at Maryland, what do you expect your role to be?*
 - b. *Regardless of whether IGERT continues to receive NSF funding, what, if anything, do you think should be sustained from the graduate training and*

activities associated with the program (e.g., Language Science Day, Winter Storm, lab rotations, etc.)?

Before we conclude today's discussion, is there anything else you'd like to tell us about your experiences with the IGERT program?