The IGERT Program Evaluation:

A Focus Group Study on IGERT Graduating Student Experiences

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Introduction

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

Focus groups allow evaluators to explore salient issues for participants by providing the opportunity for them to express their thoughts, opinions, and experiences in their own words. On January 21, 2010, program evaluators conducted a focus group study with graduate students who are affiliates of IGERT and will graduate in 2011. The focus group was designed to capture data on participants' experiences with IGERT and interdisciplinary research, the impact IGERT had on their interdisciplinary studies, their knowledge acquisition (see Appendix for protocol).

It should be noted that the data provided in this report are perceptions that participants have of their experience with IGERT, regardless of whether the perceptions are based in fact. As always, caution should be used not to generalize qualitative data beyond this focus group.

Methods

Program evaluators, in consultation with the IGERT administrators, formed the research team responsible for the protocol development, data collection, and analyses in 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) would capture the range of issues. Questions were ordered, prioritized, and assigned approximate time limits for discussion based on their complexity and importance. The focus group was designed to run approximately 60-90 minutes. A focus group script including information about the confidentiality of the session and informed consent form were also developed as per IRB agreement.

Participants

Graduate students were invited to participate via email, only students who were suspect to graduate in 2011 were contacted. All students who responded and could attend the entire focus group were selected to participate. Four students participated in the focus group on January 21st and one student submitted electronic responses after the focus group convened. The participant who submitted electronic responses is distinguished by *asterisks* before and after his/her quotes. Additionally, this individual received a modified focus group script (see appendix). Three of the participants reside in the linguistics department, and the other two are in the computer science and second language acquisition departments. Two students were female, and three were male. All of the participants started their graduate studies five years ago and anticipate graduating in 2011.

Data Collection

The focus group was staffed by three trained research team members and was audio recorded. One served as a discussion facilitator, one supported the facilitator, and the other served as a note-taker. The protocol was followed to ensure that 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 if they had not previously done so. After the audio recordings were started, the facilitator began the discussion.

Data Analysis

After the completion of the focus group, the audio recording was transcribed by student employees in the IRPA office. The transcription was verified by a second student employee. The data were then analyzed by the research team using qualitative procedures. One evaluator analyzed the data collected from the focus group, first by reading the transcript and generating a list of common themes. Each theme was assigned 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 discussion.

Results

The results follow six main topic areas: perceptions and awareness of interdisciplinary studies and the IGERT program, understanding of interdisciplinary research, challenges and opportunities, faculty support, involvement with the program, and feedback/recommendations regarding the IGERT program.

Perceptions and Awareness

First, students were asked about their initial perceptions of the IGERT program and how it influenced their graduate studies. All of the participants were interested in interdisciplinary research when they arrived to campus. One student thought interdisciplinary research was the norm, and by default, they would collaborate across departments throughout their graduate studies.

> I just assumed that when I was going into academia that you know that universities collaborate across departments because as an undergrad you can basically take any classes you want and I never thought that there would be red tape to not be able to do that. Hearing from other people, apparently, it is harder in other programs that have a lot of requirements within their own department that even if you technically have the option in terms of finishing on time, I mean it is not actually easy to do that. So once I got here my assumptions were met, but I guess that was all a lucky thing. It could have been otherwise.

Generally, participants reported that IGERT provided the funds and support to continue doing interdisciplinary research, even if their research was already in progress.

…the outside group that I worked with most and did my dissertation with were people I was working with before the IGERT application had even been approved…[IGERT] allowed me to do some course work that showed me that I wasn't going to go down a particular path I thought I was going to go down, but it didn't really help me with aspects of [connecting me to other departments].

It provided crucial institutional support that helped in a number of ways. In addition to the obvious financial support, the training programs, weekly meetings, and lab rotations put me in much greater and in-depth contact with language researchers in other department than I otherwise would have had…

Whereas, another student reported that IGERT significantly changed their research trajectory:

I am kind of the opposite way because I did not have much opportunity to do interdisciplinary stuff before so as soon as the IGERT rolled in for the next four semesters I'm not sure I even took any classes in my department. I was taking psycholinguistic and cognitive science and all of this other stuff and I got together with you know a small group of people from the first Winter Storm and we turned that into my lab rotation, a big research project that has been at conferences and might have a journal paper here soon. This completely exploded my interdisciplinary abilities.

Participants in non-linguistic departments felt that the inception of IGERT diminished barriers between departments, specifically within the linguistics department.

In my first-year, I had a hard time breaking into this community of very tight linguistic students, but once IGERT came everybody was very open for my presence and the possibility of collaboration. So it made my life a lot easier… I am pretty sure that when I was taking a course in my first-year I was the only non-linguistics student in the entire course and then after that, after IGERT came I am a norm. People from other departments come to take courses and it is a measure of the expectations of feeling of belonging it changes as soon as you have some other people in the same position.

Interdisciplinary Knowledge and Value

Participants were asked about their knowledge and understanding of interdisciplinary research and how this has changed over time. One participant said, "simply to do better research," but followed-up with a more detailed description of interdisciplinary research. This same question was asked of first-year graduate students, who showed interest in interdisciplinary research. First-year students spoke about the basic benefits of collaborating and using resources more efficiently, while this is important, their focus was on the expected benefits. Conversely, graduating students related their interdisciplinary research to broad societal benefits, social responsibility, and they articulated how the IGERT program enhanced skills necessary to be an effective interdisciplinary researcher.

I think society invests so much for us to be able to do our work and we need to make sure that we are doing that efficiently and responsibly. And by making sure people with different backgrounds are solving the problem together rather than separately.

The purpose is to help gain insight on problems of interest by jointly considering multiple points of view. This tends to allow for insight that would otherwise be elusive, but tends to be training-intensive in that it requires acquiring the methodological skills and to some extent the mindset of multiple fields.

It was believed that students had developed complex reasoning and analytic skills due to their interdisciplinary research.

> … [my perspective] changed a lot, I realized, because in my M.A. program I was very focused into a certain theoretical framework. At that time when I was given training mostly from my advisor and people in the department, they were teaching me why other perspectives are not legitimate and you become more critical of other perspectives, but then here, in the interdisciplinary program because I've been exposed to so many other reasoning and other perspectives and why they are claiming it. I think that really changed my...it kind of opened me to other ways of thinking about the problem.

> I think the more I've been exposed to these other different ways of thinking about things the more I look for congruence… with the way I look at the problem from my own disciplinary training. I think you eventually get to the point where you kind of see how these things mesh so you're not as quick to dismiss someone else's view because you don't really understand it.

> I always think of interdisciplinary research as going out after topics that are big enough that if you try to tackle them with just the tools of a single discipline you're going to choke on it. They're just too big. You have to borrow tools and approaches from outside if you have any hope of success for doing anything real about it. That for me is interdisciplinary research, and the kind of stuff that I'm interested in makes it necessary. There is just no other way to do it in a way that isn't silly.

Additionally, students described their knowledge acquisition and an appreciation for varying disciplinary methods and perspectives, even if their research did not engage a particular world view. One student said, *"I feel better equipped to both engage in and promote interdisciplinary research in the future."*

> I think interdisciplinary research is just acknowledging the question you have is not the only question in your field and other fields have similar questions. And also, when you pursue a question, there are multiple ways you can get to the question. And the particular discipline or theoretical frame you have maybe something particular and not the only way to get to the question. There are so many people out there looking at similar things that are closely related but looked at in a completely different perspective, and if you are exposed to these other perspectives, you start thinking about your own perspectives and what it is you're doing.

> I learned that even though it sounds really interesting and I'm glad people do it and are capable of doing it, I cannot be a computational modeler of any kind and it will never happen and it will never work for me. So computational approaches are not something I

can do. I learned that only because of IGERT, I will say that, so it tells me where I actually need to direct my efforts to.

Lastly, students articulated the value of an interdisciplinary focus and the advantages this will provide in their career.

> And [having interdisciplinary foci] is actually very useful. I think it is very useful in the future because in the end you never know where you are going to get hired and you might be put in a position in a department that you're not familiar with. You know, I could get a job in the psychology department somehow then I might have to teach it as a linguist in the psychology department. And at that time my openness and my exposure to these different disciplines will become very useful. And I see people who are interested and directions changing all the time after graduation depending on their job.

Challenges to pursing interdisciplinary research

For the participants in this focus group, the pursuit of interdisciplinary research was not always easy. Some students reported struggling with their interdisciplinary research endeavors and their ability to effectively communicate across departments.

> I've had more challenges than opportunities, honestly, because it is so hard to communicate with people from other disciplines to talk about the same question and just we have very rare occasion of successful Winter Storm research group, but, you know, we have many other failed projects and research groups because we have a hard time communicating, I mean, finding some common ground for research. So it's just really hard to let people know what I'm doing and why it's important and how to see the importance of their research and even if I see it, how to learn the kind of things that I have to learn to do that kind of research. As I said, in linguistics, I decided not to go because there are so many things to learn before you even start asking questions. So, I saw lots of challenges.

> You have to figure out who is, you know, doing [interdisciplinary research] in practice because everyone just assumes that it's a great thing to be doing. But just because you are working with someone in a different sub-field... is that really considered interdisciplinary research?

Similarly, other students reported that inadequate career advice and identifying a mentor was challenging.

> There is some advice that the advisor doesn't even have the experience to give, like one of the discussions was about non-academic careers. If your advisor has been in academia all his life he's not going to be able to give you that advice for example.

Opportunities that support student interdisciplinary needs

Participants discussed the benefit of research teams, inter-department collaboration, outside funding. Additionally, they commented on their ability to achieve greater autonomy in their research studies and the acquisition of skills that enhanced their interdisciplinary research

studies. These opportunities were either embedded in the IGERT program initiatives or in the network of IGERT faculty and peers. This first story illuminates a student's ability to obtain important information at various points in their graduate career:

> Well, starting with the research group that we formed from the first Winter Storm, it was nice to know that if you had a question about something that specific, suddenly you develop this network of people who you can go – who you know where to go to get the question answered essentially, which is very helpful. And with the IGERT taking lots of interdisciplinary classes and getting the chance to go one-on-one with the professor, or something there, it's given me the opportunity to get to know specific people and what they do, and be able to tap them as a resource for you know, "Hey I wanna get on a mailing list that's like this, what would you recommend?" and/or, "Who should I be looking at for a possible post-doc, if I wanted to kind of switch gears and do this other thing." Most of it has been about networking and knowing where to go to get questions answered, which is hard without this kind of exposure to people.

Another student recalled opportunities to develop and explore professional interests, due to IGERT resources:

> I mean certainly my experience has expanded a lot by just being in this program. I met a lot of people outside of my comfort zone. And in my case, I went to IGERT annual meeting last year where the IGERT students and the PI's come and share their ideas and programs and it was a great experience for me because I was able to see what other kinds of other IGERT programs exist out there and what they do and who are the students. And we have very different background from molecular biology to linguistics. So it was a very unique experience for me, and overall I feel like I've been to many conferences thanks to the travel fund. I feel like it has been very great for me, being more exposed to a variety of professional settings.

Students consistently mentioned the value of Winter Storm, specifically the professional development talks.

> This is the third Winter Storm and if you think about the professional development talks I can see a lot of my peers really appreciating that because some of this advice, the field expects that you are supposed to get this advice from your mentors. And not everyone has the ideal mentor who talks to you about both research and career advice as well. So I think just having events like that so people who don't get this advice from people in their department one-on-one they have the opportunity to get the information, that there is a setting for that, and IGERT is conscious of the importance of that, I think is a huge benefit.

> I'd like to add that all that the professional development part was one of the highlights. I would say that the highlight overall three years of the IGERT Winter Storm is definitely the opportunity to just get a group of researchers together and then brainstorm a research idea just because you have the time. I mean this isn't even like your main focus, but when you have this nice back-and-forth with people you respect and who have a completely different background and then seeing that project come to fruition that is just

a really rewarding thing. It is something that gets me excited about continuing in research.

Faculty Support

Faculty members, mentors, and advisors supported participants throughout their graduate studies. Some of these relationships started prior to the inception of the IGERT program, whereas other participants made connections via IGERT programs and the network of faculty associated with IGERT. The type of support varied, some faculty members provide academic and research advice, whereas other faculties provide career and professional guidance. All of the participants benefitted from relationships within their departments and from IGERT faculty.

> I, particularly, had good experiences with faculty members, and I got good mentoring, and advice from people, from IGERT faculty members…And I mean they have lots of experiences in fields that are not specifically on [my research studies] so it's been very helpful for me to get lots of career advice and general writing advice…

> The faculty members in my department they're nice and stuff, but the kind of research that I do is not really 100% related to them because I already am doing some interdisciplinary research… and in terms of career advice, I didn't get that much advice from them, I got it more from IGERT faculty members.

> At every major important point I knew that I could go to somebody knowledgeable to make sure that I was making the correct step… so in terms of working with people who are not in your own department, I think you have to be very clear about what the expectations are and what you're bringing to the table, so that it's not just like a vague relationship, your just talking about big ideas. I think that's really important in working with somebody who's not in your own department.

> *… I have developed very close working relationships with professors outside of my department, and these relationships have been very rewarding.*

One participant was uncertain about their official advisor-advisee relationship because no single faculty member was their main source of information and guidance, but concluded that each advisor brings various resources and allowed him/her to become an independent researcher.

> … I even have a hard time picking an advisor, and I keep a distance from them, but at the same time I'm getting lots of resources, different resources, from different advisors. And I think it's actually nice to be able to be independent, and yet get some access to important stuff so, important help, and I think it is actually a good step for me to become...at some point I have to become this really independent researcher and I think this IGERT program, the advisor-advisee relationship that I have in the Ph.D. program helped me to transition into becoming an independent researcher. So it has been very positive, I'm very happy about my advisor.

Another student shared similar sentiments, stating that although their advisor is not an expert on their research topic, the student always received support and advice.

I'm doing research that no-one in my department has the expertise to guide me on. And something that I've appreciated from my advisor is being given the freedom and the independence to pursue this thing, even though it's not [their] main area of focus, and to give me very practical advice on what I need to do to get the resources to conduct the study.

IGERT Involvement

Participants discussed their involvement with interdisciplinary research teams, coordinated through Winter Storm. Three students had very successful research team experiences and the other two students did not.

It didn't work that well for me… in my case nothing really came out of the Winter Storm research activities, but I have some collaborative work that came out of IGERT seminars so the course that I took they are offered for IGERT students and for course requirements we did some collaboration for projects that became into a bigger project that we are now working on the general publication.

I have been involved with research teams spanning two psychology departments at other institutions, working with psychologists, linguists, and computer scientists. These experiences have helped me shape my research project, building on its computational and experimental components. I think it's fair to say that this collaboration across departments has been crucial for the project, and has improved its quality in many ways.

Subsequently, participants described the difference between a successful and unsuccessful research team.

I think size matters. Because that made it really feel like a small group of researchers where everybody felt like everyone's voice gets heard. From other people's experiences it seems like it just felt like a seminar where you were being talked at. So size definitely matters, and I think people's personalities, the most successful groups involve people where no one person is the most dominate, where you are really coming to learn from other people and not just to teach and being ambitious so that you know what you can aim for. As I became the facilitator of another group this year I tried to take all the things that I think helped our group become successful for my first group and carried that over to this years group. I consciously made an effort to do that.

And in part I think people too, people's mindset when they go into the research group. Some people are really motivated to get something out of this project and then there are other people who have so many projects and, "I know this is a great opportunity to think about this topic, but I don't want to develop and carry on with this study."

I think we tend to pitch these at Winter Storm as, "Come learn about a topic," or if you already know something, "Come make sure that the viewpoint that you have is included," or whatever, and, you know, probably a lot of people get there and are like, "OK, well, that's great. I know a little bit about this now, but I'm not that interested."

While discussing their IGERT involvement, participants articulated a discrepancy between linguistics and non-linguistics student involvement. That is, students within the linguistics department are expected to attend events more consistently than non-linguistics students.

> …if you say you are a part of the IGERT track you are supposed to have a wide range of courses and you're also just expected to show up at events.

> [There is] quite a lot of pressure to have… mandatory participation, even if you don't actually have anything to contribute to certain events. Like you are going to be there and you are going to participate because you are a part of this IGERT thing and I understand the pressure is on them to make this the case and I understand why they would want to mandate attendance. It's not entirely unreasonable, but it does make the whole thing a little less attractive and changes how desirable it was ultimately.

However, one student felt that attending events and helping with event logistics is their way of meeting expectations for a funded student.

> I don't know, it didn't really bother me. In my case I felt like you are getting funding and I am allowed to focus on my research and introduce activities, not worry about TA duties in my time for IGERT I feel like it is the least I can do so it didn't bother me that much, but I can also see if you have other responsibilities on top of this then maybe that would be harder but my approach has been my duty. So that didn't bother me much.

Another student thought that department residency and proximity to events, rather than the actual department, contributes to the discrepancy between linguistics and non-linguistics student expectations.

> I can kind of imagine that people in the linguistics department by being in the center and lots of events happening in this building take additional responsibilities because, after the lunch, somebody has to clean up and after events and before people have to prepare the logistics. Where I can just focus on the things I am responsible and not worry about the [logistics].

Recommendations

When participants were asked to provide program recommendations, they dialoged about IGERT student funding. One student thought that funding decisions should be influenced by students' academic-age.

> … It is definitely better on younger students. And I would say be more strict about the academic age cut-off at which like, you can get the full funding, just because I feel like, part of the problem for me with the program has been that I had these projects already that I had accumulated and was sort of on these fixed roots of, "I need to finish these three projects and my dissertation," and so I was not as able to just, "Oh well here is a research project that comes up via some interdisciplinary class or some interdisciplinary seminar or something," and they're like just run totally hog wild with it and just go for that in a really big way. Whereas someone may be in their first or second year of graduate

school, this is the first-year they're really getting stuck into the IGERT, there's a lot more possibility for them to do that because they have you know a bunch of, a lot more time.

Conversely, another participant reported that funding should be tied to students' participation with interdisciplinary research.

I'm not sure that the, that needs to be necessarily tied to support, so much as participation. I mean if you've got a first-year student that's coming in, participating in the IGERT for two years, and then getting funded, you know, I think you would still be okay but this, if you've proceeded a certain amount down the interdisciplinary track already, it's gonna be harder for you to get as much out of it as someone who has been in interdisciplinary pool from the beginning.

Participants provided recommendations for future students, one student encouraged entering students to be more concerned about their holistic professional development and less concerned about graduating as soon as possible.

…Some students want just to graduate, rather than, you know, making a career or having this, in academics, or pursuing this question for their entire life. So, because of that they want to take an easy way, or take courses that, they just take it in the department and just get the – meet the requirements and then graduate… I say don't be afraid to take courses in other departments, even if it's harder, because it's always harder because it's new to them, and being introduced to, you know, some syntax for the first time may not be easy, and it's gonna be hard. But at the same time at the end you get to have lots – you get to reap the benefit after a while… Don't be afraid to take courses that are unfamiliar to you and that look difficult. And if you just work hard in the beginning it's going to help you in the long run as a researcher.

Students emphasized the importance of pursuing interdisciplinary interests to benefit the interdisciplinary community even if an individual is uncertain about their future research.

I think these incoming students would probably benefit from getting involved in [interdisciplinary research] real early, even if they don't know for sure exactly the path they wanna go down, open up those options at the beginning.

It's important that the student body be open and willing to listen to their colleagues from other departments. Without a broad willingness to reach out and see things from a different point of view, it is difficult to build a large-scale interdisciplinary community.

In general, all of the students praised and appreciated the IGERT program. These appreciations grew from their participation in the IGERT annual meeting and another student's involvement with students at other universities during Winter Storm.

After attending the annual meeting last year and looking at the other IGERT programs, how they run, we're really doing a good job, and I don't think that people are actually realizing it that much or talking about it that way, and by virtue, trying to do a good job,

you always focus on the things that are not going well, but there are things that are going really well, and this level of interdisciplinary activities, it's really, even at that time in the annual meeting you had like 50 different schools, and when I hear them, what's going on in their program, it's really terrible, and we're doing a really good job. So I hope people... I talked about it after attending that meeting. But I hope the participants, including students and faculty, I hope they know that this is going really well, and that, I don't see that much, like I don't think we share that feeling that we're doing good.

[Students at other universities] don't have opportunities like this at their own universities, and knowing about their experience makes me more appreciative of all the opportunities that I have here. And I think it is important to, in person, and through some PR, highlight these positive experiences because, ultimately, that's what inspires people to get more involved. And, it's like, when you reach that sweet spot in participation, that's when, actually, interdisciplinary collaborations can happen.

Summary

- In general, the inception of IGERT positively impacted students academic, professional, and interdisciplinary development throughout their graduate studies.
- Participants were able to articulate the benefits, challenges, and opportunities of pursuing interdisciplinary research with concrete examples.
- Participants had varying levels of success with interdisciplinary research teams and speculated why some research teams were more successful.
- Although students felt supported by various advisors and mentors, sometimes the support was fragmented and difficult to receive due to disciplinary barriers.
- Students value IGERT activities such as Winter Storm, particularly the professional development discussions.
- Some participants reported that students within the linguistics department are expected to attend events more consistently than non-linguistics students.
- Participants offered recommendations related to student funding and ways to encourage holistic development for all students.

Appendix: Focus Group Protocol

Topics of Interest

- Involvement with interdisciplinary studies and the IGERT program.
- Alignment of department and individual goals for interdisciplinary research.
- Awareness and understanding of interdisciplinary studies, knowledge gained during graduate studies.
- IGERT's impact on a student's ability to conduct interdisciplinary research.
- Feedback on program administration and the IGERT program.

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 with interdisciplinary research and the IGERT program. This is my colleague _____ 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. Most of you already know a lot about cross-department language research at the university, but I am going to remind you of the standard NSF goals for the IGERT program:

The IGERT program is an interdisciplinary program in Biological and Computational Foundations of Language Diversity, which is supported by the National Science Foundations prestigious Integrative Graduate Education and Research Training (IGERT) 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.

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 tape record the session so that the notes will accurately reflect the conversation. Your identity will be kept confidential. We will summarize all of the focus groups discussions, no names included, and present our findings, again no names included, to the IGERT program staff, after which they may present the findings to agencies funding the project, and members of the academic community. This focus group is a part of a larger study to assess the effectiveness of the IGERT program and to provide internal feedback that facilitates program improvements. 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.

Over the past year we have conducted focus groups with returning students, faculty members, and new students with similar goals in mind. Although the assessment process is guided, and funded, by the IGERT program in language science, its goal is to better understand the

environment for language science research more broadly at UMD, and to create a model for sustainable change in the science of language.

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. 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.]

Now I would like you to write your name on one side and your number on the other side of the card in front of you [have participants count off after this sentence]. The number on the opposite side of your card will be used for note taking today [reference note taker] and it will also be used later for the transcriptions and data analysis to ensure the confidentiality for your individual responses. We will use your names, as written, to talk with each other during today's session for conversational purposes.

I am also handing out a consent form for you to read. If you feel comfortable doing so, sign the form indicating that you understand the purpose and procedure of this session, 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. I will hand out her business cards now. [HAVE STUDENTS SIGN AND RETURN 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. We will begin by asking each of you to state the name you have written on the card, the name of your academic department and program, and when you started your program.

1. Please tell us about your awareness and involvement with the IGERT program:

    a. *Did the presence of interdisciplinary language research at University of Maryland affect your decision to attend here?*

    b. *Do you remember your initial impressions of the IGERT program (note: some of them were involved in formulating the grant proposal)?*

    c. *Which IGERT activities and interdisciplinary coursework have you been involved with? And what activities have been most/least helpful (courses, Winter Storm, advisory board, lunch talks, outreach programs, tutorials, teaching)*

    d. *Did you think your involvement with the IGERT program would impact your career development? (skills, networking, understanding of interdisciplinary research, funding, applying in the spring, etc.)* [PROBE: HAS IGERT ACTUALLY HAD THIS IMPACT?]

    e. *Do you think the arrival of the IGERT program changed the way in which you went about doing interdisciplinary research in your graduate studies?*

2. Next, we would like to hear about your understanding of interdisciplinary research and how that has changed over time:
   a. *What do you see as the purpose of interdisciplinary research? How would you describe it?*
   b. *How has your understanding of interdisciplinary research changed since the beginning of your doctoral program?*
   c. *How is interdisciplinary research relevant to your field of study?* [And/or is it common in your field?]
   d. *Has the IGERT program broadened your understanding of the challenges and opportunities in interdisciplinary research? How?* [PROBE: DID YOU EXPECT THESE CHALLENGES/OPPORTUNITIES, HOW DID YOUR ENGAGEMENT DIFFER FROM YOUR EXPECTATIONS]

3. The next questions will discuss how IGERT has affected your success in your graduate program and your ability to conduct interdisciplinary research.

   a. *Have you been involved with any interdisciplinary research teams since you began your involvement with IGERT? If so, please describe your experience with these teams* [PROBE: HOW WERE THESE GROUPS FORMED?].

   b. *Has IGERT connected you with other students, faculty, or other researchers outside your discipline in substantial ways? How?*

   c. *Has IGERT helped you to gain skills in interdisciplinary language research? Which skills?*

   d. *Have you overcome any barriers in order to pursue interdisciplinary research at UMD (or with partner institutions) and how has this impacted your success in your graduate program (e.g. resources, effective advising, support)?*

4. Thinking about your experiences overall with the IGERT program, what has been most and least helpful? [IF RESPONDENTS ONLY ANSWER MOST OR LEAST, PROBE FOR THE OTHER SIDE]

   a. *Do you have any suggestions for improving the program?* [PROBE: HAVE YOU FOUND THE PROGRAM TO BE DOMINATED BY ONE PARTICULAR DEPARTMENT? IF SO, HOW HAS THIS AFFECTED YOUR EXPERIENCE WITH IGERT?]

   b. *What advice would you have for incoming students who wants to get a grounding on the ways interdisciplinary research can permeate their graduate studies* [PROBE: WOULD YOU DESCRIBE YOURSELF AS AN ADVOCATE FOR THE IGERT PROGRAM? WHAT WOULD YOU DO DIFFERENTLY?]

   c. *What suggestions do you have for better facilitation of the program?* [PROBE: HOW COULD STUDENTS DO A BETTER JOB WITH FACILITATION? FACULTY? IGERT LEADERSHIP?]

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

Thank you for participating in today's discussion, your insights have been extremely valuable. As a reminder, we ask you to maintain the confidentiality of today's discussion and not share the content with anyone outside the focus group. Before you leave, if you feel comfortable doing so, please fill out the following questionnaire [PASS OUT QUESTIONNAIRE] to help us in our analysis of the group's discussion.

Focus Group Protocol for individual who communicated electronically:

Please read the following information from this script to ensure that I communicate all of the necessary information about your responses. First, I will remind you about the standard NSF goals for the IGERT program:

The IGERT program is an interdisciplinary program in Biological and Computational Foundations of Language Diversity, which is supported by the National Science Foundations prestigious Integrative Graduate Education and Research Training (IGERT) 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.

Please note, your responses will NOT be completely confidential because of your indirect participation. That is, your name will not be included, but your comments will be noted as a participant who was not present during the focus group session. We will summarize all of the focus groups discussions, and your comments, no names included, and present our findings, again no names included, to the IGERT program staff, after which they may present the findings to agencies funding the project, and members of the academic community. This is a part of a larger study to assess the effectiveness of the IGERT program and to provide internal feedback that facilitates program improvements. 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.

Over the past year we have conducted focus groups with returning students, faculty members, and new students with similar goals in mind. Although the assessment process is guided, and funded, by the IGERT program in language science, its goal is to better understand the environment for language science research more broadly at UMD, and to create a model for sustainable change in the science of language.

Keep in mind you don't have to answer every question. [I already have your consent form, but go ahead and read it anyway]. If you have any questions about this study, we can be reached through the person in charge of this project, Sharon La Voy, slavoy@umd.edu.

1. Please tell us about your awareness and impact of the IGERT program:

a. *Did the presence of interdisciplinary language research at University of Maryland affect your decision to attend here?*

b. *Do you think the arrival of the IGERT program changed the way in which you went about doing interdisciplinary research in your graduate studies?*

2. Next, we would like to hear about your understanding of interdisciplinary research and how that has changed over time:

c. *What do you see as the purpose of interdisciplinary research? How would you describe it?*

d. *How has your understanding of interdisciplinary research changed since the beginning of your doctoral program?*

e. *Has the IGERT program broadened your understanding of the challenges and opportunities in interdisciplinary research? How?*

3. The next questions will discuss how IGERT has affected your success in your graduate program and your ability to conduct interdisciplinary research.

f. *Have you been involved with any interdisciplinary research teams since you began your involvement with IGERT? If so, please describe your experience with these teams.*

g. *Has IGERT connected you with other students, faculty, or other researchers outside your discipline in substantial ways? How?*

h. *Has IGERT helped you to gain skills in interdisciplinary language research? Which skills?*

i. *Have you overcome any barriers in order to pursue interdisciplinary research at UMD (or with partner institutions) and how has this impacted your success in your graduate program (e.g. resources, effective advising, support)?*

4. Thinking about your experiences overall with the IGERT program, what has been most and least helpful?

j. *Do you have any suggestions for improving the program?*

k. *What advice would you have for incoming students who want to get a grounding on the ways interdisciplinary research can permeate their graduate studies?*

5. Is there anything else you'd like to tell us about your experiences with the IGERT program ?