

2014 Annual Report: UVa CHARGE

Federal Agency and Organization Element to Which Report is Submitted: 4900

Federal Grant or Other Identifying Number Assigned by Agency: 1209197

Project Title: Structured Conversations and Re-imagined Spaces: Effecting Systemic Change for Women in STEM at UVA

PD/PI Name:

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Recipient Organization: University of Virginia Main Campus

Project/Grant Period: 10/01/2012 - 09/30/2017

Reporting Period: 10/01/2013 - 05/30/2014

Submitting Official (if other than PD/PI):

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- Principal Investigator

Submission Date: 06/01/2014

Signature of Submitting Official (signature shall be submitted in accordance with agency specific instructions)

Gertrude J Fraser

Accomplishments

* What are the major goals of the project?

This annual report for Project Year 2 highlights our activities and accomplishments with an emphasis on those since the Project Year 2 Interim Report was filed in December 2013, and addresses the major recommendations and activities discussed in the NSF Project year 2 Site Visit Report (February, 2014) and our Site Visit Report Reply (March 2014).

The goal of U.Va. CHARGE, University of Virginia, is to address institutional transformation to reduce barriers to the full and equitable participation of women, including African American, Latina, and Asian American women, on the faculty in the School of Engineering and Applied Sciences and in the College and Graduate School of Arts and Sciences. We seek to create an empowered collaborative, participatory form of community that draws on the collective capacity of women faculty, their male colleagues and administrative leadership allies to identify and ameliorate the structural and cultural barriers to women's full participation in academic STEM careers. We will use an evidence-based approach which seeks to document processes and outcomes. There are five initiatives focused on recruitment, departmental climate, voices and visibility of STEM women through oral narrative and photography, and an aligned social science project on the physical environment; a Tournament of Ideas to Leverage Diversity and Innovation, and an ADVANCE Enhancement Fund program.

*** What was accomplished under these goals (you must provide information for at least one of the 4 categories below)?**

Major Activities:

Vision Process:

With internal advisory board members conducted a design and visualization exercises focused on the UVa CHARGE vision for transformation. This activity aligns with the major tenets of Heifetz's adaptive model of change strategies, Getting on the Balcony to Identify Patterns and Vision to Inspire Action. Elicited consensus on two areas of work focused on transformation: 1) coalition building and mobilization of women and allies; 2) critical mass through demographic increase. Crafted three vision statement prototypes for consideration of implementation team and stakeholders.

Internal evaluation: During year 2 of the U.Va. ADVANCE project, several developments in the 5 core initiatives were made. These developments, as well as emergent changes were documented through updating the detailed evaluation worksheets. Quarterly meetings were held with the Internal Evaluation team, consisting of Dr. Karen Inkelas and Dr. Deborah Barry, and each initiative lead to track changes, new directions, accomplishments, and lessons learned. These detailed evaluation worksheets are attached under the special requirements section.

External Evaluation: Conducted summative evaluation activities during Spring 2014. Included qualitative interviews with selected sample of search committee members and enhancement fund recipients.

Initiative 1 Departmental Level Activities (Part 1. Structured Dialogue and Part 2. Search Committee Engagement):

Equity Consultants (Search Consultants) – Initiative 1 Part 1

April 14th Workshop

Significant progress was made this past year and in particular since the NSF Project Year 1 Site Visit where we indicated the search consultants had worked with 4 departments on 6 searches. To expand the reach of search information, Professor Cohoon organized a workshop for chairs and search committees.

The April 14th Workshop, “Using Evidence-Based tools to hire and Welcome New Faculty Colleagues” was held with 16 search committee members, chairs, and SEAS dean to expand the reach of the tools and search information. The program was led by Professor Cohoon with introductory remarks by Provost John Simon addressing the importance of diverse hiring. Pam Norris briefed the group on STEM/SBE demographics. Professor Mary Lou Soffa and her CS doctoral student presented the academic portal beta site. Professor Fraser presented the revised structured dialogue model.

The April 14th program addressed final steps in the search process to evaluate candidates and plan for a productive campus visit, how to plan for a smooth start, introduction of new evidence-based tools at each stage of the search process, and a briefing on the revised dialogue process designed for scientists and engineers.

Structured Dialogue: Initial structured dialogue model for departmental groups revised and adapted in response to participants feedback and consultations with implementation team members and departmental advisors (faculty and chairs).

Initiative 2 Voice and Visibility

Part 1 Lived Experience Oral Histories

For year two we trained qualitative interviewers; modified and tested instrument with pilot interviews; initiated accrual process and interviews. Convened an advisory group of qualitative methodologists to work with the research team on issues emerging during the research process. Started interview transcriptions. Presented preliminary findings at NSF ADVANCE meeting.

Part 2: Photography Project

Created project and advisory team of faculty including those in the arts and humanities and partner with vice provost for the arts to design and curate exhibits.

Part 3: Social Science Research Component (How do men and women experience STEM and non-STEM space)

Assigned male and female participants who were STEM and non-STEM majors to view STEM and non-STEM spaces. For half of the participants, the spaces were labeled (STEM or non-STEM). For the other half of the participants, the spaces were not labeled.

Year 1 data suggested that sense of safety played a major role in women's sense of belonging at the University. A tournament challenge for a safety app is expected to emerge from this work. Predict that use of this app (vs. some other app) will increase students' sense of safety, use of space and, consequently, sense of belonging.

Lack of lighting identified by women as a safety issue. Partnered with Facilities Management and the Office of the Architect to assess lighting on campus using light meters. Campus areas metered for lighting-map of metered area included as attachment.

Designed a version of an Implicit Association Test (IAT; Greenwald et al., 1998) on categorization when built environments and men-related words, and natural environments and women-related words share the same response keys (vs. the opposite pairings). If the built environment is associated with men and the natural environment is associated with women, it may be possible to feminize or neutralize masculine spaces (e.g., STEM spaces) by adding natural elements to the spaces.

Initiative 3: Tournament of Ideas

Established a project plan to design, schedule and implement the Tournament through two interfacing teams. The teams are the Tournament Leadership Group (TLG), and the Design and Dissemination team. In addition, U.Va. and external social theorists will be challenge consultants. Focus group and direct interviews scheduled with group of chairs and faculty to elicit input on the topics on the challenges to be sure they are relevant to current climate and transformation issues at the department level.

Initiative 4, Part 1: Outreach and Travel Fund

Finalized the selection criteria for outreach grants. Outreach used primarily to increase the number of candidates brought to campus for each search. Reviewers convened by Professor/PI Pam Norris reviewed application to assess that the funded requests were in line with the intent of the fund to increase the number of women candidates in the on-campus search process and that these candidates are highly ranked. These funds increase the numbers of women candidates who may be seen and evaluated through the search and hiring process.

Initiative 4, Part 2: Academic Search Portal

A working group led by Mary Lou Soffa created beta site, worked on storyboarding and wireframe and content review and vetting by knowledge experts. Interactive modules prioritized to include dual career issues, implicit bias, broadening the pool, outreach and hiring of underrepresented minority women/women of color faculty (a key feature of the portal), and search committee best practices.

Beta Roll-out scheduled for fall 2014.

Initiative 5: Enhancement Fellows (Enhancement Funds)

Three changes were made to the guidelines

- Clear criteria posted in the guidelines so the applicants would know how their applications would be reviewed and judged.
- Applicants received reviewers' feedback.
- The U.VA.CHARGE email address was used for all communications and application submissions

Other

Implementation Team met twice monthly.

First year site visit with NSF program officers completed. Responded to initial recommendations and queries.

Developed new resources for Engineering School. Encourages new faculty formal introduction by department chair at first lecture. By request of dean UVA CHARGE developed resources related to classroom etiquette for new student orientation program in Engineering.

New Program Manager hired after a national search.

Specific Objectives:

Major foci during this reporting period were on early institutionalization activities to integrate U.Va. CHARGE activities into institutional fabric. Activities here included meetings with provost and deans to identify early successes, best practices and institutionally aligned efforts to be adapted at school or central levels.

Created new opportunities for involvement of faculty and administrative stakeholders in the UVA CHARGE initiatives to expand efforts beyond core implementation team members. This includes planning for university-wide search symposium in Fall 2014 and academic search portal integration into collaborative IT tools currently used by faculty to read candidate dossiers.

Consulted with sister ADVANCE programs on related initiatives focused on departmental level and search committee change efforts.

Social Science Study Objectives: Complete preliminary analysis of Study 3B and Study 1B; Design a built-environment IAT test.

1. Preliminary analyses of Study 3B have revealed that female (vs. male) participants perceived STEM (vs. non-STEM) spaces as less safe but only if they were non-STEM majors and only if the STEM spaces were unlabeled. This finding is consistent with Cheryan and colleagues' finding that women feel like less safe—like they do not belong—in computer science because computer science environments are masculine. In her study, female participants were non-majors and the environment was implied to be a computer science environment. Our study findings suggest that women's sense of belonging may be even more malleable than previously thought. First, STEM majors do not appear to feel less safe in STEM environments. Second, non-STEM majors do not appear to feel less safe in STEM environments if it is made clear to them that these are STEM environments, perhaps because the label (“this is a STEM space”) explains why the space is the way it is (i.e., “oh, it's not a masculine space, it's a geeky/science space?!”). Graph of results below.

2. In our more in-depth analysis of our observational/archival data (Study 1B), we found that proximity to a female faculty member's office predicted positive outcomes for women but not men in STEM. We also found that, in non-STEM departments, male and female faculty members' information was equally likely to be online. In STEM departments, however, female faculty members' information was less likely to be available online. This finding was unexpected. That said, we take this finding as evidence for our claim that women in STEM are less visible than are men in STEM.

3. In our study on mental associations between the built environment/nature and masculinity/femininity, we found that people associate the built environment with masculinity and nature with femininity. The association is moderate to large. We are now designing studies to test whether natural elements can neutralize masculine built spaces.

Complete Space Allocation and Start-Up Costs Analysis.

Space Allocation Main Findings:

Compared the total square footage and the number of spaces assigned to individual faculty members by gender, race, and tenure status. When comparing male and female faculty members, there is no significant difference in square foot allocation, but there is a significant difference in the number of spaces allocated ($p=0.01$). Men are allocated a greater number of discrete spaces (e.g., individual offices for staff, lab space) than women faculty. Faculty did not differ by race in terms of the square footage of space or the number of spaces allocated. Tenured/tenure track faculty differ significantly from non-tenure-track faculty both in terms of square footage and number of spaces allocated ($p < 0.05$).

Conducted two OLS regression analyses to investigate the relationship between the independent variables of gender, race, total grant dollars awarded, discipline, tenure status, and the dependent variables of a) total square footage; and b) total number of spaces allocated. This model is statistically significant ($F= 9.45$, $p < 0.001$). Three variables act to significantly predict the total square footage allocated to faculty: total grant dollars won, Arts and Sciences STEM discipline, and Engineering STEM discipline. When compared with faculty members in Social and Behavioral Sciences fields, faculty in Arts and Sciences STEM disciplines are allocated an additional 1,136 square feet of space. Similarly, faculty members in Engineering STEM disciplines are allocated an additional 543 square feet of space

when compared to Arts and Sciences STEM disciplines. When comparing the standardized β coefficients, the total grant funding awarded to faculty members explains the greatest amount of variance in the total square footage of space allocated to faculty members. This model explains 22.1% of the variance in square footage of space allocation to STEM and SBS faculty at the University of Virginia. Results of the OLS regression model investigating the predictors of total number of spaces allocated to faculty members. This model is statistically significant ($F=6.303, p<0.001$). When holding all other independent variables constant, the total grant dollars won by faculty members is the only significant predictor ($p<0.001$). This model explains 15.1% of the variance in number of spaces allocated to faculty in STEM and SBE fields.

Complete Start-Up Packages Equity Study

Start-Up Package Equity main findings:

We completed several analyses to examine equity in start-up packages among prospective male and female faculty members. In order to account for possible differences in results based on imbalanced samples of men and women in the data, we first conducted the analyses comparing the scores of all of the women in the sample against an equal sized group of randomly selected men. In addition, in order to test whether the data for accepted offers differed from all offers (accepted or declined), we executed the analyses utilizing only those individuals who accepted offers of employment. In both cases, no differences in the results were observed. Thus, the analyses presented in this report included all 120 individuals.

However the sample did vary for different features of the start-up packages. While the offer letters analyzed in the study included a variety of features listed above, we focused on six features that were most consistently included in offers across a variety of disciplines, and thus contained the least amount of missing data. Table 4 outlines the results of *t*-tests that were calculated to determine if discrepancies existed between the start-up packages offered to male and female offers. The results of these analyses indicate that, while there are slightly lower monetary amounts offered to female faculty candidates when compared to male faculty candidates, there is no statistically significant difference in the start-up packages offered. This analysis reflects equity in these start-up packages in regards to salary at hire, moving expenses, research start-up funds, number of months of summer salary, and total start-up funds. A reduced teaching load for some period of time after hire, usually 1-3 years, was the only variable that differed significantly for men and women. Variability in the features of offers in different departments, such as graduate teaching or research assistants, laboratory renovations, and large equipment purchases did not allow for comparison of these features within the available data. Finally, future analysis would benefit from a standardization of offer letters across departments to include all of the same features, such as graduate student support and space allocation.

Significant Results:

Equity Consultants (Search coaches) – Initiative 1 Part 1

Convened a successful “partner” meeting with a group we termed the Recruitment Strategy Group group composed of: A&S and SEAS Human Resources, the executive recruiting group, HR information systems (collects all search committee member names), dual career HR consultant, Office of Equal Opportunity Programs, and U.Va CHARGE. We will reach out to the new Vice Provost for Faculty Affairs when she starts in June to join this group. The College of Arts and Sciences will be creating a

new equity advisor cadre of faculty to assist search committees in recruiting diverse candidates. U.Va. CHARGE will begin meeting with the A&S HR Manager to develop the training for these equity advisors. This will increase the numbers of internal consultants /coaches available to search committees and institutionalize the role in the College of Arts and Sciences.

Under Professor Cohoon's leadership (in partnership with NCWIT), these U.Va. CHARGE hiring-related tools have now been developed:

Hiring- Related U.Va. CHARGE List of Tools

1. U.Va. CHARGE Practices for Hiring Diverse Faculty

Description: This tool is used by departments and search committees to identify their views on department based practices to (a) broaden the applicant pool, (b) reform search committee practices, and (c) assess how to improve appeal to diverse candidates. (The actions provided are empirically based or best practices).

2. Checklist for Filling Faculty and Executive Staff Positions

Description: This checklist provides steps that must be taken by any search committee to ensure compliance with federal and state laws and follow internal procedures to hire the best qualified candidate, and use vigorous outreach to hire the best qualified candidates and ensure diverse applicant pools to ensure diverse and inclusive hiring.

3. Candidate Review Tool

Description: This form provides an evaluation rubric to assess candidates based on the pre-agreed needs of the department and to ensure consistent use of evaluation criterion for each candidate.

4. U.Va. CHARGE Faculty Search Process Checklist

Description: This checklist provides sequential tasks for the search committee just after it is formed to assess the needs of the department to identifying criteria for candidate evaluation

5. Department Needs Assessment

Description: This form asks department members to identify what they will need in a new faculty member; this assessment will be transferred to the search committees to use in their application and candidate evaluations.

6. Job Description Ad with proactive language example

Description: A sample job ad provides compelling job ad ideas which make it clear that diverse applicants are encouraged to apply.

7. Script for an informal offer

Description: this script provides calling tips when speaking with a candidate to extend and informal offer.

8. Selling U.Va. to the Candidate

Description: this checklist offers 8 Suggestions on “Selling U.Va to Candidates.”

Reform Search Committee Practices: Department -administered survey to assess readiness to implement best practices and self-rate on current practices. Excerpt from Survey:

In each column, please indicate your views about these Search Committee Practices in your department (likelihood of positive impact, viability in your department, priority this initiative deserves, frequency department already does this):

- Applicant pool must include women & minority applicants.
- Specify that applications, recommendation letters & all correspondence use initials only for applicant first names
- Top female and minority candidates are always interviewed
- Designate a search committee member to be the “Equity Advisor”
- Desired characteristics are specified in advance of application reviews
- Application reviews must correspond to specified desired characteristics
- Other practices for increasing equity in your selection processes (specify)

Structured Dialogue Revision– Initiative 1 Part 2

Consulted with West Virginia University team and U.Va, faculty and department chairs.

We noted that successful dialogue sessions shared 3 key factors in common 1) a senior woman present who helped to prime and validate the need for discussion of departmental culture and climate with regard to women. 2) Full participation of department chair who is well oriented to the process; 3) Facilitator who could adapt to dynamic give and take of group response.

- Identified need for more background to the process to explain why this work was necessary and helpful.
- Identified need for format to allow for activity (standing up, dyadic conversations; question and answer) to ensure that all participants contribute in some way and offer their point of view.
- Provided a more thorough explanation of the rationale for the dialogues: generational shifts, more women in the pipeline, and more diversity as demographics shift, leadership expectation
- Developed cases to provide concrete examples of issues of concern to potential newcomers.
- Tested the new format with three department chairs.
- Part 1 of the dialogue uses a brief assessment to elicit participants’ rating of the department in terms of six core domains along a continuum. They will be asked to discuss their ratings among themselves.
- In part 2 the case will be presented and participants asked to assess aspects of the case compared to their previous assessments of their department. Facilitator will encourage observations of where there is alignment and where there may be need for adaptation.
- What actions could be taken to address the areas of concern?
- Facilitator will emphasize that all departmental members, not only the chair, will be expected to lead and respond to these newcomer issues.
- Piloted the revised dialogue at the April search committee workshops with Engineering and A & S STEM chairs.

Tournament TLG

The TLG now has three members or advisors (several more will be added in early summer): Professor Archie Holmes, ECE and U.Va. CHARGE implementation team member, Bernie Carlson, Engineering and Society chair, and Bill Sherman, UVa Open Grounds Challenge. All TLG members are content experts in running tournaments and may perform the following duties:

- Advise on tournament project implementation: timing, duration, design.
- Advise on selection and scope of “Challenges.” Review “challenges” posed by the DDT. Advise on a communication plan to faculty, students, staff, alumni and external audiences to create excitement and submissions.
- Represent the Tournament Challenge to their own School to encourage applications from faculty, staff, students, alumni and external participants.

Outreach and Travel Fund

Of the 8 outreach and travel fund awards made this year to departments to bring additional women candidates for on-grounds interviews, 3 of the 8 candidates (38%) supported by this fund were hired in Anthropology (1), Chemistry (1), and Physics (1).

NSF Supplemental CLB Dual Career Award (Award #1346652)

UVa CHARGE awarded a Dual Career NSF Award to the department of Politics to hire a dual career couple. The primary and secondary hires were each offered a tenure track assistant professor position in Politics. The department planned to recruit an international relations faculty member after the retirement of a current faculty member. The dual career hire specializes in international relations. Permanent salary for the dual career hire will be funded by the College of Arts and Sciences.

Key outcomes or Other achievements:

Institutionalization Agreements:

Institutionalization of the Department-at-a Glance Data Sheets

Provost John Simon has approved the institutionalization of the U.Va. CHARGE department –at – a-glance faculty data collection, analysis and administration. This project will be transferred to the Office of Institutional Assessment and Studies (IAS). Once the transfer occurs the data sheets design will be expanded from TT/T STEM/SBE only, now developed by U.Va CHARGE, to all university departments in all schools and the college. The IAS handles all faculty demographic data for the university. Professor Inkelas and Dr. Barry, internal U.Va CHARGE evaluators, will develop a transition plan that transfers knowledge and procedures to identify the source of department/discipline data/reports on the number of women by discipline (PhDs), NSF data that reports on the number of earned doctorates and postdocs by field, and the percentage of women faculty by rank in comparable (benchmarks) universities.

SEAS - U.Va. CHARGE Position Approval Process – New Effort

There will be a new SEAS faculty position approval process starting immediately for the fall 2014 faculty hiring season for all faculty positions. This new hiring approval process confirms a partnership

between SEAS and U.Va. CHARGE to cover all SEAS departments. This step meets our objective to accelerate the pace of working with all departments in SEAS and for each department to use all U.Va. CHARGE hiring-related and climate related tools. At a Spring 2014 meeting, Co-PI/Associate Dean Norris and Senior associate dean, Barry Johnson presented the U.Va. CHARGE drafted proposal that was unanimously approved by the department chairs and Deans.

Part 1 – Preliminary Approval- to- hire with Commitment to work with U.Va. CHARGE Each department chair and search committee will need to submit a preliminary approval- to- hire form to the dean accompanied by the new SEAS Approval- to-Hire (commitment to work with U.Va CHARGE) signed MOU for every open position approval request starting with the 2014 2015 academic hiring year. The objectives of the new SEAS approval- to-hire process are:

- To provide empirically based and best practices in searches tools and processes to and provide for their consistent and widespread use in SEAS.
- To create an effective communication and accountability process between the chairs and Dean at key points in the search process for each position.
- Connects the use of tools and processes based on best practices and empirical data to the U.Va. Cornerstone C.A.R. continuous active recruitment process, and broadens the use of the academic portal as the official “database” one stop portal of all U.Va charge tools and resources that will be available to all STEM/SBE faculty and eventually extended to all faculty and the public.

Part 2: Annual Dean and Chair Search Accountability Meetings

1st Meeting: Before the Position is Approved by the Dean

- The dean will approve an open position for a department when these two conditions are met:
- After the chair and dean have discussed the chair’s assessment and review of the department-specific Data- at A- Glance worksheet (compiled by U.Va. CHARGE).
- After the Chair has provided a plan of action identifying the use of search tools and best practices offered by U.Va. CHARGE to address outreach to qualified women (majority and underrepresented women) and the use of best practices in the search committee.

2nd Meeting: Mid-Point Short List Recommendations Check-in

- This meeting occurs at the point of recommendations for the short list by the search committee to the dean.
- This meeting will include a discussion of the entire search process and justification for the short list of candidates.

3rd Meeting: Debrief/post mortem

- This meeting occurs at the end of the search process
- The meeting information is used to prepare for the next hiring season armed with evaluative information and actual search data.

Dean’s Approval for SEAS Open Faculty Position Statement and Process

Starting with the hiring year 2014 - 2015 an MOU (below) will be reviewed and signed by the Dean, Department Chair, U.Va. CHARGE and Search Committee Chair:

SEAS – U.Va Charge MOU (This form is signed by the dean and department chair)

In order for a search to be approved or to proceed:

Each hiring department chair and search chair:

- Must verify their use and interaction with U.Va. CHARGE from outreach through the hiring and onboarding process of newly hired faculty members.
- They should commit to using the search tools and the information available in the academic search portal.
- They should consider using a U.Va. CHARGE search consultant.
- And they should consider participation in the structured dialogue process to problem-solve any challenges to the hiring and welcoming of new faculty members and in particular, underrepresented and majority women faculty.

The new SEAS approval- to-hire process is leveraged by the chair's and search committee's use of the department at- a- glance-data sheets produced by U.Va. CHARGE internal evaluators. To take an important step toward institutionalization and achievement to of broader impact, Professor Norris and Professor Fraser will meet with identified A&S STEM/SBE faculty to encourage their use of the department worksheets (cited as a best practice at the NSF ADVANCE First Year Site visit, Feb. 12th).

A new dean has been appointed in the College of Arts and Sciences. With the provost's support, U.Va. Charge will work with college leadership to design a similar process.

A&S will be primed to consider uniform use of the U.Va. CHARGE hiring-related tools, academic portal, consultancies and structured dialogue just as SEAS will do this fall. The college's HR Manager for A&S, reported at May 1st Recruitment Synergies Group (RSG) that she will be identifying faculty to assume the role of equity consultants in each A&S department (including STEM/SBE) to help with searches. We will have discussions early this summer to explore a partnering plan (U.Va. CHARGE and A&S) to accomplish two goals. The first goal is to transfer the U.Va CHARGE search and hiring tools utilization, consultancies, academic portal information (and structured dialogue availability) to this newly identified A&S faculty group of individuals identified in each department. The second goal is to transition the use of external search consultants to internal faculty who will be identified as equity consultants in each of the A&S (College) STEM/SBE departments. With the new SEAS universal use of the U.Va. CHARGE resources (using current external search consultants) and the launch of A&S faculty peer equity advisors, we will exceed our 4- 5 departments per year goal of the 5-year Award. Instead we will reach all SEAS and all STEM/SBE in the 2014-2015 hiring season. We think it is feasible to reach all non-STEM/SBE A&S departments the following year (2015-2016) through the use of a "train-the-trainer" model to transfer U.Va. CHARGE knowledge to additional identified faculty equity advisors in the remaining departments (Humanities ,etc.). In the meantime, the U.Va. CHARGE academic portal will officially launch this fall so every department chair, search committee, all faculty, administrators, and RSG partners will have access to the same hiring-related and climate transformation information and tools. The implementation of all of these tools, resources and the transfer of consulting knowledge internally will place U.Va CHARGE in a leadership role among its many partners (noted in the NSF Site Visit Project Year 1 Report Reply). U.Va. CHARGE will contribute to the implementation of the University's strategic plan (aka Cornerstone Plan) launch of the C.A.R. (continuous active recruitment) effort to recruit, hire and welcome diverse faculty to U.Va.

*** What opportunities for training and professional development has the project provided?**

PI Fraser:

In Initiative #2, Voices and Visibility, Professor Fraser has provided significant qualitative interview training to several graduate and doctoral students in the techniques, protocols, administration and procedures for conducting ethnographic interviews of STEM/SBE faculty women. This training also includes “practice interview simulations (role play),” team critiquing of practice interviews, interview transcript coding, and techniques to reach out and engage prospective interview subjects.

co-PI Trawalter:

The Social Science Study trained a team of undergraduate research assistants to collect light-meter data and to conduct studies with human participants. These students, young women *and* men have had an extraordinary research experience thanks to the ADVANCE work.

co-PI Norris

Noting the void in significant mentoring within SEAS. Co-PI Norris, in her role as Associate Dean, initiated two new mentoring programs and a new faculty orientation program in SEAS. The first is a peer mentoring group available to all Assistant Professor, which meets monthly with at least three senior faculty members selected for their reputation and skill in the area of interest for that session. Interest areas were identified based on input from the faculty and included things such as: mentoring graduate students, DOD funding, work-life balance. Typical attendance was only in the order of 6-12 of which approximately 25% were women. The second program is new to SEAS as well. It pairs an outside-of-the-department mentor (a.k.a. Mentor) with each new faculty member, to supplement the inside-the-department mentor, to ensure access to advice without the influence of "departmental politics". Professor Norris also initiated a full day New Faculty Orientation program for all new SEAS faculty. Nearly all new faculty participated and reported they “truly valued the rapid and efficient dissemination of important information.”

Opportunities for Professional Development

LAM – “Leadership in Academic Matters”

As part of our dedicated institutionalization efforts, 10 slots are set aside annually for STEM women to be nominated to participate in LAM, “Leadership in Academic Matters program. In 2013-2014 (fall and spring semesters), four STEM women completed LAM: 1- Engineering and Applied Sciences: 1- Chemical Engineering (Full Professor/Chair); 3 STEM/SBE in College of Arts and Sciences: 1 – Chemistry (Associate Professor), 1 – Physics (Full Professor); 1 – Politics (1 Full Professor). STEM women were 13.3% (4/30) of the total available program slots this year. LAM is open to those who have demonstrated leadership characteristics and future potential.

*** How have the results been disseminated to communities of interest?**

Conference Presentations

1. Fraser, Gertrude J., Mershon, Carol, and Walsh, Denise. (2014, May 31). *Diversifying Our Departments: A Dialogue with a Focus on Women Faculty of Color*. NCORE (National **Conference for Race & Ethnicity in American Higher Education**. Indianapolis Indiana.

NCORE Abstract:

Underrepresentation of diverse women in the professoriate is a longstanding issue. In this session, presenters will examine several theoretical and programmatic approaches to remedying this persistent problem.

We will present strategies based on interventions at the departmental level, drawing on research in multiple disciplines and contexts to develop distinct but complementary approaches. The approaches include structured dialogue, which draws on business school scholarship similar to that of Martin Davidson, who finds that critical diversity conversations with those in power and those on the margins can help diversify organizations, and the women and gender literature in political science which finds that women's mobilization is the key to advancing women's rights, including women's representation.

The first part of the session will consist of a vigorous conversation between the presenters about the applicability of these and other approaches to academe, and their strengths and weaknesses, with examples drawn from their experience as faculty and administrators at a Research I university. Since strategies may vary depending on discipline and institutional context, the second segment of the session will offer interactive exercises designed to engage participants and encourage them to reflect on their institutional, disciplinary, and personal experiences of organizational change and how they might pursue strategies aimed at increasing the numbers and diversity of faculty women. We will also explore the extent to which a gendered lens does or does not overlap and interact with a lens focused on race/ethnicity for this kind of transformational work in the academy.

2. Fraser, Gertrude J. (2014, Feb. 28). Working with Dual Career: An Administrator's Perspective. *Advancing Women in Academic STEM Fields through Dual Career Policies and Practices Conference*. The University of Texas – Pan American.

3. Social Science Study

Driskell, S.*, Hoffman, K.M.*, & Trawalter, S. (2014, February). Taking a front seat to success: Women's seating choices in collegiate STEM classes. *Poster presented at the Annual meeting of the Society for Personality and Social Psychology, Austin, TX.*

Current findings expand characterization of women's underrepresentation in STEM, looking beyond the social features of STEM environments to the physical features of STEM-related spaces. To date, these features have not received systematic attention.

Presented poster on our preliminary findings garnered attention at the Annual Meeting of the Society for Personality and Social Psychology. This work in tandem with other, emerging work in the field is encouraging other researchers to look at physical—not only social—features of STEM environments.

Co-PI Sophie Trawalter gave research talks to internal U.Va. departments who do not typically interface with STEM/SBE based spatial and sense of belonging research.

Professor Trawalter presented on the U.Va. CHARGE social science research from December 2013 to May, 2014:

Access UVA Task Force, University of Virginia

Transduction: A multi-disciplinary seminar, University of Virginia

Clinical Psychology Area, Brown Bag at the University of Virginia

Claremont Symposium on Applied Social Psychology, Claremont Graduate University, Claremont, CA

*** What do you plan to do during the next reporting period to accomplish the goals?**

Partnering with new Dean of Arts and Sciences:

High priority plans include meeting with the new dean of Arts and Sciences and gain his leadership commitment to partner with UVA CHARGE, especially on search committee interventions, search equity advisor training and structured dialogue process.

We will continue to work in the engineering school with Dean Aylor to execute on a continuous active search and recruitment process endorsed by all department chairs.

Goal is to meet in the fall with each STEM and SBE department in the college holding active searches in AY 14-15 to review data at a glance sheets and to encourage working with search coaches.

Search Tools and Consultancies

- U.Va. CHARGE search committee tools and resources will be further developed and refined this summer.
- The tools will be submitted to the academic portal development group to be hosted on the portal this fall for use by all university search committees.

Voices (Ethnographic interviews with faculty women)

- The Voices team members will schedule interviews with women faculty for this summer and fall. Goal is to complete 20 interviews by end of Fall 2014.
- Preliminary coding of qualitative interviews to start in Fall 2014

Visibility (Photographs of faculty women)

- A new strategy for the co-funding of this initiative and engaging partners for this project from the Provost's office and faculty from the Arts will be developed this summer.

Structured Dialogue

- The revised model will be reviewed with the Provost in June.
- Biology and Physics have volunteered to participate in the fall.
- Goal is to book an additional 5 departments
- The model will be discussed at the September search committee symposium.

Social Science Study

This coming year, plan is to conduct studies on the effect of nature on the masculinity and femininity of STEM spaces. We predict that adding nature to STEM spaces will feminize/neutralize the masculinity of STEM

spaces, thereby making women feel more “at home” in these spaces. In (Study 3C), we propose to manipulate STEM spaces to see how physical features of the space affect sense of place in STEM.

Outreach and Travel Fund

- Award availability will be communicated several times next year to encourage requests from department chairs with a reminder at the September search symposium.
- A special effort will be made to communicate one of the fund’s features to support the travel by chairs or search committees to contact and travel to meet with (URM women or majority women who may be potential applicants and encourage them to apply to U.Va.

Tournament Challenge Elicitation and Design Team

This group of team members will elicit challenge ideas and design challenge language based on what stakeholders say are relevant problems to be solved. Program manager will work with the team to provide the logistical support to the TLG, market the tournament challenges, build the website, and recruit tournament judges. Plan to launch first tournament in the Fall.

Academic Portal

- The portal development group will continue to work with Interactive Knowledge this summer to develop a wireframe. story board
- Interactive modules will be finalized early this summer with focus on dual career issues, implicit bias, broadening the pool, outreach and hiring of underrepresented minority women/women of color faculty (a key feature of the portal), and search committee best practices.
- The portal will “go live” at the September search committee symposium.
- Finalize content review of existing beta website

Enhancement Fund

- Two calls for applications will be issued in the fall of 2014 and in the spring of 2015.
- The fund availability will be communicated several times next year to encourage applications.

Search Symposium

On May 5th we convened a successful “partner” meeting with the RSG group composed of: A&S and SEAS Human Resources, the executive recruiting group, HR information systems (collects all search committee member names), dual career HR consultant, Office of Access and Equity, and U.Va CHARGE. We will reach out to the new Vice Provost for Faculty Affairs when she starts in June to join this group. Each group member is invested in faculty recruitment and administration. They will help us plan and organize the early September search symposium for all university search committees, department chairs, and administrators. We will begin meeting with the A&S HR Manager to plan a knowledge transfer to the new College faculty equity advisors in time for the fall symposium. Program plans will include interactive theatre performances by University of New Hampshire Players.

External Advisory Board Meeting is scheduled for early Fall.

Data Toolkit Expansion:

The provost has asked UVa CHARGE to conduct analysis of start-up package equity for all departmental hires and offers. This expansion project will extend through Fall 2014.

Dissemination and Dialogue on Toolkit Reports

In the Fall of 2014, we will organize community town halls for women and men in STEM-SBE to discuss and share the space allocation and start-up reports. These reports will also be presented to the Faculty Senate.

Impacts

What is the impact on the development of the principal discipline(s) of the project?

The most important impact for this reporting period is the significant progress toward integration of core UVA CHARGE practices and initiatives into school level required search committee procedures in the School of Engineering and Applied Sciences. The dean has incorporated a sequence of checkpoints at well-defined stages of the search to ensure that best practices for diverse pools; active outreach; evaluation bias reduction and effective on campus visits are executed. Post search debriefings will now be a routine part of the process.

What is the impact on other disciplines?

Nothing to report.

What is the impact on the development of human resources?

Collaboration with the School of Engineering and the College of Arts and Sciences will establish and train a new cadre of search equity advisors.

What is the impact on physical resources that form infrastructure?

Space Allocation Analysis and Social Science Study involved offices at the University that do not typically interface with issues of faculty recruitment and retention and women in STEM. These will lead to fruitful new data collection processes (for example, analyzing space allocation data and gender by the offices of facilities and space planning and new infrastructure and built environment initiatives.) The Office of the Architect partnered on campus light meter and mapping studies to assess safety gaps and agreed to address deficits in campus lighting as they are identified.

What is the impact on institutional resources that form infrastructure?

Nothing to report.

What is the impact on information resources that form infrastructure?

Nothing to report.

What is the impact on technology transfer?

Nothing to report.

What is the impact on society beyond science and technology?

Nothing to report.

Changes/Problems

Changes in approach and reason for change

Social Science Study

In our original social science research proposal, we proposed 3 experimental studies (Studies 3a-3c). In Study 3a, we proposed to manipulate how students use STEM spaces to see how use of space affects sense of place in STEM. In Study 3b, we proposed to manipulate perceptions of STEM spaces to see how perceptions of spaces affect sense of place in STEM. In Study 3c, we proposed to manipulate STEM spaces to see how physical features of the space affect sense of place in STEM. For each study, we proposed a specific manipulation (e.g., randomly assign students to sit in the front vs. in the back of the classroom; randomly assign students to perceive space as relatively small and private or relatively large and public; randomly assign students to wear earplugs to “shrink” the space they are in vs. not). We will change some of the manipulations for some of these studies. Specifically:

1. Study 3a will remain unchanged. We will randomly assign participants to sit in the front or back of the class. We are currently considering how to best do this, which is not easy because of ethical concerns. Based on our survey and observational data, we think that there may be positive consequences to sitting in the front of the class and negative consequences to sitting in the back. In addition to Study 3a, we will also conduct a study in which students are randomly assigned to use a smartphone “safety app” aimed at empowering students to use space and test whether increased use of space boosts students’ sense of place at the University.
1. Study 3b has changed. We still manipulated students’ perceptions of space but we did not randomly assigning them to think of STEM spaces as relatively small and private vs. relatively large and public. Our Year 1 survey data did not suggest this dimension was relevant. Instead, we investigated how students’ perceptions of safety in STEM and non-STEM spaces. This change is based on preliminary survey data from Year 1.
1. Study 3c will change. We will still manipulate/change space. However, rather than asking participants to wear earplugs (which has been shown to psychologically “shrink” space), we will change the physical space more directly. Specifically, we will conduct a natural experiment, testing whether increasing lighting on campus affects students’ and faculty members’ sense of place at the University.

Note that these changes do not change the scope of the work. We are still planning on manipulating use of space, perceptions of space, and changing the physical space. We are building on our current data, to create better, more informed interventions to boost students' sense of place in STEM.

School of Engineering Partnerships

On request of the dean, UVa CHARGE developed programs focused on warming or enhancing departmental and classroom climate. These include materials on classroom etiquette and respect that will be incorporated into student orientation programs.

Actual or Anticipated problems or delays and actions or plans to resolve them

Anticipated the need to pilot and adapt the structured dialogue process. We completed and will implement a revised protocol in Fall 2014.

Changes that have a significant impact on expenditures

Nothing to report.

Significant changes in use or care of human subjects

Nothing to report.

Significant changes in use or care of vertebrate animals

Nothing to report.

Significant changes in use or care of biohazards

Nothing to report.

Special Requirements

Responses to any special reporting requirements specified in the award terms and conditions, as well as any award specific reporting requirements.

Updated Toolkit Faculty demographic data; space allocation data; Faculty start-up resources analysis

Initiative Worksheets Project and Evaluation Plans

External Evaluation Reports and Interview Instruments