



# CRA-E/CRA-WP CSGrad4US Mentoring Program: Cohort One Year Two Immediate Impact Evaluation Report

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Computing Research Association  
Evaluation



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## About CERP & Acknowledgements

The Computing Research Association's (CRA) Center for Evaluating the Research Pipeline (CERP) is a research and evaluation center whose mission is to promote diversity in computing. CERP serves as a resource for the computing community by supporting efforts to recruit and retain individuals considered underrepresented in computing or historically marginalized (i.e., women; people who are Black/African American, Hispanic/Latinx, Indigenous and First Nations, Native Americans, Alaska Natives, Native Hawaiians, and Pacific Islanders; persons with disabilities; persons from low-income backgrounds; first generation college students; LGBTQIA+ individuals; and veterans). More generally, CERP strives to inform the computing community about patterns of entry, subjective experiences, persistence, and success among individuals involved in academic programs and careers related to computing.

CERP was created by the Committee on the Status of Women in Computing Research (CRA-W)/Coalition to Diversify Computing (CDC) Alliance through a National Science Foundation grant to the Computing Research Association (CNS-1246649). The current research was supported by NSF grant CNS-2123180. Any opinions, findings, conclusions, and recommendations are the authors' and do not necessarily reflect the views of the National Science Foundation.

For more information about CERP, visit <http://cra.org/cerp/>.

# Executive Summary

The Computing Research Association's (CRA) Center for Evaluating the Research Pipeline (CERP) provided evaluation for the CSGrad4US Mentoring Program by assessing the impact of the program on the fellows' experiences applying to graduate school and their first-year graduate school experiences. CERP employed a pretest-posttest framework in each of the two years of the program. This report is part of a multi-year evaluation aimed at understanding the long-term impact of mentoring on the mentees' goals and intent to return to graduate school. In this report, evaluation findings will focus on cohort one mentees' entry into their graduate programs and first-year perceptions compared to other first-year graduate students who participated in the Fall 2022 Data Buddies Survey. CERP examined the cohort's graduate school experience at program entry (Time 3) and after completing their first year in their programs (Time 4). Evaluation results suggest that the program had a positive immediate impact on some fellows' entry into their graduate programs and professional outcomes. In addition, Cohort 1 participants provided feedback to improve the program for future cohorts.

## YEAR TWO KEY FINDINGS #1: IMMEDIATE IMPACTS

### Self-Perceptions and Attitudes Related to Graduate School Experience

- After completing their first year in graduate program, there were significant differences over time between the cohort 1 mentees and comparison groups in their [scientist identity \(Table 3.2\)](#).

### Mentor and Professional Support Structures

- Cohort 1 mentees reported stronger perception in their professional networking, specifically [having a strong network of peers and mentors to interact with at conferences](#) (Table 3.4).
- Cohort 1 mentees were less likely to agree that [their faculty did not support their students in their departments](#) (Table 3.7).

### Perceptions of First-Year Graduate School Experiences

- While the comparisons are not statistically significant, cohort 1 mentees were more likely to believe that they will have a good experience in their graduate programs than the comparison groups (Table 3.8).

## YEAR TWO KEY FINDINGS #2: PROGRAM-SPECIFIC FEEDBACK

- On average, mentees highly rated and appreciated the [information they received about the graduate application process](#) and the [coaching they received about how to prepare your graduate application materials](#) (Table 4.1).
- As shown in Table 4.2, 88% reported that the program had a “moderately” or “large” positive impact on their ability to achieve their graduate school goals.

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# 1. Introduction

The Computing Research Association's Committees on Education (CRA-E) and Widening Participation (CRA-WP) collaboratively implemented the CSGrad4US Mentoring program for recipients of the National Science Foundation's (NSF) CSGrad4US Graduate Fellowships. The program targets individuals currently in the workforce who are planning to return to computing-related graduate programs. The goals of the CSGrad4US Mentoring Program are (1) to guide returning students through the application process towards a successful graduate admission and school selection, (2) mentor them through the transition to graduate study in the first year towards high retention, and (3) increase the domestic pipeline of students earning graduate degrees in computing.

The CSGrad4US Mentoring Program offered for the CSGrad4US Fellows to address the unique needs and situations of those in the workforce who want to return to school. Through this program, fellows will receive both group mentoring and individual coaching over the course of two years. In the first year, mentees were advised on the graduate school application and selection process. In the second year, mentees were advised on having a successful first year of their doctoral program.

## Report Overview

Employing a quasi-experimental research approach with a comparative pre-test-posttest framework, the CRA Center for Evaluating the Research Pipeline (CERP) conducted an evaluation of the year two of CSGrad4US Mentoring Program. CERP used an online survey to distribute to mentees at their graduate program entry (Time 3) and after completing their first-year in their programs (Time 4). In the second year, CERP examined cohort one participants' confidence, aspirations, and experiences with their graduate school programs. The surveys also aimed to assess the overall impact of the mentoring provided throughout the year on the fellows. The Time 4 survey included open-ended feedback questions, allowing participants to provide insights into the program modifications and impact on their trajectory to their graduate entry.

This report compares 20 cohort one participants who are currently enrolled in doctoral graduate programs with 38 first-year graduate students from the Data Buddies Survey. It assesses both the immediate and medium-term impacts on the mentees' outcomes, such as social support and graduate school experience, and their pathway to persist in their studies across different pathways. The findings from this year's evaluation contribute to the broader, multi-year understanding of how the CSGrad4US Mentoring Program supports its mentees over time.

## 2. Evaluation Methodology

### Data Collection Activities

CERP utilized a pretest/posttest framework to evaluate the impact of the CSGrad4US Mentoring, administering surveys at two distinct time points: the start of their graduate program (Time 3) and the end of the first year of graduate school (Time 4). At entry of their graduate program, CERP distributed a survey to collect information on their aspirations and confidence levels regarding success and current experiences in their graduate programs. The post-program survey was administered at the end of the first year in their programs, measuring changes in participants' experiences and progress in their graduate programs across various measures (see Program Measures section). This survey also gathered feedback from participants about the program's impact and their readiness to continue into the second year of graduate school.

Additionally, CERP surveyed a comparison group of first-year graduate students who participated in the Fall 2022 Data Buddies Survey. This comparison group was divided for analysis based on their pathways into graduate school (as noted in the tables). The sample consisted of the 58 participants who completed both pre and post program surveys (Time 3/Time 4 for Cohort 1 mentees; Time 1/Time 2 for comparison groups):

- **CSGrad4US Cohort 1:** Mentees who are currently enrolled in doctoral programs (**n = 20**).
- **DBS Comparison Group #1:** First-year graduate students coming directly from undergraduate or terminal master's programs (**n = 17**).
- **DBS Comparison Group #2:** First-year graduate students transitioning from industry or government workforce and roles (**n = 21**).

### Program Measures

For the evaluation of the CSGrad4US Mentoring Program, CERP examined the impacts during the second year of the program using the following self-reported quantitative outcomes: [identification with computing](#), [sense of belonging](#), [graduate school experiences](#), [perceived mentorship support](#), [perceived professional network](#), and [self-efficacy](#).

### Analyses

Pre/post comparisons of CSGrad4US cohort one mentees and the comparison groups were analyzed using a paired samples t-test on each Likert-scale outcome measure (e.g., measures rated on a scale from 1 to 5 to create a mean score). Two-proportions z-tests were used to test differences between proportions of groups (e.g., measures with only one response option thus creating the percentage of participants who selected a particular option). For each statistical test, we indicate whether differences in means or proportions from Time 1 to Time 2 are statistically significant using the conventional,  $p \leq .05$  thresholds for inferential statistics.

It is important to note that positive changes between Time 1 and Time 2 responses suggest, but do not prove, the positive impact of the fellowship. Due to limitations inherent in pretest/posttest self-reported data, changes between Time 1 and Time 2 could be due to response bias, demand characteristics, or may be fleeting and not sustained over time.

Qualitative data (i.e., open-ended comments) were analyzed using a thematic coding scheme, wherein patterns among open-ended comments were grouped together and summarized as an over-arching theme or ideas.



### 3. Cohort 1 Pre-Post Program Findings

#### Self-Perceptions and Attitudes Related to in Graduate School Experiences

##### Belonging & Computing Identity

Table 3.1. Please indicate the extent to which you disagree or agree with the following statements.

	CSGrad4US Cohort 1 Mentees			DBS Comparison Group 1			DBS Comparison Group 2		
	Time 3 Mean (SD)	Time 4 Mean (SD)	Sig.	Time 1 Mean (SD)	Time 2 Mean (SD)	Sig.	Time 1 Mean (SD)	Time 2 Mean (SD)	Sig.
I see myself as a "computing person".	4.11 (0.68)	4.00 (0.97)		4.00 (1.20)	3.73 (1.22)		4.16 (1.02)	3.89 (1.37)	
I feel like I "belong" in computing.	3.72 (1.13)	3.83 (0.92)		3.87 (1.06)	3.80 (1.15)		4.11 (0.99)	3.84 (1.12)	
I feel like an outsider in computing.	2.94 (1.21)	2.89 (1.32)		3.53 (0.99)	3.07 (1.44)		3.47 (1.31)	3.15 (1.39)	
I feel welcomed in computing.	3.29 (1.11)	3.18 (1.13)		3.80 (0.68)	3.80 (1.01)		3.79 (1.03)	3.74 (0.87)	
I do not have much in common with the other students in my computing classes.	2.67 (1.15)	3.00 (1.00)		3.36 (0.93)	3.29 (0.99)		3.05 (1.35)	3.11 (1.20)	
<b>Overall Means</b>	<b>3.72 (0.70)</b>	<b>3.73 (0.72)</b>		<b>3.78 (0.72)</b>	<b>3.71 (0.92)</b>		<b>3.81 (0.91)</b>	<b>3.75 (0.97)</b>	
n	20	20		17	17		21	21	

(\*)  $p \leq .05$ ; (N/A)  $n < 5$  or test criteria were not met. (1) Strongly disagree - (5) Strongly Agree

##### Scientist Identity

Table 3.2 Please indicate the extent to which you agree with each statement.

	CSGrad4US Cohort 1 Mentees			DBS Comparison Group 1			DBS Comparison Group 2		
	Time 3 Mean (SD)	Time 4 Mean (SD)	Sig.	Time 1 Mean (SD)	Time 2 Mean (SD)	Sig.	Time 1 Mean (SD)	Time 2 Mean (SD)	Sig.
In general, being a scientist is an important part of my self-image.	2.50 (1.30)	2.94 (1.16)		3.00 (1.25)	3.60 (0.99)	*	2.37 (1.42)	3.00 (1.41)	*
<b>I have a strong sense of belonging to the community of scientists.</b>	<b>2.17 (1.20)</b>	<b>3.06 (0.94)</b>	<b>*</b>	2.93 (1.22)	3.13 (1.06)		2.37 (1.30)	3.11 (1.24)	*
Being a scientist is an important reflection of who I am.	2.33 (1.24)	2.67 (1.03)		2.93 (1.39)	3.40 (0.91)	*	2.28 (1.41)	2.89 (1.57)	*
<b>I have come to think of myself as a "scientist."</b>	<b>2.28 (1.13)</b>	<b>3.06 (1.26)</b>	<b>*</b>	2.73 (1.39)	3.40 (0.83)	*	2.11 (1.29)	3.05 (1.35)	*

<b>I am a scientist.</b>	<b>2.44 (1.04)</b>	<b>3.06 (1.11)</b>	<b>*</b>	2.80 (1.32)	3.47 (1.13)	*	2.21 (1.13)	3.32 (1.34)	*
<b>Overall Means</b>	<b>2.34 (1.12)</b>	<b>2.96 (0.84)</b>	<b>*</b>	<b>2.88 (1.25)</b>	<b>3.40 (0.82)</b>	<b>*</b>	<b>2.26 (1.18)</b>	<b>3.07 (1.25)</b>	<b>*</b>
n	18	18		15	15		19	19	

(\*) p ≤ .05; (N/A) n<5 or test criteria were not met. (1) Strongly disagree - (5) Strongly Agree

### Self-Efficacy

Table 3.3. I am confident that I can:

	CSGrad4US Cohort 1 Mentees			DBS Comparison Group 1			DBS Comparison Group 2		
	Time 3 Mean (SD)	Time 4 Mean (SD)	Sig.	Time 1 Mean (SD)	Time 2 Mean (SD)	Sig.	Time 1 Mean (SD)	Time 2 Mean (SD)	Sig.
clearly communicate technical problems and solutions to a range of audiences	3.94 (0.64)	4.17 (0.71)		3.80 (1.01)	3.93 (0.88)		4.16 (0.83)	4.16 (1.02)	
articulate thoughtful answers to questions about my work during a presentation	3.56 (1.04)	3.67 (0.97)		3.60 (1.24)	3.80 (0.86)		4.21 (0.98)	4.05 (0.91)	
introduce myself to new peers/colleagues at professional meetings	4.00 (0.91)	3.89 (1.18)		3.20 (1.08)	3.47 (1.36)		4.21 (0.98)	4.00 (1.11)	
be a capable researcher in computing	3.94 (1.00)	4.17 (0.62)		3.80 (1.08)	3.33 (1.04)	*	3.89 (1.05)	3.95 (1.18)	
<b>find employment in an area of computing interest</b>	<b>4.39 (0.61)</b>	<b>4.11 (0.83)</b>	<b>*</b>	4.20 (0.86)	3.73 (1.34)	*	4.16 (0.96)	4.16 (1.26)	
complete my graduate degree program	4.00 (1.18)	4.14 (0.95)		4.60 (0.83)	4.53 (0.74)		4.63 (0.50)	4.47 (1.12)	
successfully teach a course in my field	3.89 (1.02)	4.06 (1.00)		3.33 (1.05)	3.53 (1.19)		3.89 (1.15)	3.68 (1.29)	
become an expert in my field	3.94 (1.06)	3.61 (1.15)		3.93 (1.03)	3.87 (0.99)		4.05 (1.08)	4.26 (1.10)	
discuss my work with senior members of my field.	3.88 (1.05)	3.82 (1.07)		3.80 (0.86)	3.80 (0.68)		4.33 (0.84)	4.28 (0.58)	
<b>Overall Means</b>	<b>3.89 (0.64)</b>	<b>3.94 (0.67)</b>		<b>3.73 (0.82)</b>	<b>3.71 (0.70)</b>		<b>4.06 (0.63)</b>	<b>4.06 (0.72)</b>	
n	18	18		15	15		19	19	

(\*) p ≤ .05; (N/A) n<5 or test criteria were not met. (1) Strongly Disagree- (5) strongly agree

## Mentor and Professional Support Structures

### Professional Network

Table 3.4 To what extent is each of the following available to you at this point?

	CSGrad4US Cohort 1 Mentees			DBS Comparison Group 1			DBS Comparison Group 2		
	Time 3 Mean (SD)	Time 4 Mean (SD)	Sig.	Time 1 Mean (SD)	Time 2 Mean (SD)	Sig.	Time 1 Mean (SD)	Time 2 Mean (SD)	Sig.
People with whom you can ask professional development questions?	3.24 (1.20)	3.41 (1.00)		2.93 (1.16)	2.93 (1.10)		3.21 (1.40)	3.58 (1.35)	
<b>A strong network of peers to interact with at conferences?</b>	<b>1.71 (1.00)</b>	<b>2.53 (1.18)</b>	<b>*</b>	2.07 (1.16)	2.20 (1.15)		2.17 (1.25)	2.06 (1.31)	
<b>A strong network of mentors to interact with at conferences?</b>	<b>1.81 (1.10)</b>	<b>2.13 (0.89)</b>	<b>*</b>	1.87 (1.24)	1.87 (0.99)		1.95 (1.03)	2.00 (1.29)	
People who would be excited to learn about your professional successes?	3.65 (1.06)	3.65 (1.22)		2.47 (1.13)	2.73 (0.96)		2.95 (1.51)	3.16 (1.47)	
People with whom you can discuss issues you are having?	3.29 (1.11)	3.18 (1.13)		3.13 (1.06)	3.13 (1.13)		2.89 (1.41)	3.05 (1.35)	*
<b>Overall Means</b>	<b>2.73 (0.88)</b>	<b>2.98 (0.79)</b>		<b>2.49 (1.02)</b>	<b>2.57 (0.91)</b>		<b>2.65 (1.05)</b>	<b>2.78 (1.16)</b>	
n	17	17		15	15		19	19	

(\*)  $p \leq .05$ ; (N/A)  $n < 5$  or test criteria were not met. (1) None - (5) Very much

### Mentor Support

Table 3.5. To what extent do you have a mentor who:

	CSGrad4US Cohort 1 Mentees			DBS Comparison Group 1			DBS Comparison Group 2		
	Time 3 Mean (SD)	Time 4 Mean (SD)	Sig.	Time 1 Mean (SD)	Time 2 Mean (SD)	Sig.	Time 1 Mean (SD)	Time 2 Mean (SD)	Sig.
helps you improve your computing skills?	3.00 (1.00)	2.76 (1.48)		2.79 (1.58)	2.71 (1.44)		2.89 (1.49)	2.37 (1.34)	
shows compassion for any issues you discussed with them?	3.76 (1.03)	3.82 (1.07)		3.14 (1.35)	3.50 (1.45)		3.32 (1.38)	3.16 (1.43)	
shares personal experiences as an alternative perspective to your problem?	3.19 (1.05)	3.44 (1.26)		2.93 (1.44)	3.29 (1.27)		2.58 (1.54)	2.95 (1.47)	

explores career options with you?	2.76 (1.20)	2.53 (1.46)	2.36 (1.45)	2.43 (1.40)		2.42 (1.58)	2.58 (1.47)	
encourages you to do the best you can in your coursework?	3.31 (1.25)	3.15 (1.14)	2.64 (1.22)	3.36 (1.50)	*	2.16 (1.39)	3.16 (1.54)	*
supports your research ideas?	3.18 (1.38)	3.47 (1.13)	3.14 (1.56)	3.21 (1.25)		2.68 (1.77)	2.84 (1.77)	
provides constructive feedback?	3.71 (1.16)	3.59 (1.23)	3.36 (1.39)	3.29 (1.20)		3.26 (1.63)	3.32 (1.56)	
prepares you for a career in academia?	3.13 (1.26)	3.40 (1.30)	3.71 (1.70)	3.71 (0.95)		4.29 (1.50)	4.00 (1.41)	
<b>Overall Means</b>	<b>3.24 (0.88)</b>	<b>3.24 (0.91)</b>	<b>2.90 (1.23)</b>	<b>3.10 (1.19)</b>		<b>2.77 (1.19)</b>	<b>2.86 (1.32)</b>	
n	17	17	14	14		19	19	

(\*) p ≤ .05; (N/A) n<5 or test criteria were not met. (1) Not at all - (5) Very much

### Peer Support in Department and Institutions

Table 3.6. How often do you receive the following from other students?

	CSGrad4US Cohort 1 Mentees			DBS Comparison Group 1			DBS Comparison Group 2		
	Time 3 Mean (SD)	Time 4 Mean (SD)	Sig.	Time 1 Mean (SD)	Time 2 Mean (SD)	Sig.	Time 1 Mean (SD)	Time 2 Mean (SD)	Sig.
Help and support	3.27 (0.80)	3.53 (0.74)		3.33 (0.82)	3.87 (0.92)	*	3.21 (1.23)	3.26 (1.15)	
Willingness to listen to issues you are having at school	3.40 (1.06)	3.60 (1.06)		3.47 (0.92)	3.60 (0.63)		3.47 (1.27)	3.53 (1.31)	
Helpful feedback about your work	3.33 (1.11)	3.47 (1.06)		3.27 (1.03)	3.60 (0.83)		3.11 (1.20)	3.32 (0.95)	
Respect for your work and/or ideas	3.93 (1.22)	4.00 (0.76)		4.00 (0.85)	4.20 (0.56)		4.04 (0.85)	4.32 (0.82)	
Inclusion of your perspective on their work and/or ideas	3.60 (0.91)	3.87 (0.92)		3.73 (0.70)	3.80 (0.68)		3.68 (1.16)	3.95 (1.08)	
Opportunities to collaborate	3.53 (0.92)	3.47 (1.13)		3.80 (0.86)	3.73 (0.88)		3.26 (0.99)	3.63 (1.12)	
<b>Overall Means</b>	<b>3.51 (0.88)</b>	<b>3.68 (0.71)</b>		<b>3.60 (0.71)</b>	<b>3.80 (0.60)</b>		<b>3.46 (0.87)</b>	<b>3.67 (0.81)</b>	
n	15	15		15	15		19	19	

(\*) p ≤ .05; (N/A) n<5 or test criteria were not met. (1) Never - (5) All the time

## Department/Faculty Support

Table 3.7. Think about the faculty, staff, administrators (e.g., the department chair, dean, staff) in the computing department and rate the extent to which you disagree or agree with the following statements:

	CSGrad4US Cohort 1 Mentees			DBS Comparison Group 1			DBS Comparison Group 2		
	Time 3 Mean (SD)	Time 4 Mean (SD)	Sig.	Time 1 Mean (SD)	Time 2 Mean (SD)	Sig.	Time 1 Mean (SD)	Time 2 Mean (SD)	Sig.
The department cares about its students.	3.93 (1.03)	4.07 (1.22)		3.86 (0.66)	3.93 (1.00)		3.74 (1.49)	3.74 (1.10)	
<b>The department is <u>NOT</u> very supportive of its students.</b>	<b>4.07 (1.03)</b>	<b>3.60 (1.50)</b>	<b>*</b>	4.00 (0.68)	4.21 (1.12)		3.68 (1.45)	3.58 (1.12)	
Computer science administrators and faculty care about diversity.	3.93 (0.96)	4.00 (0.85)		4.00 (0.68)	4.14 (0.77)		3.47 (1.23)	3.58 (0.96)	
<b>Overall Mean (SD)</b>	<b>3.98 (0.93)</b>	<b>3.88 (1.04)</b>		<b>3.95 (0.57)</b>	<b>4.09 (0.76)</b>		<b>3.63 (1.33)</b>	<b>3.63 (0.87)</b>	
n	15	15		14	14		19	19	
(*) $p \leq .05$ ; (N/A) $n < 5$ or test criteria were not met. (1) Strongly disagree - (5) Strongly agree									

## Perceptions of First-Year Graduate School Experience

### Graduate School Impressions

Table 3.8. Based on your time in your degree program so far, how true are the following statements?

	CSGrad4US Cohort 1 Mentees			DBS Comparison Group 1			DBS Comparison Group 2		
	Time 3 Mean (SD)	Time 4 Mean (SD)	Sig.	Time 1 Mean (SD)	Time 2 Mean (SD)	Sig.	Time 1 Mean (SD)	Time 2 Mean (SD)	Sig.
I feel that I know a lot about this program.	3.53 (1.30)	3.60 (0.83)		3.60 (1.06)	3.53 (1.25)		3.68 (1.00)	3.79 (0.86)	
I am truly excited to be in this program.	3.80 (1.32)	3.53 (1.41)		3.87 (0.99)	4.00 (1.13)		4.05 (1.03)	4.00 (1.00)	
This program is a good match for my research interests.	4.07 (0.80)	4.07 (1.10)		4.27 (1.03)	4.00 (1.20)		3.89 (1.13)	3.17 (1.25)	*
This program is a good fit for me based on other, non-research considerations.	3.67 (1.23)	3.80 (1.42)		4.13 (0.83)	3.80 (1.08)		4.47 (0.91)	3.89 (1.29)	*
I believe I will get good research training in this program.	4.29 (0.73)	4.07 (1.21)		4.36 (1.15)	3.86 (1.23)		3.72 (1.57)	3.28 (1.41)	
I believe I will have access to helpful mentors and advisors in this program	4.13 (0.92)	3.93 (1.16)		4.27 (0.88)	3.87 (1.36)		3.39 (1.61)	3.39 (1.46)	
The program seems to have a supportive network of graduate students.	3.93 (1.16)	3.70 (1.05)		4.00 (1.07)	3.80 (1.21)		3.39 (1.69)	3.33 (1.50)	
I believe I can have a successful graduate experience at this program.	3.93 (1.03)	4.13 (0.99)		4.40 (0.83)	3.93 (1.03)		4.17 (0.92)	3.78 (1.17)	
<b>Overall Means</b>	<b>3.90 (0.88)</b>	<b>3.84 (0.80)</b>		<b>4.10 (0.48)</b>	<b>3.85 (1.02)</b>		<b>3.85 (0.74)</b>	<b>3.58 (0.94)</b>	
n	15	15		15	15		19	19	
(*) p ≤ .05; (N/A) n<5 or test criteria were not met. (1) Not at all true - (5) Extremely true									

Table 3.9. So far in your degree program, how do you think your knowledge in the following areas compares to that of other first year students in your program?

	CSGrad4US Cohort 1 Mentees			DBS Comparison Group 1			DBS Comparison Group 2		
	Time 3 Mean (SD)	Time 4 Mean (SD)	Sig.	Time 1 Mean (SD)	Time 2 Mean (SD)	Sig.	Time 1 Mean (SD)	Time 2 Mean (SD)	Sig.
Knowing what courses to take	3.08 (1.04)	3.23 (1.17)		3.73 (0.82)	3.47 (1.06)		3.63 (0.83)	3.58 (0.77)	
Knowing what graduate school would be like	3.69 (0.86)	3.54 (0.78)		3.33 (1.18)	3.60 (0.91)		3.32 (0.95)	3.16 (0.96)	
Knowing what research projects to get involved in	<b>3.14 (1.10)</b>	<b>2.71 (0.83)</b>	*	3.07 (1.39)	2.50 (1.16)	*	2.94 (1.06)	2.50 (1.04)	
Knowing what career paths are available after finishing the program	3.93 (0.73)	3.57 (1.02)		3.13 (1.13)	3.00 (1.00)		3.33 (0.84)	3.61 (0.92)	
<b>Overall Means</b>	<b>3.44 (0.58)</b>	<b>3.21 (0.64)</b>		<b>3.21 (0.94)</b>	<b>3.06 (0.62)</b>		<b>3.21 (0.47)</b>	<b>3.10 (0.62)</b>	
n	15	15		15	15		19	19	

(\*)  $p \leq .05$ ; (N/A)  $n < 5$  or test criteria were not met. (1) I know a lot less than others - (5) I know a lot more than others

### Overall Graduate Program Satisfaction

Table 3.10. Please indicate the extent to which you disagree or agree with the following statement:

	CSGrad4US Cohort 1 Mentees			DBS Comparison Group 1			DBS Comparison Group 2		
	Time 3 Mean (SD)	Time 4 Mean (SD)	Sig.	Time 1 Mean (SD)	Time 2 Mean (SD)	Sig.	Time 1 Mean (SD)	Time 2 Mean (SD)	Sig.
Overall, I am satisfied with the computing program at my institution.	4.00 (0.76)	3.67 (1.35)		4.23 (0.83)	3.87 (0.83)		4.06 (1.00)	3.72 (0.96)	
n	15	15		15	14		19	18	

(\*)  $p \leq .05$ ; (N/A)  $n < 5$  or test criteria were not met. (1) Strong disagree - (5) strongly agree

## 4. Program Year 2 Perceptions & Feedback

### Rating on Quality of CsGrad4US Mentoring Program

Table 4.1 Rating on the Quality & Aspects of Program.

	CSGrad4US Cohort 1 Mentees
	Mean (SD)
<b>The information you received about the graduate application process</b>	<b>3.87 (1.31)</b>
The information you received about what graduate school is like	3.70 (1.14)
The information you received about what doing research is like	3.56 (1.21)
The information you received about how to choose the right graduate program for your needs and goals	3.63 (1.20)
The coaching you received about your readiness for graduate school	3.63 (1.20)
<b>The coaching you received about how to prepare your graduate application materials</b>	<b>3.81 (1.17)</b>
The amount of support you received from your coach about your decisions	3.75 (1.29)
The connections you made with your CSGrad4US peers	3.19 (1.17)
Overall, how would you rate the quality of the CSGrad4US program?	3.81 (1.11)
n	16

(\*)  $p \leq .05$ ; (N/A)  $n < 5$  or test criteria were not met. (1) Poor - (5) Excellent

### Impact of CGrad4US Mentoring Program on Graduate School Goals

Table 4.2 Impact on Program Involvement.

	CSGrad4US Cohort 1 Mentees
How do you think your involvement in the CSGrad4US program affected your ability to achieve your graduate school goals?	Percentage (%)
A large negative impact	0%
A moderately negative impact	6%
A small negative impact	0%
No impact	0%
A small positive impact	6%
A moderately positive impact	38%
A large positive impact	50%
n	16



## Open-Ended Feedback

**Table 4.3. Feedback on Barriers Related to their Graduate school experience.**

Are you experiencing any difficulties or encountering any barriers in your first year of graduate school? Is there anything that you were not expecting or that you wish you had been more prepared for? If so, please describe them below.
Time management skills are really difficult
One thing that made me hesitant about going back to school was dealing with students who made me feel uncomfortable. This presented itself in the first few weeks of the semester and it has really made me hesitant to venture out as I do not feel safe (classmate stalked me, had to get Title IX involved and a No Contact Order in place). I think that all grad students need to be aware of their actions and understand that they may be making others uncomfortable: there needs to be more education on diversity and gender inclusivity, it is inappropriate for a man to continue to pursue a woman when she has repeatedly told him to stop contacting her (on multiple platforms). It does not create a safe learning environment and it frankly made me consider dropping out despite all of the wonderful opportunities and resources available here. It caused me an immense amount of psychological stress to the point where I asked my professors if I could attend class online for fear I would encounter the individual. I am hoping I will not have to see him again as our research interests do not align but it is still a fear of mine to see this student on campus.
I just wish I went to a school with a larger graduate division. I may have over-indexed on advisor's research tastes matching my research tastes given that they taught at a school with some downsides (funding, isolating environment in small town).
coming back from industry to grad school, there's an interesting maturity gap between those who went to industry and came back, and those who went straight to academia. navigating that socially has been trickier than I expected
Nothing really unexpected.
Coursework seems really irrelevant and outdated, requiring a lot of classical CS. They also value breadth of CS knowledge and actively dissuade people from taking classes that would make them a better researcher in their area
My undergraduate degree is not in computer science so I have had difficulty with course selection, especially when I have to complete certain courses as degree requirements and I have not taken the introductory course in that field. I am still on track to pass all of my classes, but I do not know if I will meet the GPA minimum requirement for my program. I did expect to have difficulty with coursework and have performed better than my expectations when entering my program, but the process of meeting your degree requirements (minimum GPA, courses completed, quals, etc.) is quite mystifying still (what happens to you if you don't meet them?) so it would be useful to hear about how to navigate things like this.
- I've needed to spend extra time on coursework due to my math being pretty rusty (it's been 5-8 years since I've used most of the math needed, and some expected areas like probability I had not studied before).
My professors seem to teach graduate courses as if the students have no CS background. So I am reviewing much of my undergraduate degree instead of learning new, advanced material. I was looking forward to being challenged in class, but instead I feel as if they mostly entail busy-work.
I feel a little stretched thin between teaching, coursework and research to the point where sometimes my "best" for a given thing is maybe 60% of what my "best" might look like in another time or place. That is was something I wasn't quite prepared for, and am not always sure how to handle

**Table 4.4. Feedback on the valuable aspects on the program**

What was the most valuable aspect of the second year of the CsGrad4US Program?
funding
Funding
Getting to meet other fellows at the CRA IDEALS conference and conversations on the unofficial Discord we made
Just having more time to apply to places and work on the personal statement.
Many of us are still connected on Discord.
Meeting other peers during IDEALS
networking with other fellows who had gone through a similar life path as me at the GC-IDEALS conference
The opportunity to meet peers at the CRA-IDEALS workshop

**Table 4.5. Feedback on program modifications**

Please tell us below if there is anything specific you would like to change about the CSGrad4US program.
I think there should be more resources and tips on how to apply for the fellowship. I have had more than 6 people reach out to me in the last 1-2 years about preparing their application. Because it is relatively new, it does not have as much existing examples out there like the GRFP does and I can understand why it might be challenging for someone to apply
I wish there were more HCI/social computing people that mentors and peers in the program. It seems like a lot of the advice was geared toward technical sides of CISE, but I consider myself a computational social scientist and some advice (esp around coursework) was just not that relevant to me. Relatedly, I felt really underprepared for interview with faculty prior to admission. With one year under my belt, it seems like a lot of these faculty asked about my ontology and epistemology and that was a curveball
meeting peers at the CRA-IDEALS workshop was fantastic, I wish there had been more interactions with them during the application process in year 1 (although I recognize the challenge of facilitating that remotely)
More transparency about when my department will receive funding from the fellowship.
please adjust the fellowship award amount to match what it currently is offered to future applicants (37k vs 34k)
Record all the meetings and put them on gistify.ai, it's a good tool to use later for people to study from or look at meetings they missed.

**Table 4.5. Other programmatic feedback.**

Is there any other program feedback that you would like to give to CSGrad4US leadership? If so, please share it below:
Thank you Dr. Butler and Dr. Hambrusch!!!
The inability to be able to go back and access previous lectures and meetings is the biggest hurdle for me. Sometimes you can be busy or just forget and want to go back. Using a tool like <a href="https://www.gistify.ai/">https://www.gistify.ai/</a> I think would be essential for allowing me to go back, and review material and be more successful. I'm not a good note taker, it's too distracting for me to do so, but being able to go back and have the transcript and notes already there like with gistify would be the best of both worlds.
I wish I did more soul searching and had a way to get to know the professors I was applying to better
This program has been instrumental in getting me admitted to Berkeley and attending. I can't thank Dilma and the whole CSGrad4US team enough for your belief in me and your support in preparing my application materials. As a PhD student, I'm now doing work that is my calling. Thank you.
I'm very happy. Before this I was really struggling with ever getting into a PhD program and I didn't have the necessary mentorship to make the right decisions about the right program for me. This helped me a lot coming from a background that prepared me for work only and having to work during my undergraduate. Helped me know what questions I needed to ask to be successful beyond industry.
The only thing I wished had been more incorporated within the program is more opportunities to get to know other CSGrad4US fellows. I think the conference next spring which was chosen as a cohort-building experience will be a fantastic way to achieve this. For future cohorts, I think it would be nice to provide more ways for fellows to get to know each other sooner and support each other during the application process.



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