

Abstract

Faculty play a key role in the success of undergraduate STEM students from underrepresented groups (URG). The NSF INCLUDES Aspire Alliance Southern California Regional Collaborative, a regional network of 2- and 4- year institutions, aims to address the need for more diverse faculty by 1) increasing the number of qualified teaching professionals in community colleges (CC) and 2) strengthening the skills of future faculty to teach diverse student populations. These two goals are, in part, achieved through a future teaching faculty (Aspire2Teach) or community college leadership (Aspire2Lead) training program. The Aspire2Teach training program, specifically, is a collaboration with teaching internship programs (ProjectMATCH and TIES) in the Southern California Region. Program participants (interns) are offered a series of institutes on inclusive teaching, professional development, and classroom training under the guidance of a discipline-specific mentor. Additionally, interns engage in Aspire program activities that complement those in the ProjectMATCH or TIES internship related to professional development, equity, diversity and inclusion (EDI), and community building. To assess the impact of the Aspire collaborative training model on intern career interest, teaching skill development, knowledge (institutional and pedagogy), and overall satisfaction with the Aspire program, a mixed methods approach was developed that includes an end of program survey and interview with the participating interns. Selected results from the past three years indicate that interns had sustained interest in community college careers after completing the program and expressed an increase in their knowledge, confidence, and pedagogy skills related to teaching in the community college setting. In addition to the impact of the overall collaborative training, interns specifically indicated that the Aspire program activities (i.e., monthly community meetings, application feedback, teaching demo practice etc.) were beneficial to their teaching training, career development, and in providing community beyond the teaching practicum experience. The career path of the interns following their participation in the program were also tracked. Finally, we highlight program modality differences over the three years due to restriction during the pandemic and the impacts and lessons learned for interns and program leads. This poster will highlight results of the assessment over the past three years, as well as an outline of the program components that can help inform others interested in implementing a similar program at their institution.

Aspire Program: Overview

Aspire seeks to increase the diversity of STEM faculty across higher-education landscape.

NSF INCLUDES Aspire Alliance Theory of Change



Southern California Regional Collaborative Specific Overview

Goals:

- To increase the number and diversify the pool of graduate students and qualified professionals who are interested in pursuing a teaching career in STEM at 2-year colleges.
- To expand and strengthen the preparation of current and future STEM faculty to teach the diverse student population at 2-year colleges.

One-year internship structure:

- Interns are **recruited** through a 3-part informational webinars, word of mouth, and newsletters. Interested persons are then guided through a workshop to prepare their application for the local regional internships (e.g., Project Match, TIES).
- Aspire interns **explore career options** through community college open house and guided tours, webinars and information events, and career/hiring fairs.
- Interns participate in course observation and **teaching experiences** at the community college with an experienced teaching mentor.
- Aspire interns meet for **professional development** with faculty and/or program administrators.
- Aspire interns connected and supported each other in **learning communities** that met and reflected on teaching practices and challenges.
- If ready to apply, interns are **supported in preparing their job application** documents.

YEAR	MODALITY
Year 1 (2019-2020)	All components live and in-person
Year 2 (2020-2021)	Teaching: Remote-Asynchronous Aspire Program Components: Remote-Synchronous
Year 3 (2021-2022)	All components remote and synchronous

Methods

Surveys: Retrospective post-surveys were sent to Aspire participants at the end of their participation in the program. The survey consisted of questions about Aspire, Project MATCH and other related programs. Between 2019-2022, 15 interns responded to the survey.

Interviews: One-on-one interviews were conducted with 11 interns upon their completion of the program*. Each lasted, on average, 30 minutes and were transcribed by the research team. Transcripts were then coded to identify themes related to the Aspire outcomes. The themes were used to supplement data gathered from the surveys.

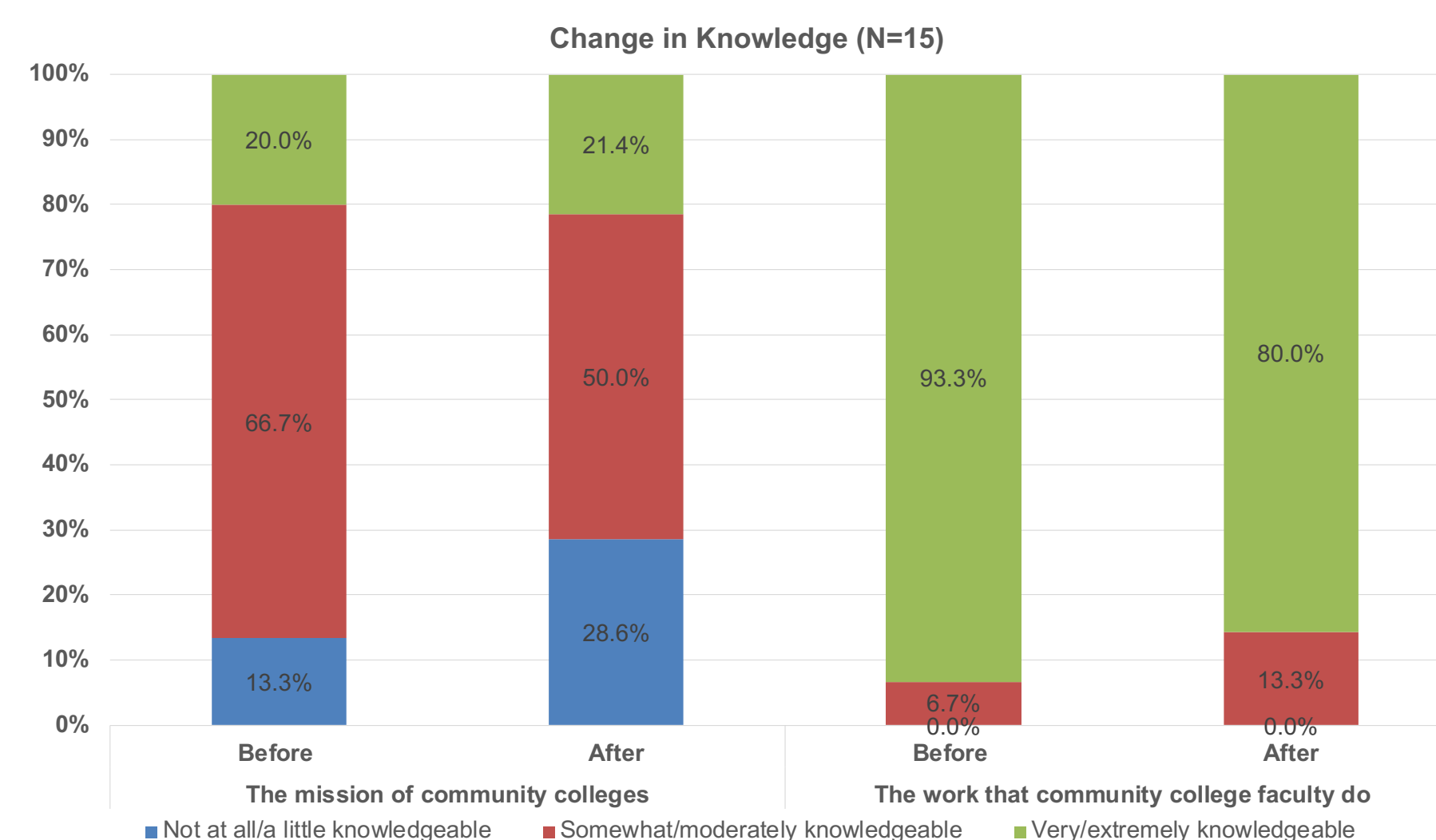
Acknowledgements

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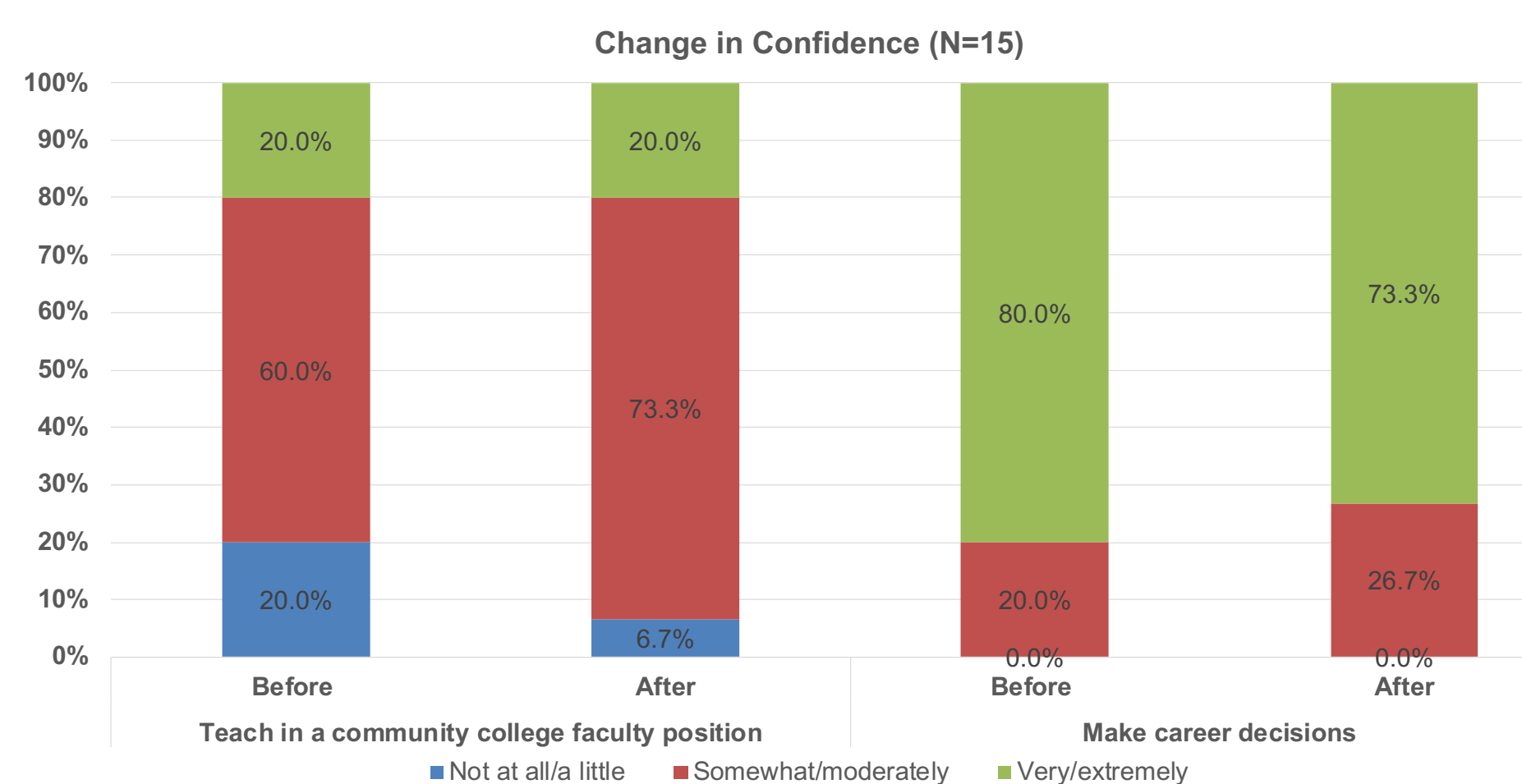
Figure 1. Aspire Interns have Increased Knowledge and Confidence for Community College Teaching

A. Knowledge: "Please rate the extent of your knowledge of the following items [before/after] the teaching practicum"



Aspire interns indicated that their institutional knowledge of both the mission of community colleges and the specific role of faculty increased after completing their teaching practicum.

B. Confidence: "Please indicate your confidence in your ability to complete the following tasks [before/after] the teaching practicum"



Aspire interns' confidence in their ability to teach in community college increased after completing their teaching practicum. Further, they maintained confidence in their ability to make career decisions.

Figure 2. Aspire interns Pedagogy Skills Improve (Self-Assessment)

"Please rate your ability to complete the following tasks [before/after] the teaching practicum using the scale (Scale 1-6 (1=Not at all - 6=Extremely))":

Pedagogical Skill (N=15)	Before	After
Design a lesson plan for a class or part of a class session	4.20	5.33
Lead discussion with students	4.93	5.53
Provide feedback to students on an activity or assignment	4.53	5.40
Utilize classroom/learning technology	4.13	5.07
Create a classroom environment and curriculum that cultivates a sense of belonging for diverse students	4.07	5.27
Manage the intersection of students' everyday (non-academic) lives with learning	3.33	4.73
Integrate employability skills into a STEM classroom	2.80	3.73
Help students learn the applicability of STEM to everyday life	3.73	4.67

Aspire interns' knowledge and skill in pedagogy increased after completing their teaching practicum. Additionally, their preparedness to engage the diverse students in community college settings increased.

Figure 3. Career Paths of Aspire Interns

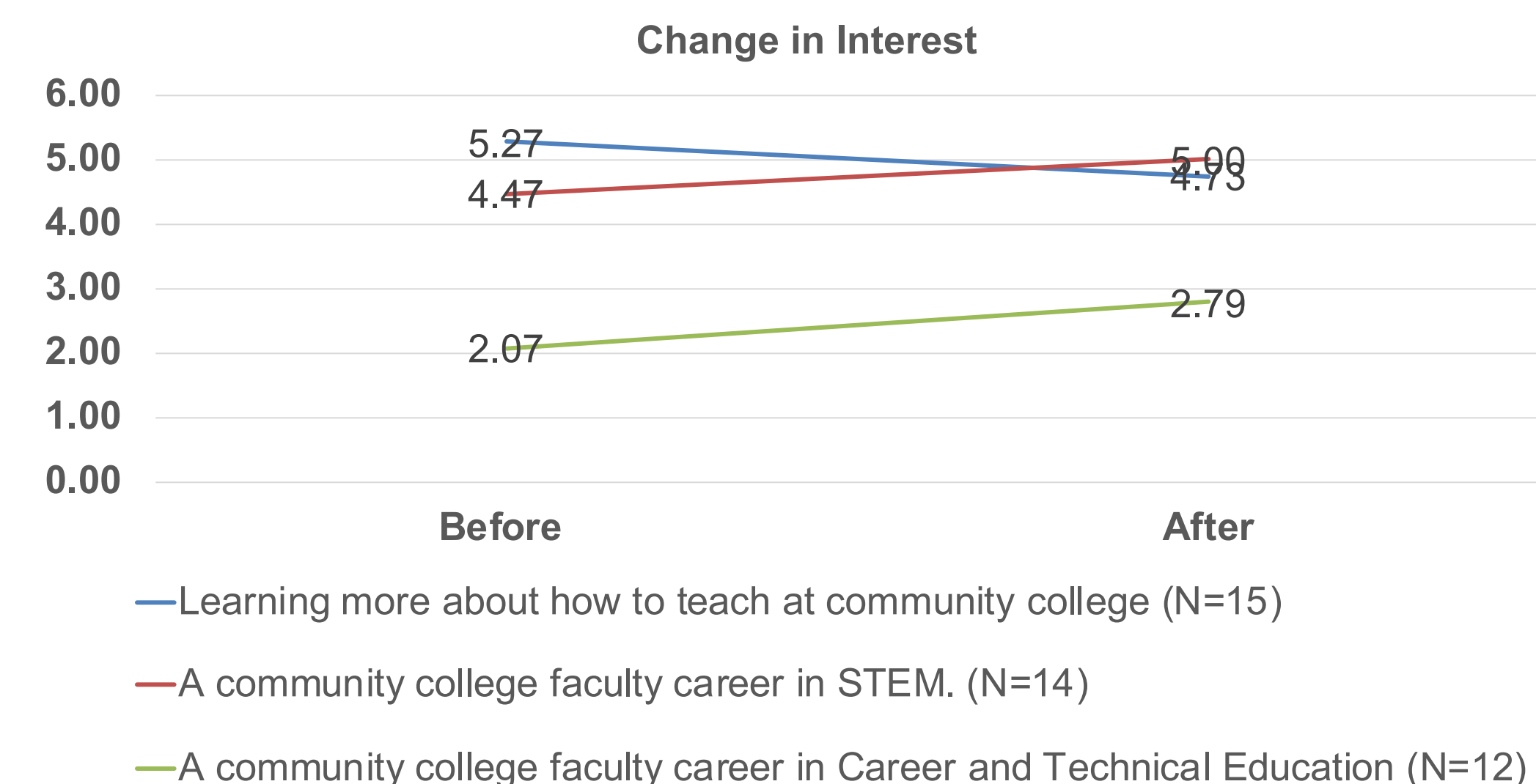
% of interns (N=20)	Career Path
10	Full-time Community College Faculty
10	Part-time Community College Faculty
5	Full-time 4-year Faculty
5	Part-time 4-year Faculty
15	Higher Ed Academic Positions (e.g., Lecturer, Academic Admin)
20	Research Positions
20	Job Market/Not Graduated
15	Other

Total of 45% of interns are still teaching:

- 20% of Aspire Interns teach at Community College
- 10% of Aspire Interns teach at 4-year Institutions
- 15% of Aspire Interns hold academic positions (with teaching responsibilities) at Higher Ed institutions

Figure 4. Career Interest of Aspire Interns

Aspire interns came into the program with a high level of interest in teaching at community college. At the end of the program this interest was sustained for STEM careers specifically and slightly increased for Career & Technical Education faculty careers.

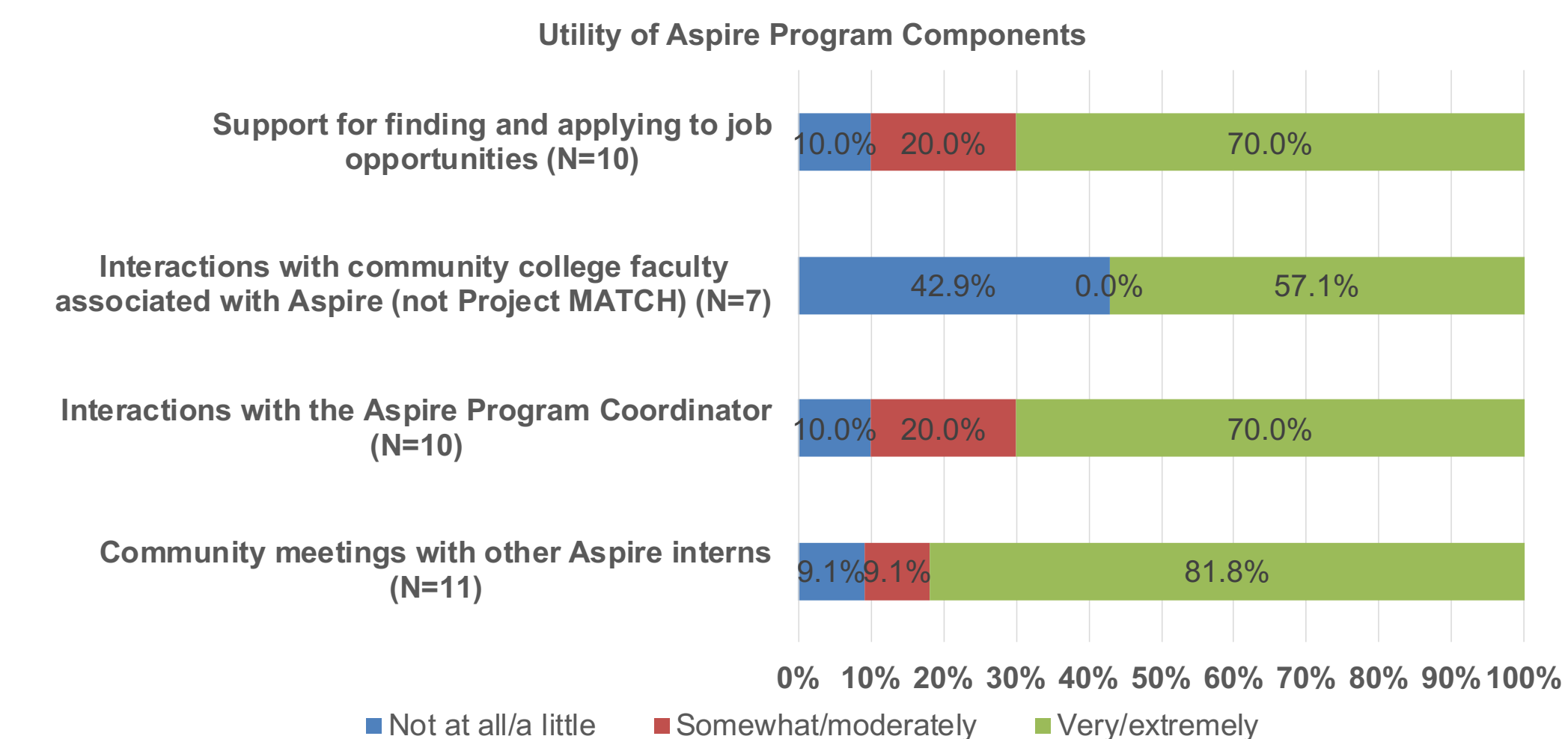


Sample Quotes from Aspire Intern Interviews

- "Participating in this internship greatly expanded my career interests and development. It was very valuable in that I learned about career positions that aren't widely known, etc."
- "This internship solidified my want to be faculty at a community college or liberal arts institution. I love that community colleges are focused on the success of the student and that faculty caters the classroom to the students."

Figure 5. How useful are the Aspire-Specific components of the Program?

"How useful were the following components of the Aspire internship program to your training experience?" Please note, this question was not included in the 2020 survey.



Participants were asked, "What aspect of the Aspire community meetings or meetings with the Aspire Program Coordinator was most useful to you, and why?" Responses fell into the following four categories.

Theme	Sample Response
General Help	The coordinator was very responsive and communicative, willing to help above and beyond and guided every steps of the internship process.
Pedagogy	There were moments where I was frustrated or needed to workshop a teaching idea to make my pedagogical style more effective, and Aspire offered that to me.
Career Development	Tips and advice on finding jobs and improving experience/qualifications for jobs as well as feedback on application materials. I'd already had a lot of teaching experience and training leading up to the Aspire internship, but taking the next step to finding employment at CCs was where I had the most uncertainty.
Weekly Meetings/ Sense of Community	Community! Just speaking to other educators who were passionate about the work and frustrated with the hardships of the work. They truly meant the world to me.

Summary

- The overall internship program increased intern preparedness for community college and other teaching careers.
 - The modality of the internships had to change over time due to the global pandemic, however the outcomes remaining largely the same. Specifically, interns reported: (1) an increase in their skills and knowledge related to working at a community college, (2) an increase in confidence related to teaching and task ability, and (3) value in the utility of Aspire-related programming.
- The Aspire program, specifically, helped support interns obtain faculty careers in community college(s) after their local teaching internship as well as build and sustain a professional community and interest in teaching at community college amid these changes each year.
- In the future, Aspire can work to improve the intern experience with mentorship from other community college faculty, to enhance their overall learning and networking. (Figure 5).
- In the Southern California region, there are limited full-time teaching opportunities, therefore collaborations with other regions may be helpful for interns.