Professional Development for Community College Faculty: Lessons Learned from Intentional Mentoring Workshops Aisha R. Morris and Donna J. Charlevoix; Education and Community Engagement, UNAVCO, Inc. morris@unavco.org 2016 Fall AGU Meeting - ED31A - 0851

Introduction

UNAVCO

NSF Facilities support research and education efforts of the scientific community. Facilities are uniquely positioned to both serve a broad, national audience and provide unique workforce experience to students and recent graduates. Intentional efforts dedicated to broadening participation in the future geoscience workforce at the NSF GAGE (Geodesy Advancing Geosciences and EarthScope) Facility, operated by UNAVCO, are designed to meet the needs of the next generation of students and professionals. An important part of supporting students is ensuring faculty have the necessary skills and tools to mentor and support them. The **Geoscience Workforce Development Initiative** at UNAVCO supports

attracting, training, and professionally developing students, educators, and professionals in the geosciences. For the past 12 years, UNAVCO has managed the highly successful Research Experiences in Solid Earth Science for Students (RESESS) program, with the goal of increasing the diversity of students entering the geosciences. Beginning in 2015, UNAVCO added Geo-Launchpad (GLP), a summer research preparation internship for Colorado community college students to prepare them for indepen-



dent research opportunities, facilitate career exploration in the geosciences, and provide community college faculty with professional development to facilitate effective mentoring of students.

Geo-Launchpad Internship Program (GLP)

Geo-Launchpad is an eight-week paid summer internship program dedicated to increasing the diversity of students entering the geosciences by engaging students attending two-year colleges in Colorado.

- Each intern has a faculty mentor at their home institution
- Interns work in pairs; each pair mentored by a UNAVCO Project Manager and/or engineers
- Weekly communications seminar (with RESESS), researchready skills workshop, and alternating Career Circle / professional development discussions
- Faculty mentors connect with interns at least once during the summer experience
- Interns participate in overnight field trip with RESESS interns and University of Colorado faculty and graduate students
- Interns present their work at end of summer poster session with other internship programs from the local area
- Faculty mentors visit UNAVCO for two days at the end of the summer and participate in a faculty mentor training workshop



Figure 2. 2016 Geo-Launchpad interns work in the UNAVCO warenstrumentation for deployment to Antarctica



hchpad intern Bradley Norman and UNAVCO polar engineer Annie Zaino set up the base station for a GPS survey of the St. Mary's glacier near Idaho Springs, Colorado.

Jure 4. 2016 Geo-Launchpad intern Alex Olsen-Mikitowicz sets up the GPS antenna in preparation for a anner survev near the Boulder Reservoir. Boulder, Colorado.

References

Crisp, G. (2010), The Impact of Mentoring on the Success of Community College Students, Review of Higher Education, 34(1), 39-60. Huntoon, J. E., and M. J. Lane (2007), Diversity in the Geosciences and Successful Strategies for Increasing Diversity, Journal of Geoscience Education, 55(6), 447-457. Jacobi, M. (1991), Mentoring and Undergraduate Academic Success: A Literature Review, Review of Educational Research, 61(4), 505-532. Johnson, W. B. On being a mentor: A guide for higher education faculty. Lawrence Erlbaum Associates Publishers, 2007. Levinson, D.J., Carrow, C.M., Klein, E.B., Levinson, M.H. & McKee, B. (1978), The Seasons of a Man's Life, New York: Ballentine. Pope, M.L. (2002), Community College Mentoring: Minority Student Perception, Community College Review, 30(3), 31-45.

Figure 1. 2016 Geo-Launchpad interns participat

• After interns return to fall classes, faculty stay in contact to provide support and advice



Mentoring vs Advising

- Two-day end-of-summer mentoring workshop for faculty
- Faculty recognized quickly they could not distinguish between advising vs. mentoring
- Discussions and activities focused on identifying assumptions
- Provided faculty with literature references supporting mentoring community college students and students from underrepresented minorities
- Provided suggestions for activities to employ to facilitate effective mentoring relationship

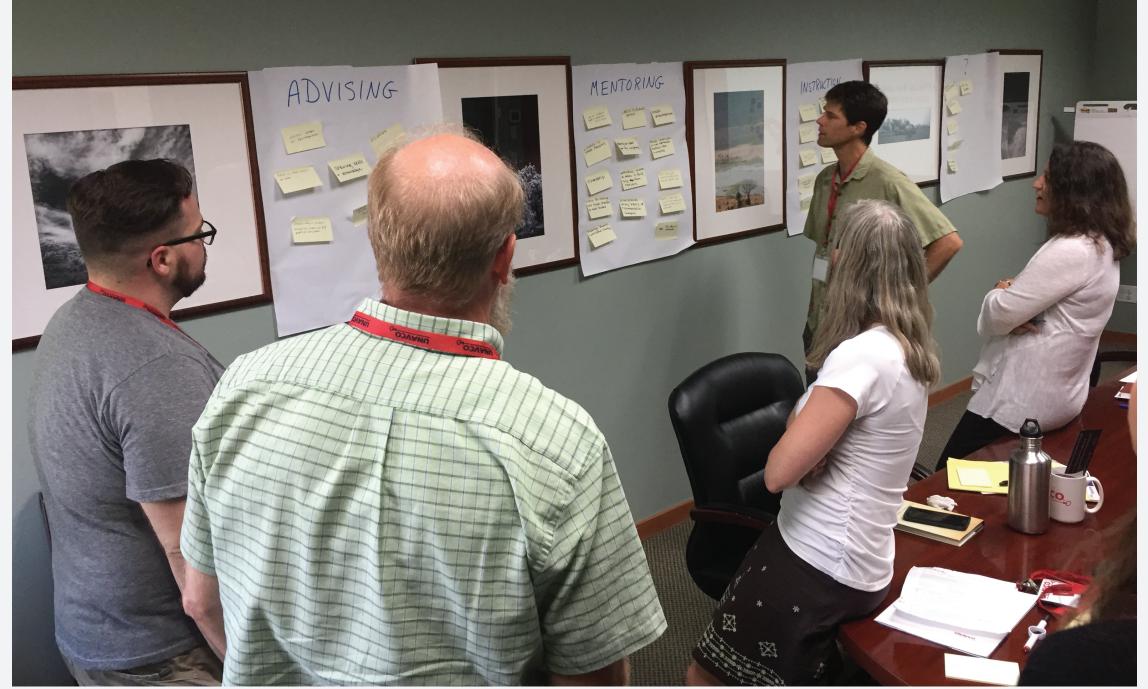


Figure 6. 2016 Geo-Launchpad faculty mentors discuss mentoring vs advising during the fac ulty mentor training workshop held at UNAVCO headquarters, Boulder, Colorado

Intentional Mentoring

During the two-day workshop, community college faculty mentors are introduced to the concept of intentional mentoring.

Intentional mentoring:

- Typically traced to a seminal study by Levinson et al. (1978)
- Levinson et al. observed mentoring in higher education is "...limited and poor in quality"
- Widely defined
- Mentoring is provided by more than one single relationship
- Formal and informal
- Duration varies greatly

Mentoring impacts:

Huntoon and Lane (2007) note that the role of mentoring can not be underestimated and that students with a close mentoring relationship have:

- Academic achievement such as higher GPAs and completing more credit hours
- Higher likelihood of graduation
- Enhanced professional skill development
- Better networking
- Increased likelihood to secure initial employment
- Higher income levels and promotion rates (Johnson 2007)

Although not an indicator of persistence, mentoring plays a workshop held at UNAVCO headquarters, Boulder, Colorado. critical role in student development (Crisp 2010).

Faculty Mentoring Workshops



Figure 5. 2015 Geo-Launchpad faculty mentors discuss mentoring vs advising during the faculty mentor training workshop held at UNAVCO headquarters, Boulder, Colorado.

- Activities focused on exploring variety of interactions faculty have with students
- Faculty identified six+ interactions they have with students
- Faculty categorized the activities: Advising, Mentoring, or Instruction
- Group sharing and discussion of where notes were placed
- Faculty often re-categorized activities after discussion



tors and interns during the faculty mentor training workshop held at UNAVCO headquarters, Boulder, Colorado.



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In addition to facilitating discussions focused on mentoring, staff also provide resources to the faculty participants to support their mentoring activities both with the Geo-Launchpad program and with the broader student population at their institutions (e.g. Johnson 2007). The additional resources available include presentations and supporting literature providing data focused on mentoring community college students and resources for mentoring students from diverse populations (e.g. Jacobi 1991; Pope 2002).

During the faculty ment workshop, interns and f mentors discuss how to the mentoring relations and then signed a forma ment outlining how the duct the mentoring rela (9b); including topics, from of meetings, and expect the fall following the su internship, the faculty n and student have at leas meeting to follow up or toring plan. Interns send mary to UNAVCO and fa mentors receive an honorarium for their participation.

Toward the end of of the faculty mentoring workshops, faculty mentors were individually interviewed by the external evaluator. Faculty mentors provided feedback on their impressions of the impact of the summer experience on the students, as well as their perceptions of possible impacts of the faculty mentor training on future student interactions. Example statements are included below.

I think for me personally, I've been teaching a very, very long time. This will start my 32nd year. You get kind of cranky and old. This is just like, oh this is so cool. We talked a minute ago about her coming to my class. I have a geology majors class and her coming and talking about this program and opportunities that she's had. That gets me all excited and energetic, ready to go. So I got a lot out of it. I'm getting a lot out of it still. -2015 Faculty Mentor



- vs advising

Resources and Follow Up for Faculty Mentors

toring		
faculty	UNAVCO FACULTY MENTOR WORKSHEET	UNAVCO MENTORING AGREEMENT
	Structuring the Mentoring Relationship	Student-Faculty Agreement
o structure	Using the framework of Johnson (2007), begin to articulate elements of the mentoring relationship you believe will be mutually beneficial and feasible.	We are voluntarily entering into a mentoring agreement that we hope will be mutually beneficial. We want this to be a rich, rewarding experience with most of our time together
chin(02)		spent in substantive developmental activities. To make our expectations transparent, we hereby clarify these features of our relationship:
ship (9a)	Notes: Role Expectations	Plan for managing confidential information
al agree-	Professor owns primary responsibility for initiating this process	
0		Anticipated duration of the relationship
ey will con-	Goal clarification	
	Articulating achievable goals Goals vs. milestones	Student's program and career goals
ationship		
Contron CV	Contact frequency, duration, method	Frequency of meetings
requency	Expectations of professor & student Clarity on expectations will guide contact needs	
tations. In		Specific roles of the advisor (e.g., give program advice, observe and give feedback, recommend developmental activities, provide emotional support, suggest/provide resources, etc.)
Immer	Matching concerns Personality, communication style, work habits,	
	career aspirations, personal values, also more personal elements such as gender, race, religion	Specific expectations of the advisee (e.g., be open to advice and feedback, be timely with
nentor		appointments and deadlines, communicate needs and concerns, do excellent work, etc.)
	Relationship Boundaries	
ist one	Confidentiality agreement Relational complexity, reciprocity, establishing	Additional points: We have discussed the advising relationship and hope it will
. 1	professional boundaries	become a further developmental opportunity for the student and a mutually beneficial relationship.
n the men-		We agree to a no-fault conclusion of this relationship if, for any reason, it seems appropriate.
	Periodic Evaluation Especially important for longer term mentoring	
d a sum-	relationships Can be formal or informal	
aculty		Mentor Date Student Date
acuity		
•		

Figure 9. a) Worksheet provided to interns and faculty mentors to establish mentoring expectations and norms. b) Mentoring agreement to be filled out and signed by intern and faculty mentor. Both documents after Johnson (2007).

Outcomes and Evaluation

I think professionally it's been great to learn a lot more about mentoring and be able to be more intentional with these relationships that crop up with students. Now, having more resources on the mentoring side, I think will benefit me greatly in my career as a teacher, to be more intentional with how I give advice or how I talk with students or build a rapport. Giving more than just, "Oh, take this class, take this class," but more to "What's your ultimate goal?" Then figuring out the best way to reach that goal. -2016 Faculty Mentor

ng the faculty mentor training workshop eld at UNAVCO headquarters, Boulder, Colorado

Lessons Learned

• Community college faculty participants valued learning the difference between mentoring and advising so that they can better mentor students, not simply advise • Structured, interactive activities are effective strategies for facilitating discussions regarding mentoring

 Faculty discussions were identified as beneficial opportunities for sharing thoughts and experiences on a topic (mentoring) not often discussed among faculty





