

Results of a Three-Year Project to Increase Diversity in Geosciences

P. Grady Dixon



Kathy Quardokus Fisher



Oriana Calagna



LaToya Myles



Carolyn Brinkworth



Denise Simmons



Abstract

Diversity, equity, and inclusion (DEI) in the geosciences can occur only when geoscientists take deliberate actions to redefine the discipline's culture. However, scientific leaders often do not have the expertise in DEI to lead these culturally inclusive change efforts. Hearts of GOLD's (GOLD: Geo Opportunities for Leadership in Diversity) professional development provided established geoscientists with the knowledge, tools, and skills to become DEI change leaders. By targeting scientists who were actively engaged and well-respected in the field, the project connected and expanded the cohort of diversity champions who have power to make significant cultural shifts in their institutions, professional organizations, and across the geosciences community. The project held two summer sessions led by the Knapsack Institute. These "GOLD Institutes" engaged participants in lessons of diversity, equity, and inclusion and helped them plan specific actions to lead change in their home organizations. We used case-study analysis to investigate how participants of the two sessions enacted change strategies. We framed our discussion by considering how change occurs in communities through socially-constructed adaption and adoption of new ideas. Results provide a landscape of practices that geoscientist leaders have used to become champions of diversity, from discussing DEI at faculty meetings to developing new organizational structures to support DEI. Future work on how these landscapes of practices can be capitalized to design DEI professional development sessions will be discussed.

Research Questions

1. Did GOLD Institute attendees create/change organizational routines?
2. Were these routines performative only or likely to become ostensive?

Methods

Routines are defined by Breslin (2012) as patterns in practice that are due to a deeply held, unspoken knowledge of the way things are done that is passed down. We defined organizational routines by four factors:

1. behaviors that are repeated
2. a recognizable pattern of action
3. include multiple participants
4. are interdependent of other entities in the organization.

GOLD Institute

Two-day workshops (summer 2017 and 2018) designed as "intensive" training in diversity, equity, and inclusion specifically for geoscientists.

[Quardokus Fisher et al. \(2019\)](#)

Results presented here are from interviews with the 2017 cohort.



A 2-day, intense workshop on diversity in Geosciences helped influential scientists create 12 different examples of organizational change routines, including 2 transformative changes.

These scientists had little or no previous expertise in diversity.



Results

Participants of the 2017 and 2018 GOLD Institutes shared, via post-workshop surveys, several actions (Table 1) they were taking in direct response to their GOLD experience. In follow-up interviews with 11 of the 2017 participants, we found that 12 of these actions qualified as "organizational change routines," with 10 of them being "performative" (how things are done) and 2 being "ostensive" (the written rules; Feldman and Pentland, 2003). In this context, we consider ostensive routines to be transformative.

Table 1: Actions listed by GOLD Institute participants (2017 and 2018).

Actions	Participants
Provided GOLD Institute material as a resource (article or definition)	4
Discussed or facilitated discussion of DEI with colleagues outside of the local workplace	2
Discussed or facilitated discussion of DEI with the GOLD Institute network	5
Wrote a community-guiding document on diversity, equity, and inclusion (e.g., white paper)	2
Wrote a public blog, article, and/or newsletter	4
Makes a choice to attend DEI lunches or professional development	4
Has had informal conversations with colleagues about DEI	2
Includes discussion of DEI as part of hiring meetings	5
Discuss DEI at faculty meetings	2
Developed/developing/plans to create a DEI talk/workshop	4
Create a process for strategic planning, statement, policy development	2
Noticing importance of DEI in day-to-day situations	8
Hiring procedures or student acceptance influenced by DEI	5
Resource sought out by others	1
Created events where brokerage could take place	3

Discussion

Being a change agent for improved diversity, equity, and inclusion can take a lot of effort and can be frustrating if there are no noticeable results. While efforts such as increased awareness and discussion are important, it could be that lasting legacies require system-wide routine change. In our examples [so far], this includes giving agency and assigning tasks to other colleagues to be part of the change and integrating the change into the organization by changing the ostensive aspect of "how things are done."

References

- Breslin, D. (2012). The evolving organizational routine. In *Managing networks of creativity* (pp. 64-80). Routledge.
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