

A Good Place to Do Science: A Case Study of an Academic Science Department

Executive Summary

Purpose

We studied an academic science work environment that has been conducive to the advancement of women faculty and students to identify elements that have facilitated high quality science and gender inclusion.

Methods

We conducted this study using several qualitative methods including document & archival research, direct observation, and 29 interviews of departmental members (faculty, staff, post-docs, and doctoral students).

Findings

Four types of *constructive interactions* support high quality science and inclusion. We list them here in increasing order of complexity, trust level required, and work impact:

- Collegial Interactions – basic respectful, civil, and congenial interactions.
- Tacit Learning Interactions – interactions related to faculty obligations that provide opportunities for conveying and learning the work and norms of the environment.
- Relational Interactions – interactions through which close professional and or friendship relationships are formed and maintained.
- Generative, Resource-Building Interactions – interactions through which important resources are provided, received and or generated between individuals and for the group.

Five *participative departmental activities*, initiated or explicitly supported by the chair, facilitated constructive interactions:

- Team teaching with participation across faculty ranks.
- A variety of department social events, some of which occur after hours and others, which are family friendly.
- Participative faculty meetings in which information important to all faculty members is shared and the opportunity for decision-making input is provided.
- Participative faculty recruiting through which all faculty members have input into the selection of new faculty. Broad support for the new faculty member is established through this activity.
- Regular applicable research presentations and seminars that stimulate ideas and provide feedback and modeling of approaches to research and effective presentation of ideas.

Constructive interactions and participative departmental activities create and sustain a cooperative and productive workplace culture through the following five *inclusive departmental processes*:

- Valuing of high-quality, interactive science
- Transparent decision-making processes
- Engagement of faculty across ranks
- Professional respect, trust, and caring relationships
- Helping, cooperative behaviors

The following five *inclusive leadership practices* of the chairs facilitated the development of the department environment:

- Support of the advancement of good science, regardless of whose lab it emerged from
- Treating everyone fairly and equitably
- Seeking input from faculty in decision-making
- Promoting meaningful opportunities for interaction
- Using the role of chair in service of the scientific community within the institution

Conclusions

This study identifies conditions and factors that facilitate the development of a cooperative inclusive and productive work environment and work culture. A science environment that is both cooperative and scientifically productive begins with constructive interactions.

Participative departmental activities, inclusive departmental processes, and inclusive leadership practices embed constructive interactions into the ongoing culture of the department. The leadership of the chair is important in the development and maintenance of a departmental culture that facilitates the advancement and productivity of all scientists.