

Improving Retention in the Physical Sciences with a Departmental Action Team

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Context: Physical science department with a significant underrepresentation of women and minority undergraduates that created a Departmental Action Team (DAT) to address this issue.

What is a DAT?

Departmental Action Teams (DATs) are externally-facilitated groups that consist of faculty, staff, and students within a single department working on a broad-scale educational issue of departmental importance.

DATs were created as part of a larger institutional change project, with the goal of improving undergraduate STEM education through a combination of grassroots efforts (DATs) and administrative initiatives acting in concert to create departmental change.

What design principles informed the DAT's structure?

Vision- & Outcomes-driven: The DAT participants created a shared vision of what they want to achieve; they were driven by this vision rather than the preferences of any one participant. They could change tactics to avoid obstacles while still moving towards their goal.

Sustainability: The DAT aimed to create new department-level structures to make sustaining change more likely..

Regular Meetings: The DAT had biweekly, hour-long meetings, which allowed enough time for sustained progress.

Frequent Wins: Creating and achieving sub-goals helped DAT participants (and their departments) to recognize progress and provided motivation to continue.

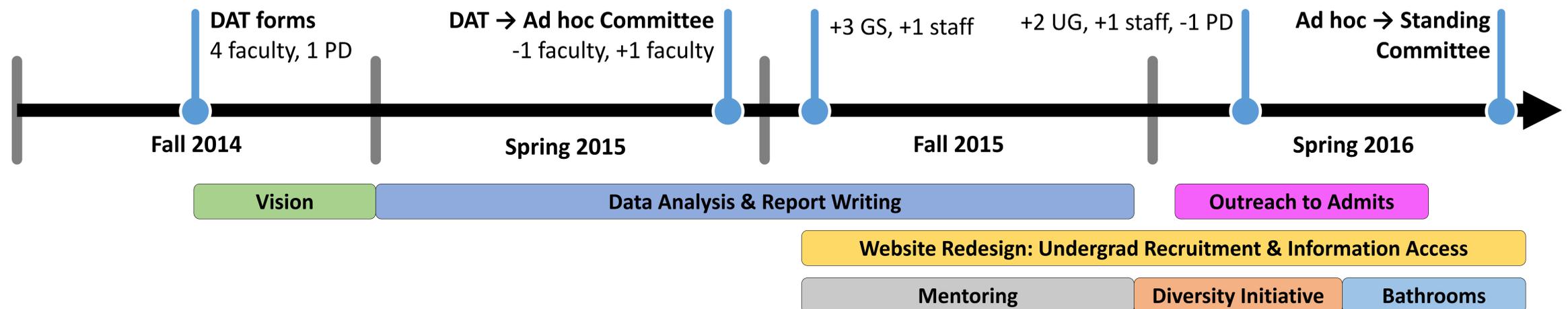
Evidence-based Decisions: The DAT analyzed institutional data to target interventions to the particular needs of their department and students.

Diverse Membership: Inclusion of faculty, staff, undergraduate and graduate students, and postdocs (many from marginalized backgrounds), allowed for more voices to be heard, leading to better decisions.

Participant Agency: DAT participants chose the issue their DAT would address. Thus, they drove the process (change was not “done to” them), which motivated them to spend time on DAT work.

Explicit Facilitation: Postdocs from outside the department facilitated each meeting: they created agendas, handled logistics, and disseminated thorough notes. Additionally, they provided outside perspective, connected the DAT to external resources, and encouraged collaboration and mutual respect among participants.

What did the DAT do?



Vision

The DAT's initial meetings involved creating broad goals and a vision to achieve. Participants chose to focus the DAT on improving retention of women and URM students.

Data & Reporting

The DAT analyzed institutional data about undergraduates and generated a report for the department. Some findings:

- Representation of women & URM students lower than national average
- Women more likely to drop intro course than men, accounting for declared major
- Admitted women & URM students matriculate less than male & white peers

Diversity Initiative

Campus-wide initiative to define *excellence* and *inclusion*. DAT held 5 meetings (one each for faculty, staff, UG, GS, and PD), facilitated by members of the same group (to reduce power differentials and allow for open discussion). Participants articulated criteria for excellence, shared stories of inclusion & exclusion, and brainstormed ways to increase inclusion. Some outcomes:

- Participants appreciated the opportunity to discuss inclusion within the department.
- The meetings raised the visibility and legitimacy of the DAT.
- Ideas for increasing inclusion will inform the actions of the DAT moving forward.

Mentoring

Created a “map” of undergrad mentoring & advising to identify gaps. Begun to explore partnership with existing student mentoring program to include faculty.

Admitted Student Outreach

The DAT organized outreach to 176 women and URM admitted students. Each received a phone call from a student and an email from a faculty member.

Gender-neutral Bathrooms

DAT coordinating with building manager to designate some bathrooms as gender-neutral. This is a first step in broadening the DAT's scope to include LGBTQ+ students.

Website Redesign

Worked with strategic relations office to redesign department website to (1) highlight opportunities for women and URM students (to encourage matriculation) and (2) make information easier to access to help current students in navigating the university

Future Work

- Continue work on mentoring, bathroom, and website redesign projects.
- Create community-building events (e.g., new UG student welcome).
- Continue inclusion conversations (e.g., “State of Inclusion” event, monthly reading/discussion group).