

Departmental Action Teams

DATs

A DAT is a working group of about 6 to 8 faculty, staff, and/or students who work on a cross-cutting issue related to undergraduate education in their department.

The DAT is supported by external facilitators who have expertise in: best practices in curriculum, instruction, and assessment; facilitation and group dynamics; organizational culture; and education research.

Core Principles

Our work is guided by six principles that support effective departmental change:

1. Students are partners.
2. Work focuses on achieving collective positive outcomes.
3. Data collection, analysis, and interpretation inform decision-making.
4. Collaboration between group members is stimulating, productive, and rewarding.
5. Continuous improvement is an upheld practice.
6. Work is guided by attention to diversity and inclusion.

Fostering sustainable change in STEM education

Typical dissemination of educational reforms is ineffective

While there exists a breadth of knowledge about best practices for STEM education, research shows that there has not been widespread adoption of these practices. For these innovations to take hold, one must attend to the departmental structures and practices that support (or inhibit) sustainable change.

This project takes a holistic approach to reforming STEM education by focusing on shifting departmental structures and culture to sustain improvements to education.

Using research-based change strategies

Our approach involves adapting organizational change literature that was primarily developed in business settings to higher education. Additionally, we conduct ongoing research on the DAT model to iteratively design and test its effectiveness. Products from this research can be used to guide educational reform at other institutions.

Impacts of the DAT model

We have implemented DATs across several disciplines (e.g., physics, psychology, electrical engineering) to support a range of outcomes:

- Improved climate for women and underrepresented minorities
- Restructured a course sequence to better support majors' transition to upper division
- Provided instructors with dedicated time for cross-course coordination

The DAT cultivates a departmental culture that is open to continuously improving undergraduate education. This benefits all members (e.g., students, faculty, administration), by allowing them to contribute to and have ownership of positive change.

