Learning Fellows: Agents of Change

Erin DeSilva
Adrienne Gauthier
Cindy Tobery
Kes Schroer

2 June 2017
Who are Learning Fellows?

• Learning assistants: undergraduate, in-class peer mentors
• Facilitate group problem-solving sessions & group discussions
• Lead demonstrations, discussions, case studies, and simulations
• Provide academic support during class
• Meet with faculty once/week to give feedback and prepare for next week’s class
Establishing the Range of Learning Fellows on Campus
## Modeled after University of Colorado Boulder

<table>
<thead>
<tr>
<th>UC Boulder</th>
<th>Dartmouth</th>
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<tbody>
<tr>
<td>Research university, 32000 students</td>
<td>Small liberal arts college, 6350 students</td>
</tr>
<tr>
<td>Exclusively STEM or STEM education</td>
<td>Evenly distributed in all divisions – Arts &amp; Humanities, Social Sciences, and STEM</td>
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<tr>
<td>+50 courses/year</td>
<td>40 courses over two years</td>
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<tr>
<td>Separate teaching huddles for faculty &amp; Fellows and a pedagogical course for Fellows.</td>
<td>Fellows &amp; faculty have “mini” pedagogical activities in every teaching huddle. There is no pedagogy course.</td>
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<tr>
<td>Semester system</td>
<td>Quarter system</td>
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</tbody>
</table>
Dartmouth “primed” for Fellows program

• Many flipped classes

• Active-learning regularly happening on campus

• Faculty & instructional designers accustomed to working together

• TA training program & Future Faculty series

• Undergraduate & graduate students serving various roles in classrooms
Number of Learning Fellows by term

Courses in orange are large gateway courses.
Learning Fellows by the numbers, 2015-2017

- 49 faculty partners
- 24 departments & academic programs
- 129 Learning Fellows

More than 2,300 Dartmouth students impacted
Other institutional partners

- Academic Skills Center
- Center for Service
- Dartmouth Undergraduate Veterans Association
- Institute of Writing and Rhetoric
- Jones Media Center
- Office of Pluralism and Leadership
- School of Graduate and Advanced Studies
- Society of Black Engineers
- Student Accessibility Services
- Thayer School of Engineering
- Teaching Science Fellows
- Tutor Clearinghouse
Staff mentors, 2016-2017

Erin DeSilva
EdTech
Chem 10, Chem 52, Cosc 50, Ears 6, Math 3, Phys 4

Ashley Doolittle
Center for Service
Social Impact Fellows

Adrienne Gauthier
EdTech
Bio 13, Math 3, Phys 13, Psy 10

Colleen Goodhue
Media Production
Media Fellows

Mike Goudzwaard
EdTech
Rel 1, Rel 16

Scott Millspaugh
EdTech
Colt 1, Clst 2, Clst 12, Japn 10

Adam Nemeroff
EdTech
Gov 5, Hist 90, Socy 1

Mary Nyhan
Student Wellness
Anth 12

Kes Schroer
EdTech/DCAL
*Program manager
Clst 11, Ears 6, Engs 20, Engs 31, Latin 1, Math 3, Socy 2

Cindy Tobery
DCAL
Bio 13, Chem 52, Cosc 50, Engs 20
Increasing institutional, faculty, and student buy-in
Dartmouth Learning Fellows is a joint venture

Funding for Fellows

- President's discretionary fund
- Private donor, gateway courses
- Departmental

Administration & Management

IDCAL
Dartmouth Center for the Advancement of Learning

Dartmouth EdTech
Learning Fellows enjoy the job because...

- They can give back to their community.
- They learn material better the second time around, when there is no grade associated with it.
- It’s fun.
- They learn what professors do on the job.
- They learn about their own learning.
- They want to make learning more accessible.
- They form relationships with professors.
- They see “a-ha moments” in students.
- It’s a chance to design classroom activities.
- It’s professional experience.
- They are thinking about going to grad school.
- Students need peer mentors to adjust to college.
- It’s a chance to inform the culture of teaching at Dartmouth.
- They “bridge” conversations between professors and students.
- They can make hard topics more fun.
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“Learning Fellows have a different way of interacting. I think they’re the best change we’ve implemented in the course.”

“We just couldn’t do these courses without Learning Fellows.”
Developing a student-centered learning community
Trends for better academic performance

- UC Boulder found that student grades improved in physics and chemistry courses that employed learning assistants (Pollock 2009, Landon & Cech 2013).

- The Rochester Institute of Technology and Boston University have both found lower DFW (drop/fail/withdraw) rates in courses with learning assistants (unpublished data).
• Outcomes, so far, are the same for courses with/without learning assistants.

• In mathematics, students perform better in higher-level classes after having a course with a learning assistant (data forthcoming).
Example of mixed responses:

“The Learning fellows, they are very helpful, but please don't try and control the groups and their progress. There must be a struggle in order to efficiently learn, so let us struggle a bit and try not to micromanage what is going on in the group.”
Student responses to Learning Fellows

N=466

Example of neutral responses:

“I don’t speak to them that much.”
“ I am indifferent.”
Student responses to Learning Fellows

N=466

Example of negative responses:

“I haven’t learned much from them.”

“I fail to see the value of the Learning Fellows in what should be a large lecture class.”

“I think our group has barely interacted with the Learning Fellows because we are in the middle of the auditorium.”

“He gives us non-answer answers and actually makes us think and reason through the problem. Very annoying.”
Most commonly cited Learning Fellow behaviors:

- Asks questions
- Clarifies course or professor’s expectations
- Ensures everyone in the group understands the material
- Offers a new perspective
- Outlines the process to solve a problem
- Supports group dynamics & group discussions

Other behaviors (less than 5% of students reporting):

- Is helpful
- Guides to answer without giving it away
- Provides feedback
- Explain/clarifies
Examples of positive responses

“My Learning Fellow is FANTASTIC!! I love her! She is so smart and knowledgeable but not in a way that is standoffish or intimidating. She is friendly and easy to talk to and brings a positive attitude with her to class and recitation. She is also not afraid to admit when something is difficult for her or she isn't sure of something which I really respect.”

“Every time my group has asked a Learning Fellow or Grad TA for assistance with a problem, I have found them to be helpful in just the right way. They help guide us towards coming to our own conclusions, rather than telling us the answers outright, which is very helpful for our overall comprehension.”
Papers & presentations

• Presentations:
  • Learning Assistants Alliance – Boulder, October 2016
  • ELI Educause – Houston, February 2017
  • NEFDC – Fitchburg, June 2017
  • POD Network – Montreal, October 2017
  • ASHE – November 2017 (with paper, pending)

• Papers
  • Innovative Higher Education (drafting)
  • Journal of College Teaching (drafting)
Learning Fellows Are Transforming the Classroom Experience

March 21, 2017 by Hannah Silverstein

In a growing number of courses, undergraduate learning fellows provide “near-peer” mentorship.

Jason Laackman, Fellow, recognized as “Outstanding Graduate Student Teacher”
Research Questions

• What is the impact of the Learning Fellow program on faculty and instructional designers?

• When a course is redesigned to include LF’s, what is the impact on retention in the course and major among traditionally underrepresented groups of students?

• What are the best methods for evaluating the success of courses with LFs?
Huddle up!

PROJECT MANAGEMENT
GRID ACTIVITY

Overview:
Many LFs are supporting teams of students with projects. This exercise was designed to allow the LFs to think through strategies for supporting students at various stages of their project.

Learning Objectives:
● Develop strategies to support students through various stages of a project.

Activity: Ask the Learning Fellows:

● What are the skills, tasks, deliverables, and obstacles in this project?
  ○ Write these on post-its
● How do they fit into the planning, implementation, and final submission?
  ○ Create a grid on the board as shown below and place post its
● What is the LF role in moving the teams through these projects?
  ○ LFs mark the topics they want to discuss
● What are some strategies for helping with these?
  ○ Discuss as a group

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<th>Final Submission</th>
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<td></td>
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<tr>
<td>Tasks</td>
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<tr>
<td>Deliverables</td>
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<tr>
<td>Obstacles</td>
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Learning Fellows video

https://www.youtube.com/watch?v=vyyHwQEumd4
What’s next?

- Faculty have bought in, but have departments?
- LF are bought in, but is the student body?
- Staff are bought in, but is administration?
- How can we educate administration, students, and alumni in the value of peer mentorship?
- How can we frame the mission of our program?
- How can we gather feedback on the way this program is changing campus in the long term?
Thank you.

Further resources:
www.sites.dartmouth.edu/learningfellows
https://laprogram.colorado.edu/