

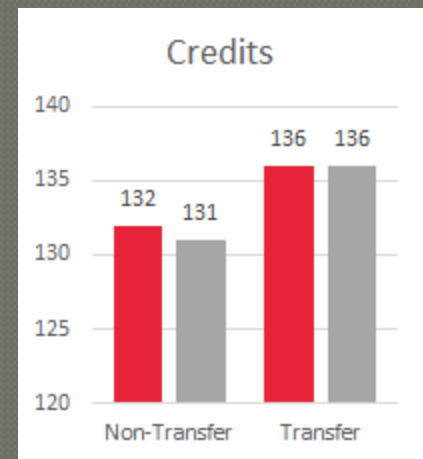
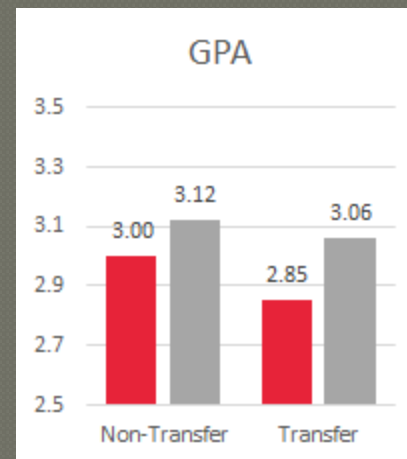
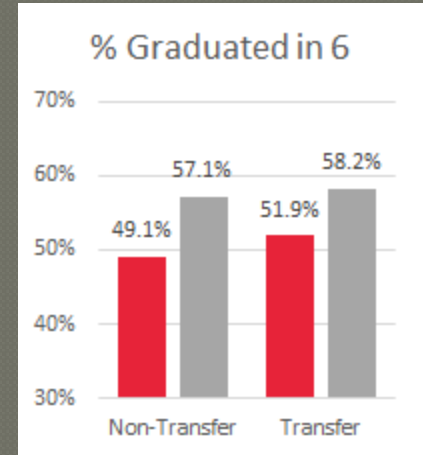
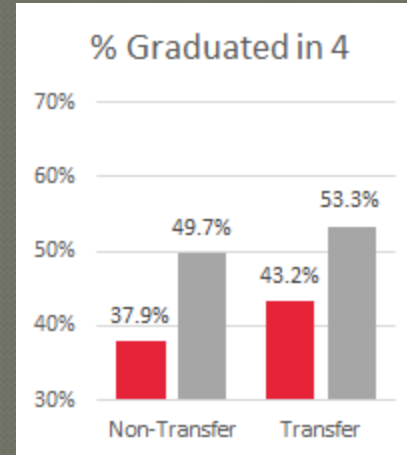
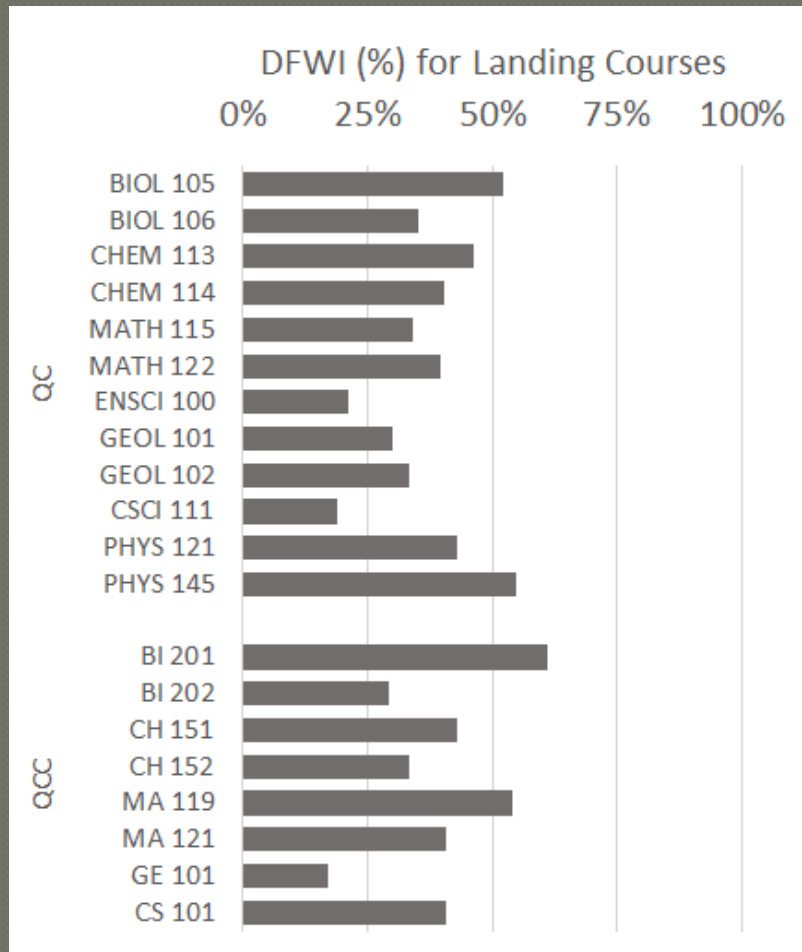
Incorporating Peer Mentors into General Biology Labs: The Impact on Student Retention, Engagement and Grades

October 27th, 2018

MACUB

Dr. Peter A. Novick & Prof. Jennifer Valad

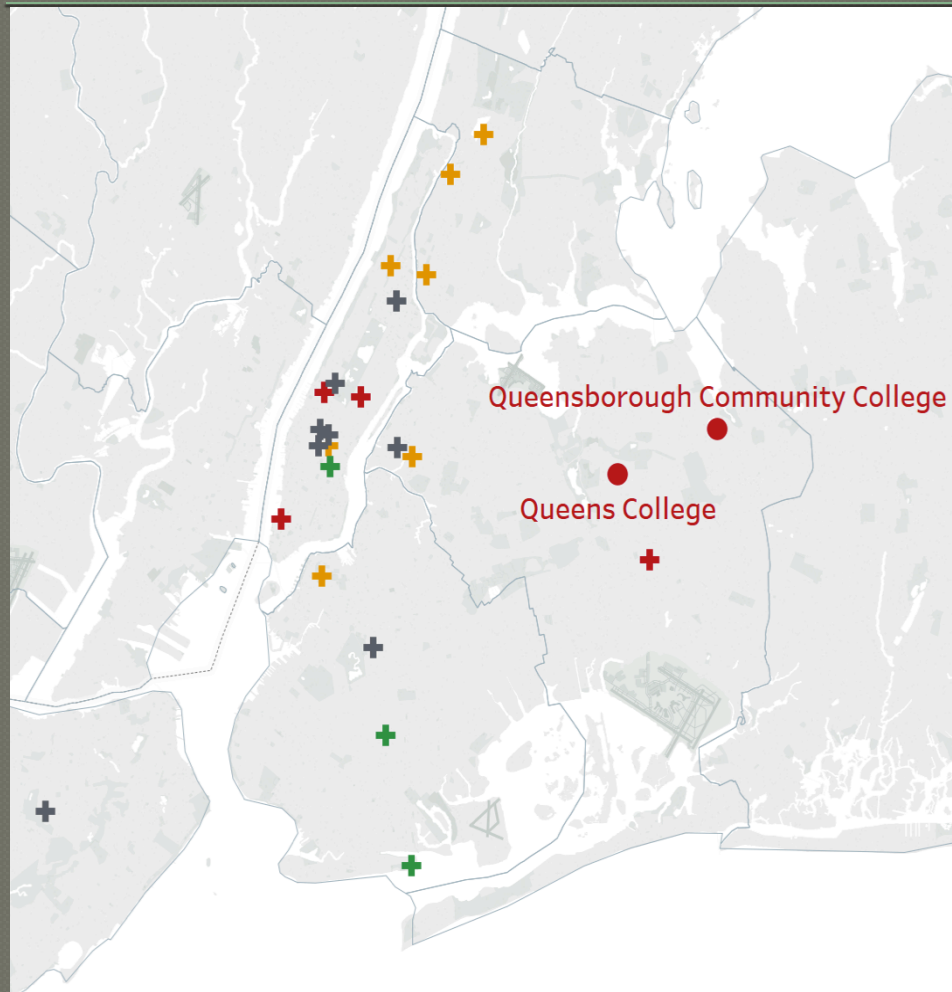
Success in Landing Courses



N=3,193 STEM-landing course takers, F2008+S2009

■ Hispanic ■ Non-Hispanic

QC & QCC: HSI & AANAPISI



CUNY's Hispanic-Serving Institutions (HSIs) and Asian American and Native American Pacific Islander-Serving Institutions (AANAPISIs)

- No Designation
- AANAPISI
- HSI
- AANAPISI & HSI

AANAPISIs: http://www.aanapisi.net/list_of_aanapisis#institutions

HSIs: http://www.hacu.net/images/hacu/OPAI/2015_HSI_List.pdf

Three Activities

- 1 Improve access:** redesign STEM “landing” courses
- 2 Improve learning:** learning collectives
- 3 Bridge:** a cross-campus model for transfer student success

Goals:

- graduate more Hispanic & low-income students
- develop articulation agreements for QCC-to-QC transfer

Three Activities

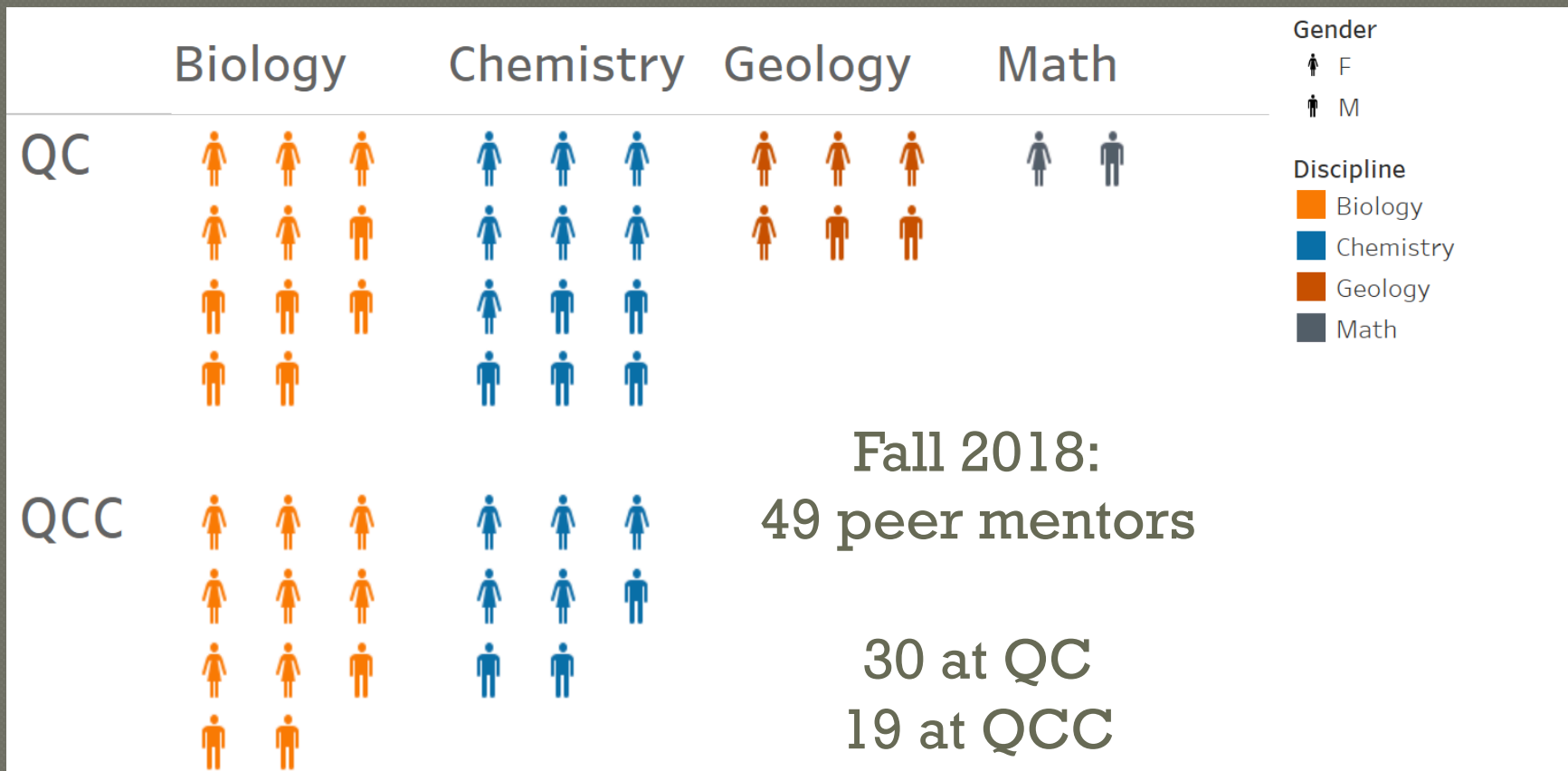
- ① **Improve access:** redesign STEM “landing” courses
- ② **Improve learning:** learning collectives
- ③ **Bridge:** a cross-campus model for transfer student success



Learning Collectives

“A collective is very different from an ordinary community. Where communities can be passive (...), collectives cannot. In communities, people learn in order to belong. **In a collective, people belong in order to learn.** Communities derive their strength from creating a sense of belonging, while collectives derive theirs from **participation.**” (Douglas and Seely Brown, 2011)

Peer Mentor Data



Mentor Recruitment

- Students who succeeded in the course
- Outgoing personalities
- Responsible
- Diverse study strategies
- Advertised on Website
 - Pros
 - Cons
- Former students
 - Pros
 - Cons
- Paid position

Mentor Training

- 2 -3 days at the start of Fall and Spring semesters
 - Tutoring vs. Mentoring
 - Pedagogical strategies
 - Logistical concerns
- Weekly pedagogy meetings
 - Check-in
 - Discuss a reading
 - New Strategies
- Content meetings
 - Discuss the upcoming lab

Mentor Responsibilities

● In the Laboratory

- Draw figures on the board
- Pass out materials
- Help with experiments
- Review material
- Lead discussions

● Out of the Classroom

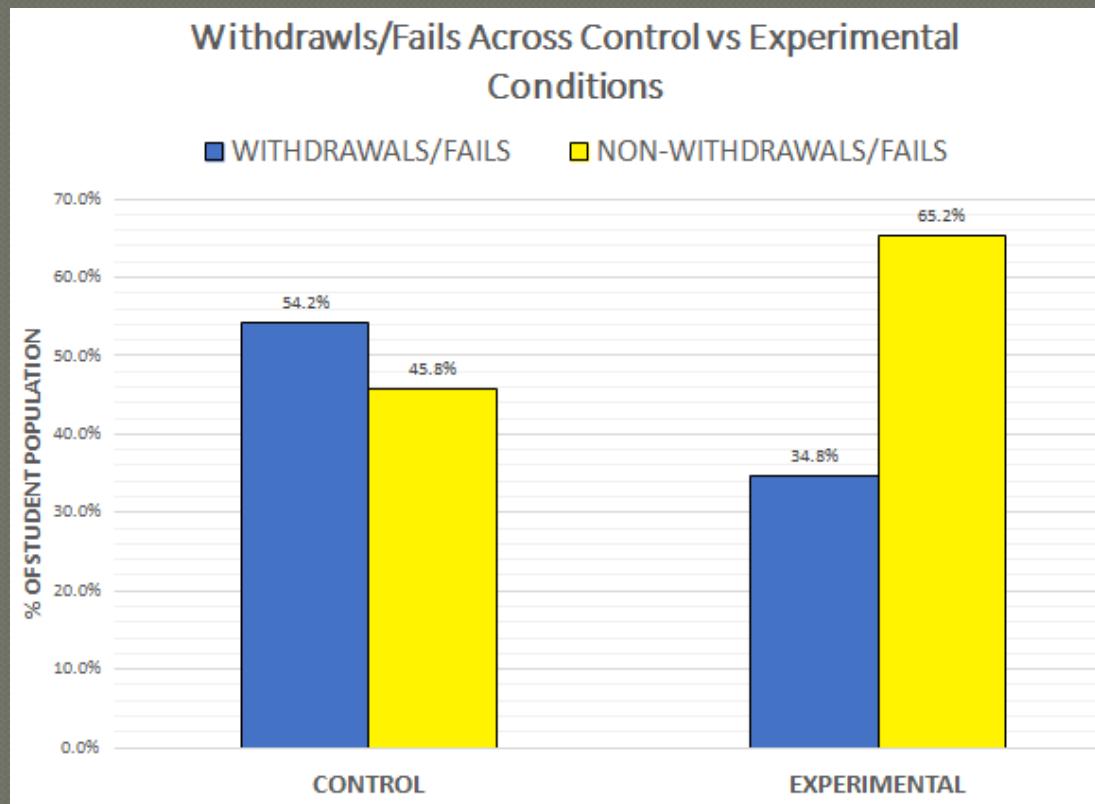
- Office Hours/Study Sessions
- Review material
- Discuss how to...
 - Read a textbook
 - Take an exam
 - Study
 - Take Notes

BI201- General Biology

- First part of a two semester course
 - Four credits- 3 lecture hours, 3 laboratory hours
- Designed for students interested in STEM
- Topics Covered
 - Scientific method
 - Evolution
 - Biochemistry
 - The Cell
 - Metabolism
 - Classical and Molecular Genetics

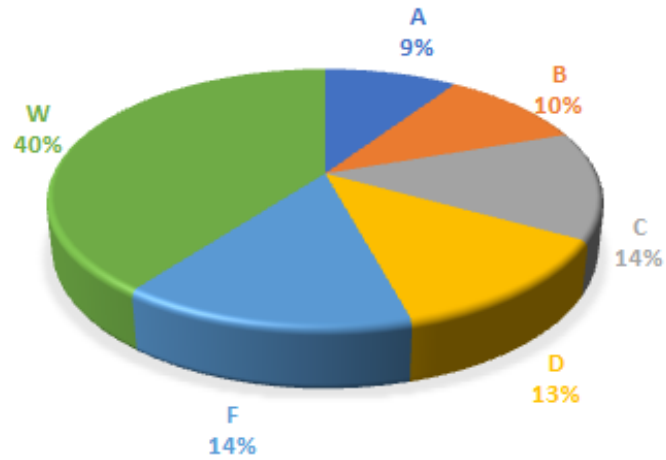
Success in The Classroom

- Reduction in the number of students receiving Fs and Ws in BI201

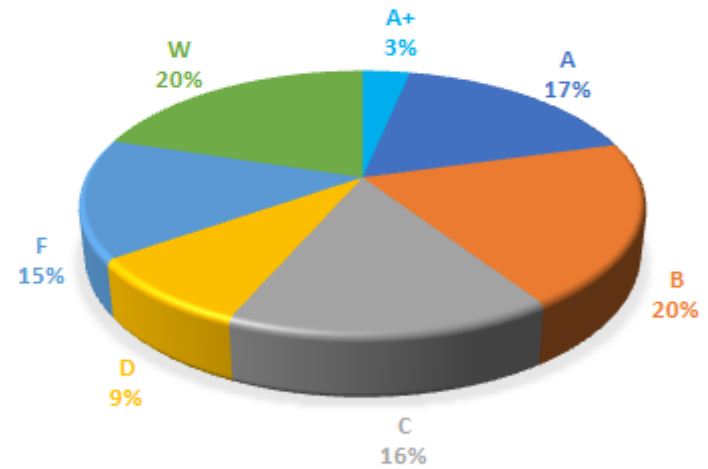


More Students Ready for BI202

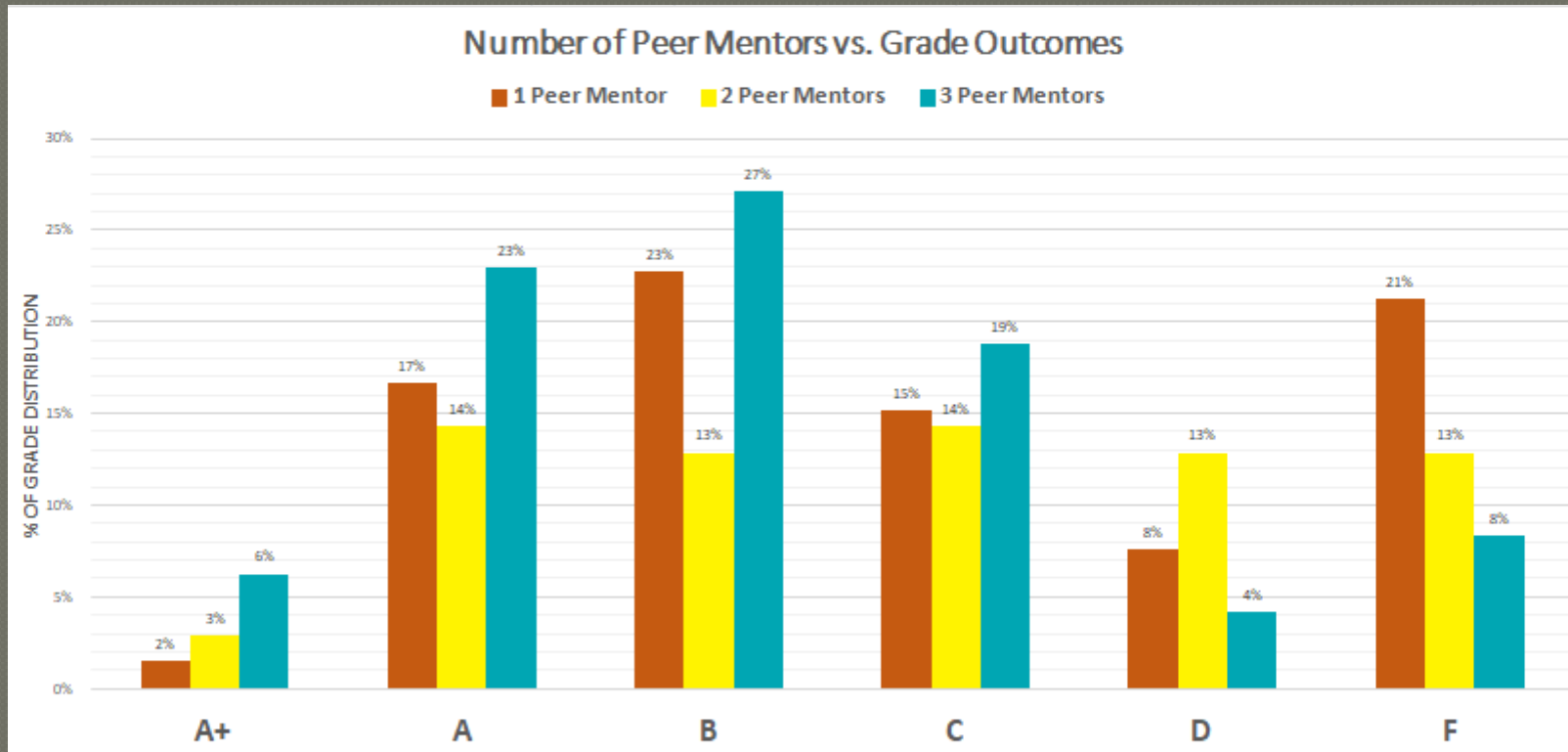
CONTROL GRADES



EXPERIMENTAL GRADES



Impact on the Number of Mentors



Success for the Mentors

- Stay with the project after Graduation
 - Queens College, City College, Stony Brook University & Binghamton University
- Aid in recruitment
 - Self sustainable by students who have had mentors
- Present at conferences
- Place on resume for job experience or interview
- Used for 4 year and Graduate Programs
- Feelings of empathy and understanding

Modifications and Sustainability

● Things we have learned

- Better to hire by recommendation
- Time of mentor office hours very important
- Space is limited

● How this can last after the grant period

- Offer college credit?
- Hired through learning center?

Acknowledgements

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