2020 INNOVATIONS IN TEACHING AND LEARNING CONFERENCE

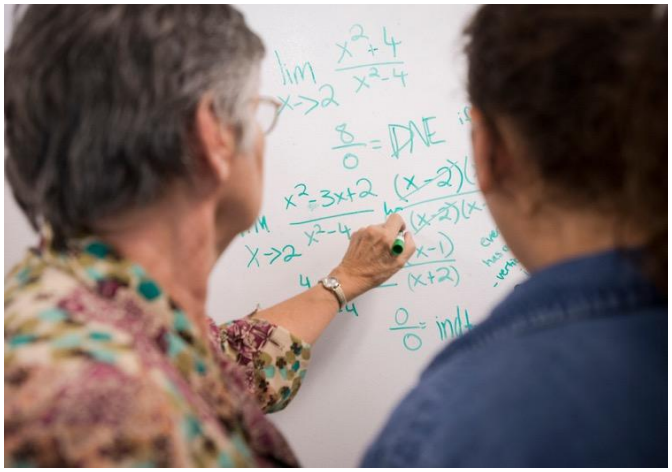
From COVID to Change: Rethinking Supporting Teaching in Your Unit

National Science Foundation Grant (IUSE-1821589)

GEORGE MASON UNIVERSITY

Agenda

- Welcome, Introductions
- Poll activity
- Pedagogical and Organizational Change Framework
- What do faculty need for transition online
- Individual reflection and planning
- Breakout planning/Share plans



Executive Director for Online Learning

Charlie Kreitzer

Introduction

- Stearns Center Mission
- Response to pandemic
- SC support and resources available

World situation context

Poll

How has the spring/COVID experience changed your approach to supporting teaching in your unit generally?

Start the presentation to see live content. For screen share software, share the entire screen. Get help at **pollev.com/app**

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How has the spring/COVID experience changed your approach to supporting teaching in your unit generally?

- “"Old habits die hard" ”
- “More intensive sessions about modalities and pedagogy. Opened more opportunities to be collaborative. ”
- “we have had weekly meetings on teaching and learning issues ”
- “Existing relationships in departments keep some faculty from speaking up. ”
- “How to think about physical experiences like labs and practium ”
- “Many of the CDS (Computational and Data Sciences) classes were already in an online mode. This department had one of the easier transitions as it did not have the enormous challenges other departments had. ”
- “I'm impressed by the number of Mason Core faculty who participated in Stearns Center training, and have "pivoted" to making impressive online courses. ”
- “Arranging more group brainstorming sessions to share best practices ”
- “The spring experience has accelerated the need to rethink pedagogy and assessment in STEM classes. ”

Poll

What do you want most from this session?

Top

Start the presentation to see live content. For screen share software, share the entire screen. Get help at **pollev.com/app**

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What do you want most from this session?

Top		New	
0	To think about how we use what we have learned from the recent changes to make our teaching more effective in the future.	0	To think about how we use what we have learned from the recent changes to make our teaching more effective in the future.
0	How to support innovative teaching with a limited budget	0	How to support innovative teaching with a limited budget
0	Strategies to minimize the burden on individual faculty members as they are dealing with all the uncertainties.	0	Strategies to minimize the burden on individual faculty members as they are dealing with all the uncertainties.
0	Innovations for leaders to cope with the changes forthcoming in higher education.	0	Innovations for leaders to cope with the changes forthcoming in higher education.

Introductions

NSF IUSE: Building a Culture of Active Learning through Course-Based Communities of Transformation

Research Team

Jill Nelson, Associate Professor
Electrical & Computer Engineering

Jaime Lester, Professor
Higher Education Program

Jessica Rosenberg, Associate Professor
Physics & Astronomy

Robert Sachs, Professor
Mathematical Sciences

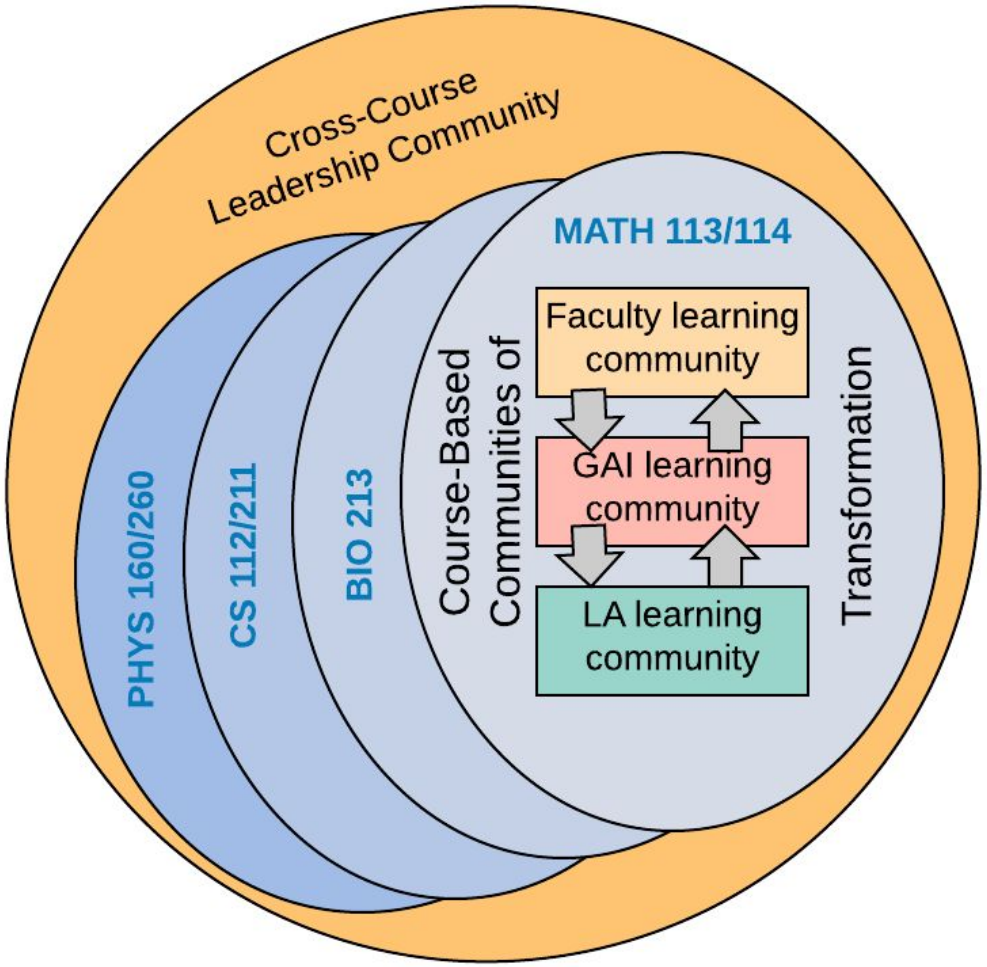
Julie Shank, Doctoral Candidate
Higher Education Program

Kathryn Fernandez, Doctoral Student, Physics Education Research

PROJECT GOALS

- Use **multi-generational teams** to **spread the culture** of **active learning within the STEM faculty** and facilitate **broad adoption**.
- Develop an understanding of how a **faculty-driven grassroots approach**, combined with **institutional support**, can **build a culture of active learning**.
- **Study strategies to remove barriers** for faculty implementing new evidence-based teaching methods.
- **Prepare the next generation of STEM educators** by **involving graduate and undergraduate students** in the implementation of active learning in the classroom.

Project Logic Model



Grant and Project Description

Join us for the kick-off of a series of discussions about supporting active learning in STEM college teaching.

Friday, October 2, 11:30 am – 12:30 pm
Zoom link:
https://gmu.zoom.us/j/93504031691?pwd=VWJhcWFOdmhkL1dmM3ZyUUx5UkNkQT09
Meeting ID: 935 0403 1691
Passcode: 339387

We aim to engage the broader STEM community at Mason in working toward sustained adoption of active learning in gateway STEM courses, especially given the recent transition to an online environment. Please join us for a series of discussions about active learning in STEM with a particular emphasis on re-examining teaching practices in the context of distance learning. The kickoff discussion will be held on Friday, October 2 with subsequent discussions held the first and third Friday of each month.

RESEARCH QUESTIONS

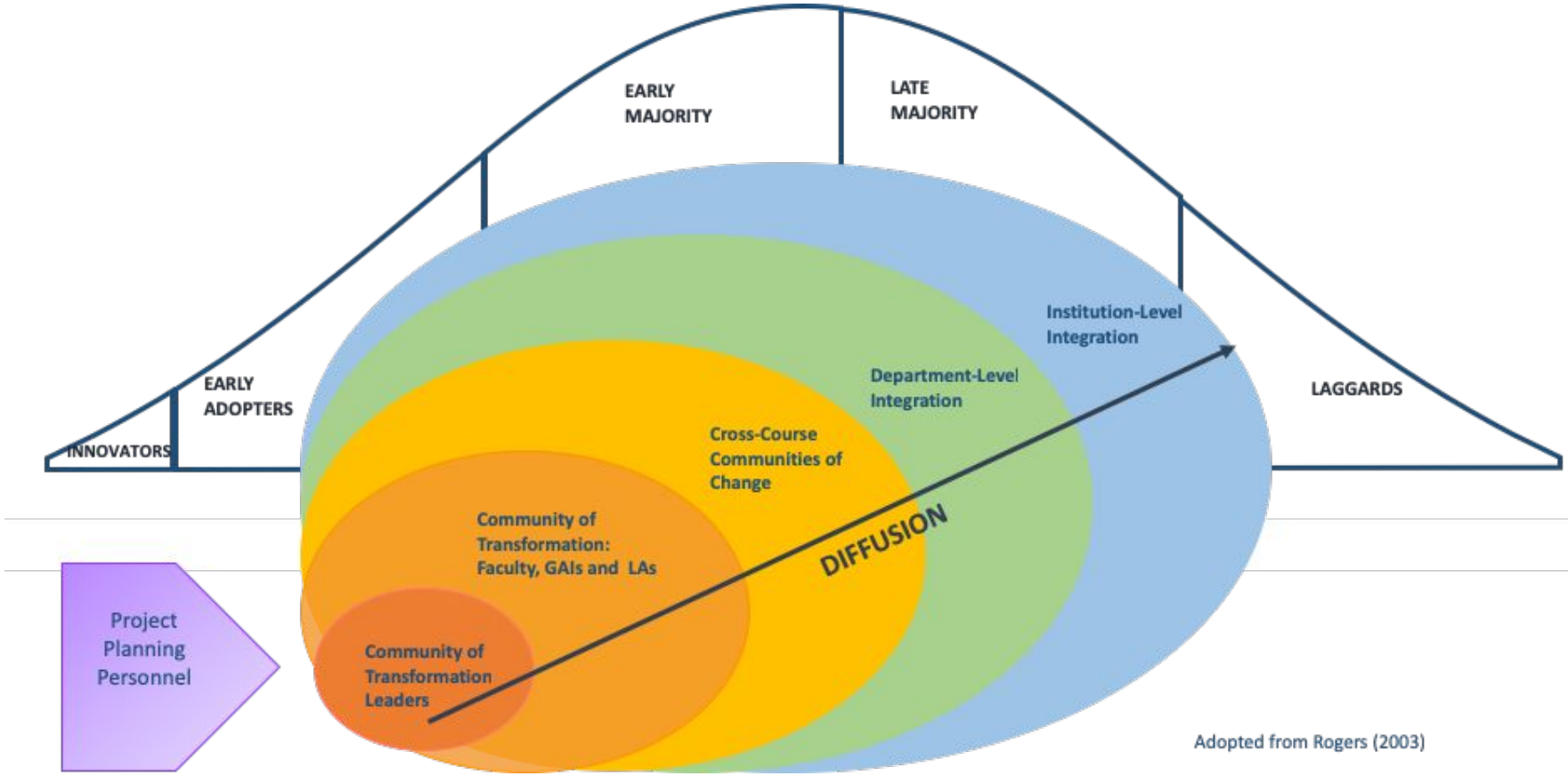
- How do the tactics outlined in the **grassroots change theory** help to **create sustainable course-level and department-level changes** toward the use of inquiry-based learning?

- To what extent do **graduate apprentice instructors** and **undergraduate learning assistants assist in diffusing course-level change** to the department or college level?

- How do **grassroots tactics, implemented through communities of transformation**, interact to **diffuse course-, department-, and institution-level change**, and to **influence organizational learning**?

Visualizing Innovation Diffusion and Organizational Change

The change model combines a bottom-up, or grassroots, approach via individual faculty operating within STEM programs with top-down (university administrative) support.



Initial Data: What matters for Online Instruction

Supportive Leadership Sets the Stage

- Supporting autonomy among faculty to solve online learning problems
- Visible commitment by leaders - at all levels – is crucial

Change Agents are the Primary Facilitators of Communication

- Respected peers with relevant experience and prior relationships
- Guide work through collaborative meetings, problem solving, and resource development

Establishing Norms

- Focusing on departmental norms in an online environment lessens resistance to change

Effective Processes Can Move Work Forward

- Departmental repositories allow for crowdsourcing of resources
- Ongoing check-ins and effective communications

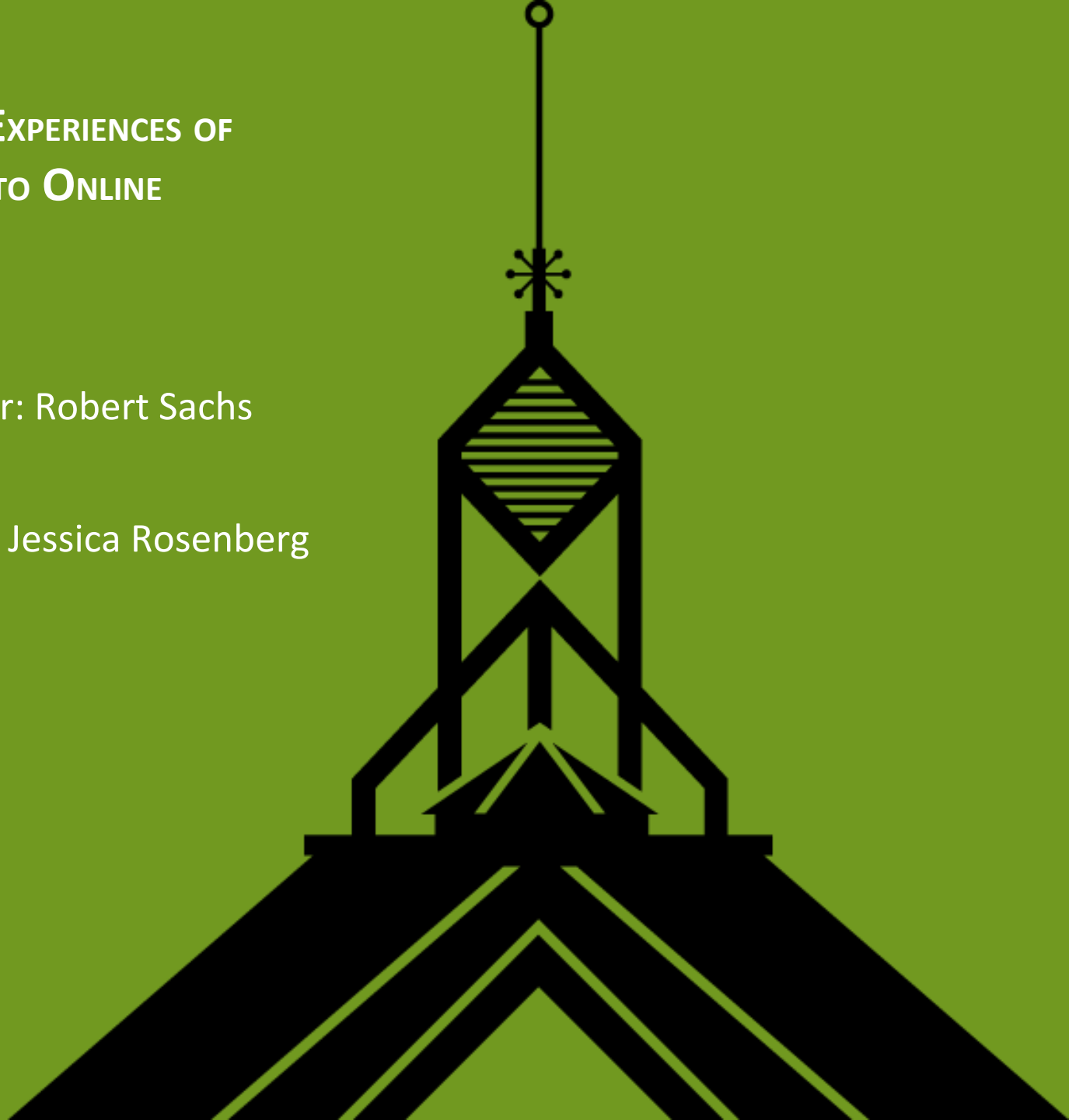
Pandemic Produces New Leaders

- Not all faculty were prepared for shift (particularly technologically)
- Faculty went above and beyond to support each other

CCT Leaders' Experiences of Transition to Online Learning

Math CCT Leader: Robert Sachs

Physics CCT Leader: Jessica Rosenberg



Stearns Center Work during Transition

What comes to mind when you think of support for online learning?

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What comes to mind when you think of support for online learning?

Activity

Implications for you and your work

- Transition to online teaching
- Leaders, positional and non-positional, have the opportunity to shape culture and change – *we each have some agency.*

Individually: Think about how you want to support online learning

- Goals, priorities, opportunities, and challenges.
- Faculty needs to overcome challenges
- Stakeholders and collaborators. What perspectives are needed? What perspectives would stakeholders and collaborators bring?
- Identify strategies and resources to meet goals

Breakouts

Now in groups

- Be Bold, Concrete, and Imaginative

Part A:

- Share and review focus and goals
- Are they reasonable? Is stretch sufficient? Too much?

Part B:

- Discuss needs to achieve the goals for supporting online teaching and learning.
- Create a list of stakeholders and collaborators needed.

Part C

- Discuss strategies and resources. What is needed for success?

Debrief

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QUESTIONS

This project is supported by the National Science Foundation, Division of Undergraduate Education.

Recommendations for Supporting Faculty

- Provide visible top-down support, but allow for bottom-up leadership
- Attend teaching meetings and seminars to show support
- Advocate for necessary people, technology, resources, incentives, rewards, and other needs to facilitate focus on teaching and learning
- Strategize ways to leverage organizational culture to support online teaching
- Provide incentives, rewards, and professional development to encourage faculty and graduate students

Recommendations for Supporting Faculty

- Mention strategies and give time to champions to discuss strategies in departmental meetings
- Champion ‘wins’ during Deans and Department Chairs meetings
- Advocate for different technology or institutional changes that make online teaching easier to adopt
- Institutional advocacy for change

Recommendations for Supporting GTAs

- Advocate for people, technology, resources, and other needs to leadership

  GTAs are in need of resources to teach their courses in the new online format, advocating for funds/commitments to provide them with loaner laptops and/or tablets with a stylus will help them.

- Provide incentives, rewards, and professional development to encourage graduate students

  GTAs were more receptive to change and adapted quickly with shift to online learning, continued encouragement and acknowledgement of their work is needed.

- GTAs are in need of support in the form of training, departments can combine efforts and collectively establish this.

How Learning Assistants Can Support Faculty and GTAs

- Undergraduate Learning assistants are key players for monitoring chat if needed
- Learning assistants can engage students in group work, and allow contact with greater numbers of students and groups in an online environment
- Many stepped up to take on additional responsibility
- Advocated for students by rephrasing/presenting student questions to instructor