Communities Facilitating Scholarly Mathematics Teaching and Learning

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Project SLOPE
Scholarly Leaders Originating as Practicing Educators in Two-Year College Mathematics

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Plan for Session

Table Conversations
Faculty Learning Communities (FLCs)
Pillars of PROWESS
Brainstorm FLC topics
FLCs in the first two years of college mathematics
Table Conversation

What questions around mathematics teaching and learning are being discussed at your college?
Table Conversation

What opportunities are there for faculty learning related to the questions being asked?
Table Conversation

What structures are there (or that you wish there were) for faculty learning related to the questions being asked at your college?
Table Conversation
What is a Faculty Learning Community?

Group of faculty and professional staff engaged in an active and collaborative program focused on enhancing teaching and learning.

http://www.units.miamioh.edu/flc/whatis.php
What a Faculty Learning Community is NOT

Teaching circle
Book club
Seminar
Course
Workshop
Committee

http://www.units.miamioh.edu/flc/whatis.php
What Faculty Learning Communities Achieve

Faculty Learning Communities as a vehicle for engaging in scholarly mathematics teaching and learning.
What is Scholarly Teaching and Learning?

Good teaching

Reflective teaching: How?

Scholarly Teaching: Why?

Scholarship of Teaching and Learning (SoTL)

David Bressoud, *Foreword* to Doing the Scholarship of Teaching and Learning in Mathematics
What is Scholarly Teaching and Learning?

Some Faculty Learning Communities include a SoTL project

- Miami University model (Milton Cox)
- Project SLOPE (AMATYC)
What is Scholarly Teaching and Learning?

*Lesson Study* is another structure for taking a scholarly approach to mathematics teaching and learning.

https://www.researchgate.net/publication/322203792_Analyzing_teacher_learning_in_lesson_study_mathematical_knowledge_for_teaching_and_levels_of_teacher_activity/figures?lo=1
Focusing the work of a FLC

Anchor FLC efforts in scholarship or broader contexts such as the new AMATYC IMPACT guidelines.

PROWESS
# AMATYC IMPACT: Four pillars of PROWESS

## Making an IMPACT on Mathematical PROWESS

<table>
<thead>
<tr>
<th>Proficiency: Developing Students' Mathematical Knowledge</th>
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<tbody>
<tr>
<td>Irrespective of a student’s academic pursuits, mathematical proficiency is critical to being a functioning member of society. Students need to: know mathematics procedures, execute core computations fluently, view mathematics as relevant to their daily lives, demonstrate mathematical understanding, utilize the structure in the mathematics to solve problems, apply mathematics to everyday situations, and communicate mathematically.</td>
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<tr>
<th>Ownership: Taking Responsibility and Showing Initiative</th>
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<tbody>
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<td>Faculty should work towards empowering students to take ownership of their learning by promoting self-regulated learning. For faculty, ownership involves being a reflective practitioner who examines curricula and teaching practices to identify areas that need improvement. For departments and institutions, ownership requires supporting faculty in their teaching.</td>
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<th>Engagement: Developing Intellectual Curiosity and Motivation in Learning Mathematics</th>
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<td>Engaging students intellectually in the process of learning mathematics through active and cognitive activities is fundamental for improving student achievement. Likewise, engaging faculty in the pursuit of excellence in teaching through innovative best practices results in an invigorated commitment to teaching and innovation, which benefits students, the department, the college, and society as a whole.</td>
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<th>Student Success: Stimulating Student Achievement in Mathematics</th>
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<td>Stimulating student success requires the entire college community to work together to advise and place students into appropriate pathways while creating a positive learning environment to maximize their success. Producing and sustaining a learning environment that promotes student success should be implemented by utilizing a collaborative spirit that unites college leadership, faculty, staff, and policy makers.</td>
</tr>
</tbody>
</table>

Return to the notes from the table conversations.

How are the topics or discussion at your colleges related to the pillars of PROWESS?
Brainstorm

Topic, problem, question or opportunity of mathematics teaching and learning that could be the focus of an FLC in your college.

As we brainstorm FLC topics we would like to pursue, connect these topics to one -- or more -- of the four pillars of PROWESS.
Idea Tree

Write down a topic, problem, question or opportunity of mathematics teaching and learning that could be the focus of an FLC in your college.
Idea Tree

Pass the paper to your right.
Idea Tree

Write down an idea or question that is spurred by what is written on the paper.
Idea Tree

Pass the paper to your right.

Write down an idea or question that is spurred by what is written on the paper.
Idea Tree

Return the papers to their originators.
Idea Tree

Read the tree that grew from your idea.

Think about or write down some more thoughts on your tree.
Idea Tree

What are some resonating ideas of FLC topics that came from your table?
FLCs in the unique setting of two-year colleges

Teaching is central to mission of 2YCs.

Faculty identify strongly as educators.

Committed to improving practice and student success.

Desire for engaging, meaningful and transformative faculty learning and development.
FLCs in the unique setting of two-year colleges

Structures may not be available to incorporate this form of faculty learning

- Unfamiliarity with FLCs as a form of professional development
- Time and funding may not be available
AMATYC Project SLOPE
Research Fellows Program
Scholarly Leaders Originating as Practicing Educators in Two-Year College Mathematics

Apply by November 30.

https://amatyc.site-ym.com/page/ProjectSlope
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Thank you

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