Engaging your faculty colleagues in evidence-based practices using SAGE 2YC resources: Book clubs, journal clubs, and implementation groups

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SAGE 2YC: Faculty as Change Agents

- National network of 2YC geoscience* faculty who use evidence-based strategies to
  - improve students' academic success,
  - broaden participation in STEM, and
  - facilitate students' professional pathways into the STEM workforce

- 3 cohorts of faculty Change Agents:
  - Cohort 1, 2016-2019, hybrid delivery
  - Cohort 2, 2018-2019, almost all online
  - Cohort 3: 2020, all online

- Virtual faculty professional development has taken several forms, including the faculty discussion series I will describe today

* Cohort 3 includes faculty across STEM, with at least one geoscientist on each campus team
Focus of this talk: SAGE 2YC topical virtual PD “events”

- Engage participants in deep learning about the 3 project strands
- Improve students’ academic success
- Broaden participation in STEM
- Facilitate students’ professional pathways into the STEM workforce
Goals of the virtual PD series

The overarching goal of our discussion series is to spark changes in practice through deep engagement with evidence-based practices for teaching and learning. The specific goals generally include some or all of the following:

Participants will

• **read** primary or secondary literature on the topic;
• **reflect** on how the reading relates to their current teaching practices;
• **develop plans** to implement evidence-based practices in their classrooms / departments / programs;
• **peer review** implementation plans;
• **implement** their plan;
• **report** back to the group about what they implemented and how it went.
Structure and format

- Synchronous 1-hour meetings via Zoom, each preceded by asynchronous assignments
  - Typically 3 synchronous meetings, 1-3 weeks apart
  - Groups of ~4-20 participants
- One or two leaders who coordinate assignments, communications, etc.

1st meeting: Do the pre-meeting assignment, send it to the coordinator.

Before the 2nd meeting: Do the pre-meeting assignment, send it to the coordinator.

2nd meeting: Discuss the assignment and lay the groundwork for the next one.

Before the 3rd meeting: Do the pre-meeting assignment, send it to the coordinator.

3rd meeting: Discuss the assignment. Consider whether to schedule any follow-up.
Example: Whistling Vivaldi book club

Prior to the first meeting:

• Read chapters 1-4. Send me 3 questions you would like to discuss in our synchronous meeting. I will post them (anonymized) to a password-protected web page before the meeting.

1st meeting:

○ At the beginning of the meeting, I remind everyone that some degree of discomfort and concern about saying the wrong thing is natural; these discussions are an opportunity to learn.

○ Group discusses a subset of the submitted questions. (I choose which ones.)

For 2nd & 3rd meetings:

• Iterate, with 3-4 chapters for each meeting
Example: Bloom’s Taxonomy implementation group

Prior to the first meeting:

• Send me a set of course-level learning goals for one course
• Review course-level learning goals from 3 or 4 other participants; rank them according to Bloom’s taxonomy and send your rankings to the faculty member whose course it is.
• Review your peers’ rankings of the Bloom’s taxonomic levels of your course goals. How much variation is there? What surprises you?

https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/
Example: Bloom’s Taxonomy implementation group

1\textsuperscript{st} meeting:
- Does everyone agree on the Bloom’s level of your learning goals?
- If not, where do they disagree?
- If so, what’s the proportion of higher-level goals to lower-level goals? What do you think about that proportion - does it represent what you want students to learn?

For 2\textsuperscript{nd} & 3\textsuperscript{rd} meetings:
- Iterate, but with a set of exam questions (2\textsuperscript{nd} meeting) and an assignment (3\textsuperscript{rd} meeting), each time in new review groups

https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/
Sessions described on the SAGE 2YC website:

Book clubs:
- **Small Teaching**: Everyday Lessons from the Science of Learning, by James Lang
- **Whistling Vivaldi**: How Stereotypes Affect Us and What We Can Do, by Claude Steele

Journal clubs:
- Fostering students’ **sense of belonging**
- Developing students’ **science identity**
- Supporting **2YC-4YCU transfer**

Implementation groups:
- Using the lens of **Bloom’s taxonomy** to align course learning goals, assignments, and assessments

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**Improve students’ academic success**

Broaden participation in STEM

Facilitate students’ professional pathways
Engaging your faculty colleagues in similar activities

- Choose a topic that appeals to you, that you want to learn more about
- Peruse the materials available on the SAGE 2YC website to see if there’s something you can adopt or adapt: https://serc.carleton.edu/sage2yc/faculty_discussions.html
- Consider what group size makes sense
  - We’ve run events for 4-20 participants
- Invite colleagues to join you
  - Selected group, or open to the community?
  - For whom is the topic relevant?
  - Whom do you want to engage in this conversation?
  - Who has expertise to share?
Engaging your faculty colleagues in similar activities

If you are designing an activity on a book or topic we haven’t addressed, use evidence-based design principles:

- **Articulate your goals for the sessions**
  - What do you hope you and your colleagues will get out of these activities?

- **Plan activities that support your goals**
  - What can you do, before, during, and between your meetings, to set yourselves up to achieve those goals?
  - What will you ask participants to do in advance of each of the meetings?
  - How will you structure your meetings to maximize discussion and sharing of ideas?
  - Will you “lead” each of the sessions, or share that role with others?
Engaging your faculty colleagues in similar activities

- Follow our template, or adapt it for your situation
  - F2F or virtual meetings? How many sessions? Over what total time interval? How long will each synchronous discussion be?
  - Will you share everyone’s responses to the asynchronous activities?
    - *Of course you will. You might anonymize them if the topic warrants it.*
  - Will someone take notes during discussions? If meeting virtually, will you record sessions?
    - *If so, be clear about how recordings will be shared, with whom, and get explicit consent from all participants.*

- Schedule it!

- Run it…. and send out reminders about everything
  - About every pre-meeting assignment
  - About every meeting

- Optional: Follow up with participants, 1-2 months later
SAGE 2YC
2YC Faculty as Agents of Change

Faculty Discussion Series

Faculty discussion series are a key element of the SAGE 2YC faculty professional development program. These have included book clubs, journal clubs, and implementation groups sometimes called "teaching circles." Each discussion series has focused on a topic directly related to at least one of the three strands of the SAGE 2YC project: supporting the academic success of all students, broadening participation in the geosciences and STEM, and facilitating students’ pathways to geoscience/STEM careers. These discussions support faculty members in exploring evidence-based teaching practices and in reflecting on how they can implement those practices.

Goals
The overarching goal of our discussion series is to spark changes in teaching practices through deep engagement with evidence-based practices for teaching and learning. The specific goals of each of the SAGE 2YC Faculty discussion series have varied with the specific topic addressed. However, the goals generally include some or all of the following: Participants will

- read some of the research literature on the topic;
- reflect on how the reading relates to their current teaching practices;
- develop plans to implement evidence-based practices in their classrooms / departments / programs;
- offer each other feedback on those implementation plans;
- report back to the group about what they implemented and how it went.

Structure and format
Each of our discussion series is composed of a series of meetings, as the name implies, providing each of the meetings (including the first meeting...