Insights from Guided Pathways Webinar:
"Embedding Active and Experiential Learning in Online Teaching Environments"

Presented in February 2021 by Dr. Ann Edwards,
director of Carnegie Math Pathways at WestEd;
and Dr. Tia Brown McNair, *vice president for diversity, equity and student success and executive director for the Truth, Racial Healing and Transformation Campus Centers at the American Association of Colleges and Universities*

Who can use this: administrators, instructional faculty, instructional design faculty, staff

PRESENTATION OBJECTIVES:

- Gain insight into how to create a collaborative and active online learning environment.

- Strengthen institutionwide commitment to high-impact, equity-minded, asset-based teaching and learning.

Keywords: Collaborative learning, Guided Pathways, Pillar 4, instructional design, online learning, equity, experiential learning, asset-based teaching, teaching and learning, asynchronous learning

Design an Online Learning Experience That Leads Students to Success

STRATEGIES TO IMPLEMENT COLLABORATIVE LEARNING IN ONLINE COURSES

As today's students increasingly seek the flexibility of online courses, there is an opportunity to create engaging and rigorous online learning environments that lead to quality credentials and employment. Collaboration among students is possible in online environments and can lead to several positive outcomes for students, including stronger communication and leadership skills, improved student self-efficacy, and increased preparedness for social and workplace interactions. Collaborative online learning also provides instructors a deeper look into students' thinking and capabilities to do and learn more without instructor intervention.

This brief shares strategies for college professionals to design and implement active online teaching and learning environments to support all students to learn.

" Authentic and effective online collaboration, and importantly social connection, really is possible [in math courses].

— **Dr. Ann Edwards,** *Director, Carnegie Math Pathways at WestEd*

STRATEGIES

1. Design for the student experience.

Carnegie Math Pathways employed research-based design principles centered on the learner's experience to adapt its in-person courses to online. The online course design is based on four pillars: a) Curricula are centered on rich tasks that are relevant to students to make content meaningful and promote engagement. b) An active collaborative learning approach supports student reasoning discourse and promotes social belonging. c) Content provides targeted, built-in scaffolding for students needing extra support. d) Importantly, social and emotional supports are embedded into the curriculum and instruction to foster growth mindsets, self-efficacy and a sense of social belonging.

Edwards shared the following core design principles to enhance the student experience through active and experiential learning:

- **Always Welcoming:** Feel like you belong, right from the start.
- **Coherent:** How everything fits together is clear.
- **Adaptive:** A learning system that meets you where you are.
- **Intentional:** A controlled structure and flow, where there is always an explicit next step.
- **Collaborative:** Teach others and learn from them.
- **Supportive:** Help is there when you need it.
- **Interactive:** Rich, meaningful and productive communication.

2. Design for group collaboration.

In collaborative learning sessions, students can teach others and learn from them. A typical Carnegie Math Pathways course unit begins with individual preparation so students can gain context. Then, they complete a survey/activity that promotes productive persistence. At the center of the course unit, students do a collaboration session in a small group (see "Strategy in Practice"). That is followed by instructor feedback and an individual exercise that deepens learning from the collaboration session.

Edwards recommended the following for collaborative learning:

- **Establish norms early.** In the first few weeks, provide an explicit definition of collaborative learning, and describe what good collaboration looks like and how to do it successfully. In Carnegie Math Pathways, instructors start the first few weeks of each course with a "Starting Strong" package of elements that includes a clear course landing page, predictable and visible course structure, and a course orientation.

- **Set roles, and rotate them each session.** Group roles can support more equitable participation and scaffold capacity to collaborate. Roles can include leader, recorder, facilitator, progress monitor, etc.

- **Implement reflection periods.** Offer students opportunities to reflect on what is working, challenges and how they can be good collaborators. Incorporate ongoing reflection through group and individual questions after collaboration sessions, especially at the start of the term, to improve the quality of collaboration. Student reflections also provide instructors with feedback as to how things are going and how to potentially shift, improve and intervene as needed.

- **Build social rapport among group members:** Instructors should incorporate activities for students to get to know each other, build bonds and promote a group identity.

- **Incorporate group accountability structures.** Accountability supports productive collaboration. Some ways to embed accountability include peer evaluations of quality of participation using a group collaboration rubric, opportunities for instructor feedback or including a "participation" grade for the course.

STRATEGY IN PRACTICE:

In Carnegie Math Pathways, small groups of four to five students engage in online student-led collaboration sessions for each course unit. They set their schedule, no instructor is present, and the session is recorded for the instructor to provide feedback. A predesignated group leader opens the lesson in Realizeit, shares their screen on Zoom and is responsible for submitting group responses. Instructors enhance online content to include additional scaffolding, prompts and hints. The first session asks students to read about the benefits and challenges of group work, explains how to do it well, and engages them in reflection and discussion. Then they create a group resume with their experiences, knowledge and achievements.

This experience empowers learners to own their unique learning process, form a bond and group identity with their peers, and value their work through productive collaboration. Edwards found that collaborative sessions offer instructors a deeper understanding of students' mindset and knowledge acquisition – input that can help them adapt the course.

3. Focus on purpose and equity in shifting in-person learning to the online environment.

When thinking about which elements to carry over from in-person to online learning, McNair recommends that educators prioritize core purpose and equity. For example, if you were to translate applied learning (i.e., internship, service learning, undergraduate research) to an online environment, consider how to embed elements of these experiences that will support the core purpose and student outcomes in a way that is accessible to all.

Ask the following questions:

- What is the learning experience's ultimate purpose?

- What do we want students to learn?

- How can we design online learning assignments or opportunities for learning that will help all students achieve beneficial learning outcomes?

- What are the quality elements of design that we need to think about from our own understanding that we bring to the assignment design process to create a quality design experience with an awareness of where we're falling short.

STRATEGY IN PRACTICE:

Students need their work to be rooted in a purpose for them to feel connected to it. One strategy that McNair has used to achieve that is the Transparent Design in Higher Education Teaching and Leadership, which helps faculty make explicit the purpose of the work, the knowledge that will be gained, how this applies to real-world work, the tasks involved and criteria for success. That has resulted in statistically significant improvements in student learning gains and knowledge of employment skills. More recently, faculty members at Amarillo College and Monroe Community College have embedded the transparency assignment design model into their development of high-impact practices for online courses. They are seeing positive feedback and higher levels of engagement from students.

ADDITIONAL RESOURCES

- See California Virtual Campus Online Education Initiative's Resources for Teaching and Learning Online.

- View more information about Carnegie Math Pathways at www.carnegiemathpathways.org.

- Check out lessons from Carnegie Math Pathways' "Narrowing the Distance in 'Distance Learning': Lessons from Carnegie Math Pathways on Designing for Student Success Online."

- View the Academic Senate for California Community Colleges' "Ensuring an Effective Online Program: A Faculty Perspective" (2018).

- Explore Realizeit, an adaptive learning platform to build in content and curriculum, active learning focus, and social and emotional supports.

- Learn more about Transparent Design in Higher Education Teaching and Leadership.

- See a series of briefs on equity in learning in CCCSE's Ensure Students Are Learning Equity Tools.

- Go deeper into discussion and reflection with the National Center for Inquiry & Improvement's "Advancing Equity Through Guided Pathways Series Discussion Guide #10: Creating Active and Culturally Responsive Learning Environments for Students"

The Success Center at the Foundation for California Community Colleges independently prepared this overview based on the presentation; the overview may not fully represent the presenters' viewpoints.

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