![Postsecondary Teaching with Technology Collaborative logo]

Early Insights from the Postsecondary Teaching with Technology Collaborative

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Agenda

- Welcome from Dr. Karen Stout

- Introduction to the Postsec Collab

- Self-Directed Learning: Definitions and Findings from Previous Research

- Supporting SDL in Online Courses: Perspectives from the Field

- Panel Discussion

- Facilitated Breakout Discussions

Introducing the Postsec Collab

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What is the Postsec Collab?

A research and capacity-building center that aims to study and improve **how faculty teach** and **use technology** to help students build **self-directed learning skills** and increase students' success in postsecondary **online STEM courses**.
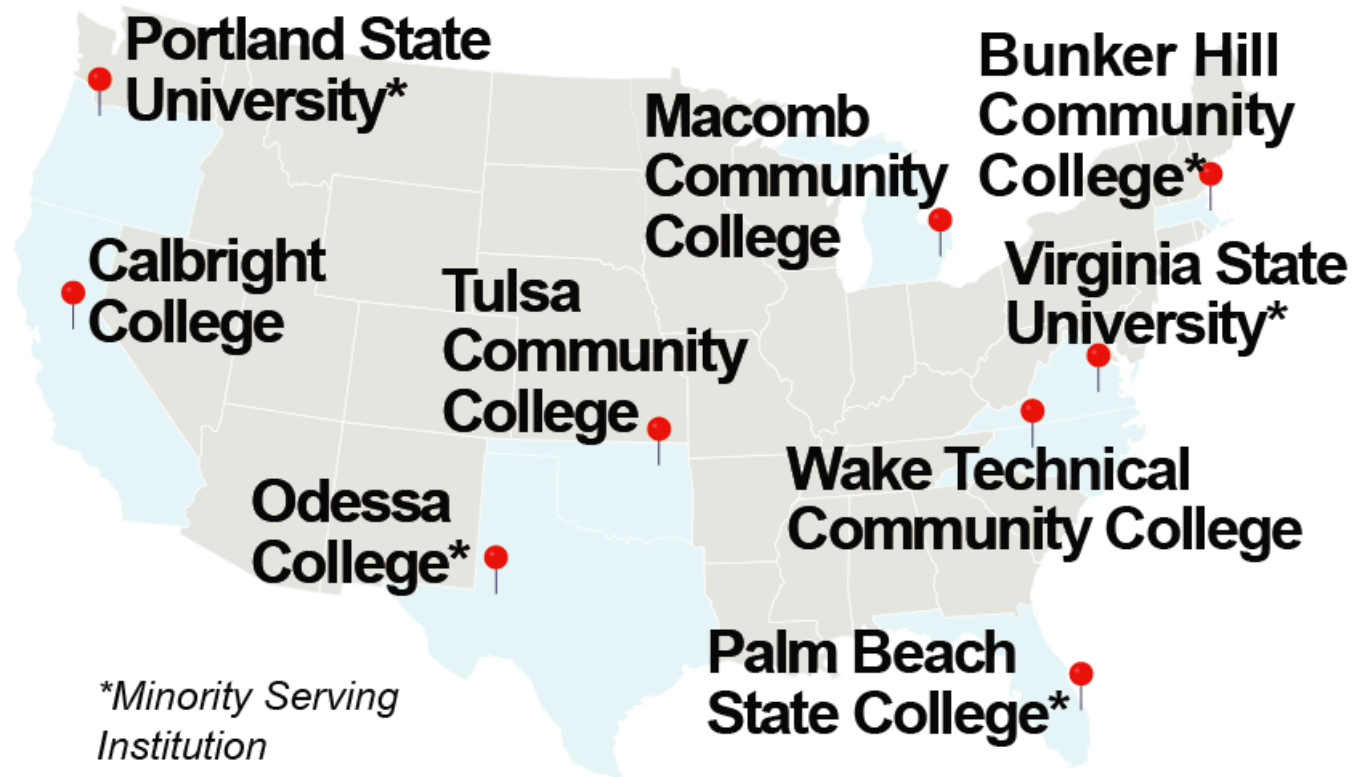
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Postsec Collab: Who Are We?

SRI Education
A DIVISION OF SRI INTERNATIONAL

CCRC COMMUNITY COLLEGE RESEARCH CENTER
TEACHERS COLLEGE, COLUMBIA UNIVERSITY

Achieving the Dream

Portland State University*

Macomb Community College

Bunker Hill Community College*

Calbright College

Tulsa Community College

Virginia State University*

Odessa College*

Wake Technical Community College

Palm Beach State College*

*Minority Serving Institution

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Why This Focus?

COVID has increased the urgency for research and support to improve teaching and learning in online courses

Higher education needs more information about strategies to improve equitable outcomes in online courses

The need for strong self-directed learning skills may be more profound in online courses, especially in STEM

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STEM Faculty Perspectives on Online Course Challenges

- Weak relationships with students

- Student reluctance to seek help

- Limited class time for student skill application, reflection, revision

- Desire for more STEM-specific professional development to support course design and teaching
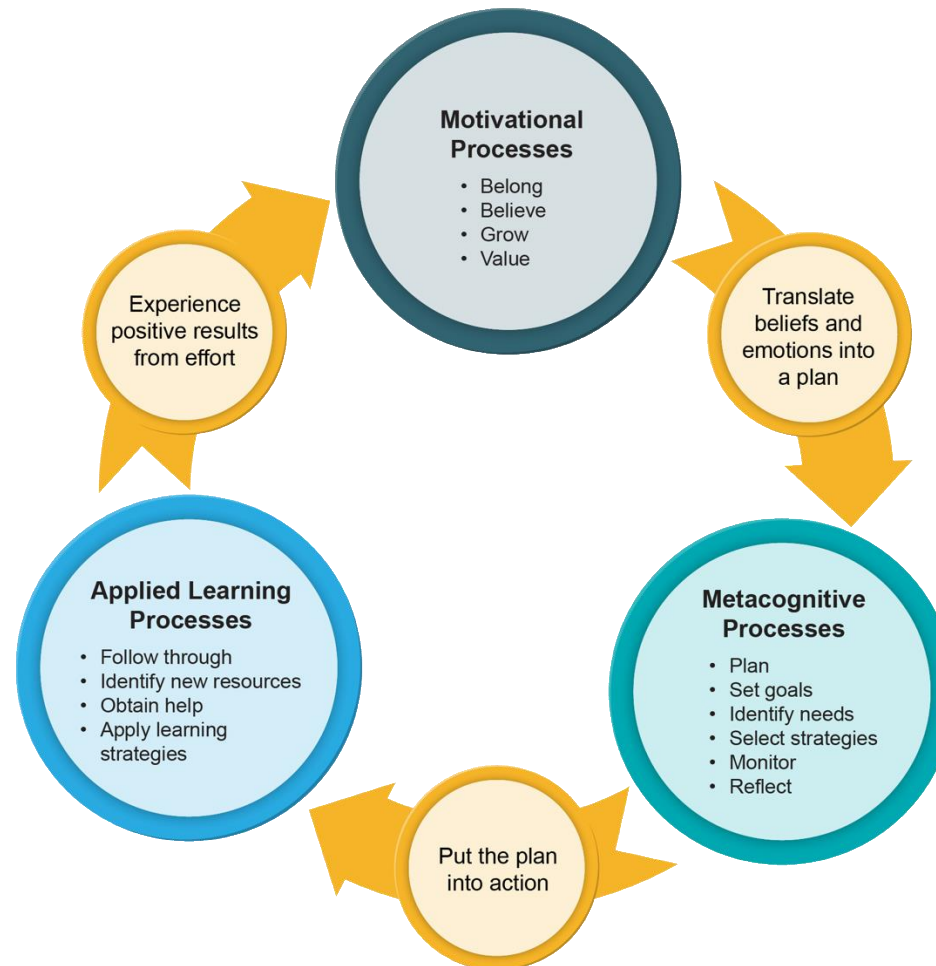
"We have a lot of support in setting up the [LMS] structure for the class, but not as much support for setting up an online pedagogy."
- Faculty member

What Literature Says about Self-Directed Learning

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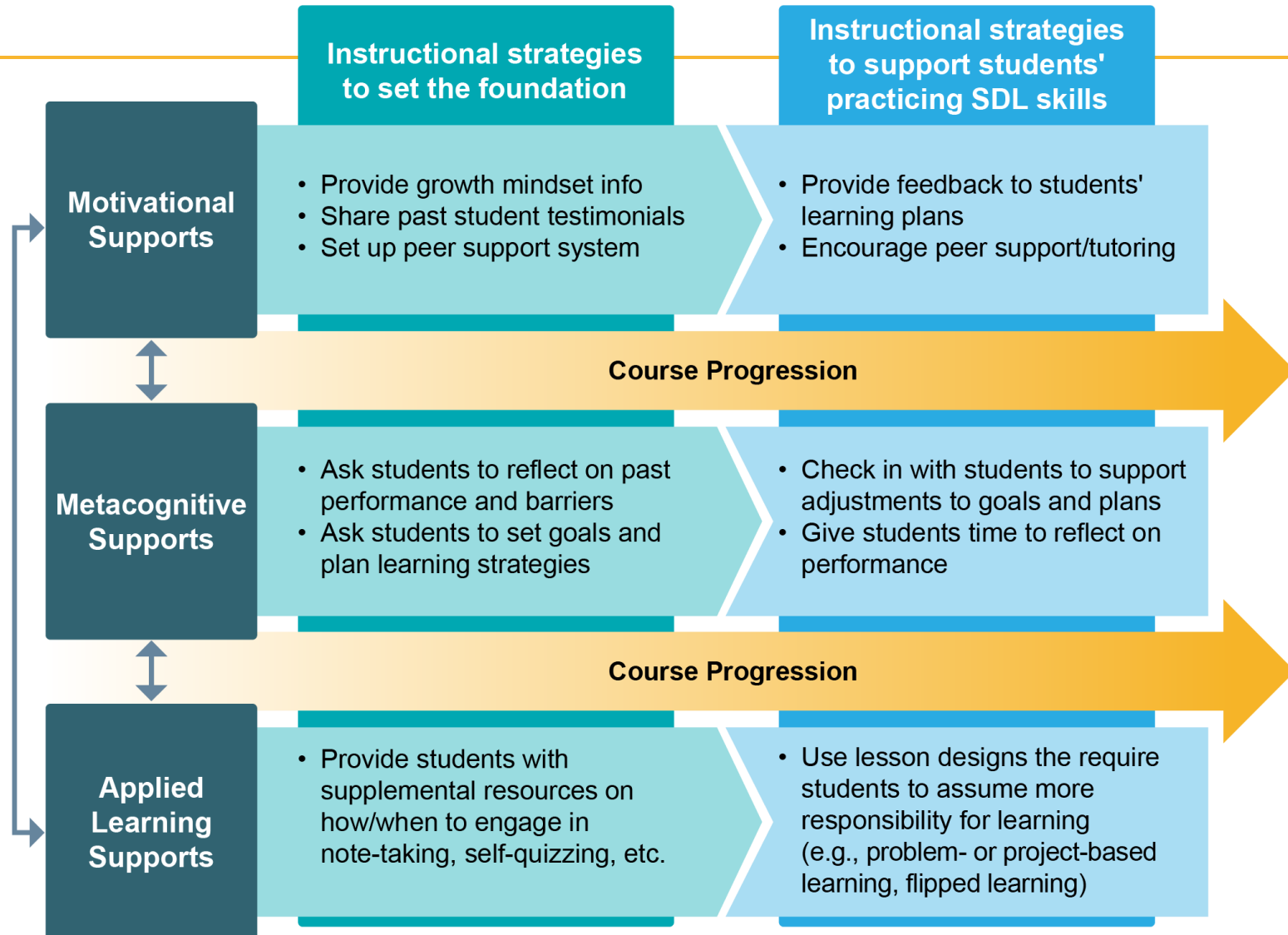**Teaching with Technology**
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Why Focus on Self-Directed Learning?

- Online learning requires students to be more independent
- Students need better guardrails for how to take ownership of the learning process
- Research shows that successful students have strong SDL skills
- We know many students haven't had opportunities to build SDL skills
- Development of these skills & mindsets can be supported through intentional instructional strategies
- Many institutions endeavor to support students' SDL skills through student success courses and services
  - Opportunity to embed SDL instruction in academic coursework – especially online

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Self-Directed Learning Skills

Motivational Processes
- Belong
- Believe
- Grow
- Value

Translate beliefs and emotions into a plan

Metacognitive Processes
- Plan
- Set goals
- Identify needs
- Select strategies
- Monitor
- Reflect

Put the plan into action

Applied Learning Processes
- Follow through
- Identify new resources
- Obtain help
- Apply learning strategies

Experience positive results from effort

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SDL Instructional Support

	Instructional strategies to set the foundation	Instructional strategies to support students' practicing SDL skills
Motivational Supports	• Provide growth mindset info • Share past student testimonials • Set up peer support system	• Provide feedback to students' learning plans • Encourage peer support/tutoring
	Course Progression	
Metacognitive Supports	• Ask students to reflect on past performance and barriers • Ask students to set goals and plan learning strategies	• Check in with students to support adjustments to goals and plans • Give students time to reflect on performance
	Course Progression	
Applied Learning Supports	• Provide students with supplemental resources on how/when to engage in note-taking, self-quizzing, etc.	• Use lesson designs the require students to assume more responsibility for learning (e.g., problem- or project-based learning, flipped learning)

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Examples of technology-supported strategies

Some students believe initial failure means they don't belong in a class

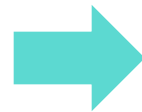➡️ Assign video explaining science of learning and growth mindset

Some students need real time adjustments to improve performance

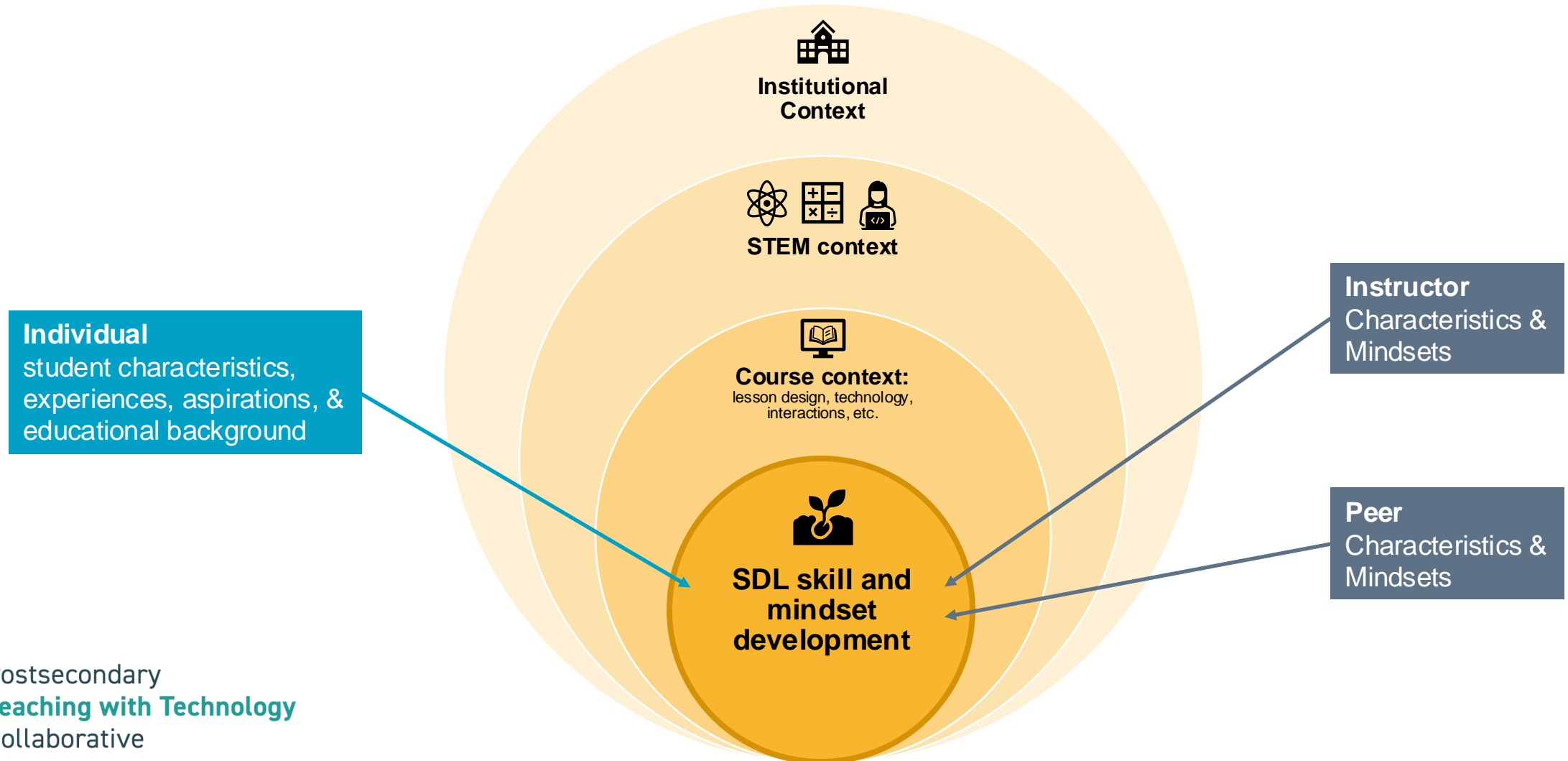➡️ Set up automated prompts focused on goal setting, task planning, etc.

Students do not feel safe admitting they do not understand

➡️ Use technology to support peer communication and help seeking

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Ecological Perspective of SDL Development

Institutional Context

STEM context

Course context:
lesson design, technology, interactions, etc.

SDL skill and mindset development

Individual
student characteristics, experiences, aspirations, & educational background

Instructor
Characteristics & Mindsets

Peer
Characteristics & Mindsets

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Gaps and Limitations of Existing Research

- There's much that we hope to learn about SDL that can contribute to the existing literature

- Insufficient attention to culture and context
  - We hope to learn more about how to support students from diverse backgrounds
  - Few studies in online courses
  - Limited attention to broad-access postsecondary institutional context

- Varied terminology around these skills and measurement approaches
  - Has made research less accessible for practitioners and challenging to synthesize

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Final Reflections from Literature

- The message is clear from four recent reviews and our scan of recent empirical studies using technology, taking place in online course settings, and/or STEM courses:

- With the repeated use of integrated tools to support SDL processes, instructors can help improve students' attitudes, study skills, and academic outcomes

- Together with faculty partners, we aim to identify a reusable set of tools that may be integrated at scale in online courses throughout an academic term to broaden student success

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Supporting SDL in Online Courses: Perspectives from the Field

Research Activities at a Glance

Data Collection Activity	Total Number of Participants	Institutions
Faculty, Staff, and Administrator Interviews	139	9 institutions
Student Interviews and Focus Groups	10	4 institutions
Faculty Survey	141	8 institutions
Faculty Course Tours	12	

Strong SDL Buy-in

- Supporting SDL is perceived to be part of the institutional mission
- Pandemic has heightened awareness of student learning needs

"Right now we are losing students at the very beginning; we're not losing students halfway through the trajectory. How can we ensure that we are providing students with what they need?"
- Administrator

SDL Support Largely Outside the Classroom

- College success courses, new student orientation, tutoring or writing centers, success coaching
- Often linked to targeted supports for traditionally marginalized groups (e.g., TRIO, affinity programs)

"How do we get people to understand the importance of this [student success] course? Maybe some of the activities we're doing in this class could be utilized in other disciplines. Maybe I'm teaching science and I'm struggling to get them motivated."
- Staff

Faculty Concerns

- Limited time to cover expansive content
  - Other areas of instruction more urgent
- Some faculty report skills are best taught earlier or elsewhere
- Standardized course design
- Some faculty fear students would not be receptive to SDL-related content

Student Perspectives on Learning Online

- Many students expressed reservations about reaching out to instructors for help
- Most students had limited interaction with other students
- Many students described learning strategies as self-taught
- Many students have found their own tech tools to manage their learning

"It was just kind of a time management thing. Like, with age and time, I just had to become good with time management—like life just teaches you that."

- Student

Faculty Support for SDL Skills and Mindsets

- Low, medium, and high stakes assignments

- Metacognitive strategies—awareness of learning process

- Reflection and fostering sense of belonging

Motivation through Reflection in Online Biology Course

- Weekly reflections using FLIPGRID technology
  - Learner's story
- Students share videos with peers
  - Supports a sense of belonging
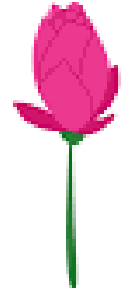- Professor provides video response
  - Encouragement, guidance

Rose   **Thorn**   **Bud**

Success   Challenge   Potential

Supporting Planning & Study Skills Online Anatomy & Physiology

- Focus on content mastery vs. accountability in course

- Course technology instructional videos with graded quizzes

- Adaptive textbook features to guide reading and homework

Scaling and Strengthening SDL Practices

- Build on existing institutional expertise in student affairs

- Strengthen connections between student success courses/ workshops and academic courses

- Leverage centralized course templates

- Support translation of in-person approaches to online

Panel Discussion

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Introducing Our Panelists

Zalmond Abbondanza

Professor of Mathematics, Department Chair

Palm Beach State College

Mona Easterling

Professor of Biology and Co-coordinator of Undergraduate Research

Tulsa Community College

Rachel McDermott

Associate Professor of English

Palm Beach State College

Facilitated Breakout Discussions

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Breakout Discussion Questions

- Have you incorporated SDL skills and mindsets into your courses? In what ways?

- What resources are available to support SDL skills and mindsets at your institution (e.g., student success courses, coaches, advising, tutoring)?

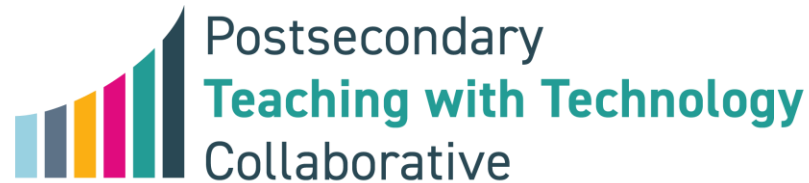- What types of supports do you need to implement SDL strategies in your courses?

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Postsec Collab Goals

☑ Increase awareness of the importance of self-directed learning skills and of culture and context in supporting these skills

☑ Improve online instruction and/or use of technology for instructional purposes

☑ Advance educational equity by building colleges' and universities' capacity to improve instructional quality in ways that support their diverse student bodies

☑ Strengthen feedback loops among researchers, practitioners, and education technology developers

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