![Postsecondary Teaching with Technology Collaborative]

A framework for designing online courses to support student success

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Agenda

- Introductions
- The growth of online coursetaking and related problems of instructional practice
- Examples from the field
  - Developing online teaching strategies at PBSC
  - Faculty microcredentials at Wake Tech
- Choose-Your-Topic Discussion

Introductions

Postsecondary **Teaching with Technology** Collaborative

Raise your hand if you work with faculty on online courses.

Does anyone work exclusively with faculty teaching online courses?

Raise your hand if you work closely with STEM faculty / departments.

If you work with a specific STEM discipline, which one(s)?

Let's share

What are the challenges you face in supporting faculty to improve student learning in online courses, especially in STEM?

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 apply and strengthen **self-directed learning skills (SDL)** to increase their success in online courses.

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Minority Serving Institution

This interactive session is focused on

- The importance of SDL skill support for students taking online courses, both through course design and instructional practice

- Strategies and tools to support the instructional practice of faculty teaching online introductory STEM courses

- Important contextual features of broad-access higher ed institutions and their impact on faculty development

The growth of online coursetaking and related problems of instructional practice

Amy E. Brown, Research Associate
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Rebecca Griffiths, Principal Researcher
SRI Education

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Overview of early Institutional Policies and Practices research

- Virtual interviews and focus groups in fall 2021 and spring 2022 with 139 stakeholders at our 9 partner institutions
    - Faculty with expertise designing and teaching online STEM courses
    - Staff included administrators, deans, department chairs, instructional designers, online learning administrators, chief diversity officers, and faculty development coordinators

- Interview topics included
    - online course delivery and instructional issues facing institutions,
    - strengths and needs of students in online courses, and
    - ways that institutions and instructors are supporting SDL skill development

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Public 2- and 4-year institutions saw large increases in the percent of students taking at least one online course during COVID-19, with public 2-year institutions maintaining those increases over time.

Average percent of students enrolled in some/only distance education (IPEDS), by year and sector.

Sector of U.S. Institution	Fall 2019	Fall 2020	Fall 2021
Public 2-year (901 total institutions)	**36%**	**70%**	**66%**
Public 4-year (755 total institutions)	35%	81%	61%
Private, not-for-profit 2-year (135 total institutions)	35%	47%	47%
Private, not-for-profit 4-year (1,544 total institutions)	32%	66%	46%

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Opportunities and benefits emerging from the pandemic

- Improved use of learning management systems
- Increased professional development for instructors
- Improved physical tech infrastructure and expanded software licenses
- Development of student-facing online orientation materials

Challenges with online teaching and learning

Poorer student performance in online course sections

Lack of meaningful communication and engagement

Increased demands for students to apply self-directed learning skills

Challenges especially apparent in online STEM courses

Postsec Collab model of self-directed learning: framework

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

Institution-level SDL skill development supports

- Some institutional buy-in for supporting students' SDL skills, but
  - SDL skill support is **more common** in online course orientations, student success courses, tutoring, and affinity group programs for targeted student groups
  - SDL skill support is **less common** in courses and academic departments

Wake Tech's eLearning Intro for Students

https://www.waketech.edu/online-learning/elearning-intro

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Classroom-level SDL skill development supports

- Limited/uneven explicit instructional support for SDL inside online classrooms and some faculty hesitation/caution to integrate support into disciplinary courses
- When present, common examples included:
  - introduction videos
  - proactive communication with and encouragement of students
  - reflection activities after exams
  - incorporation of diverse scholars in content to foster students' sense of belonging

Real-time Discussion in Asynch Physical Geology Course

- Instructor uploads lecture video to GoReact platform
- Students contribute to comment thread (text, video, audio, doc upload, links) as they watch the lecture
- Students connect with classmates, identify needs, monitor understanding, identify new resources, obtain help

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Hypotheses we are testing

Broad-access context

Students arrive at college with widely varying needs for SDL supports

Equity considerations

Students from systematically marginalized backgrounds need intentional efforts to support belonging and help seeking

SDL mindsets and skills are mutually reinforcing

Providing integrated support can have greater impact than individual strategies

Reinforce student success

Embedding SDL mindset and skill supports directly in academic coursework can reinforce and bolster what students learn in orientation and student success courses

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The Postsec Collab is testing strategies to develop SDL skills

Assign videos to support sense of belonging, time management, growth mindset

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

Use technology to support peer communication and promote help seeking

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Developing Online Teaching Strategies at PBSC

Dr. Josh Kanies, CTLE Director
Palm Beach State College

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Sustaining Motivation

"You can't motivate people….BUT you can affect and influence their motivation.

*A task with **PURPOSE** and **VALUE** may require more thought and preparation, but it generates the high-quality energy, vitality, and positive well-being that leads to **SUSTAINABLE** results."*

- *Edward L. Deci*

Dive deeper with these books on motivation:

- *Why Motivating People Doesn't Work* by Susan Fowler (2023)
- *Why We Do What We Do: Understanding Self-Motivation* by Edward L. Deci (1996)
- *Drive: The Surprising Truth About What Motivates Us* by Daniel H. Pink (2009)

Autonomy

Motivation

Competency

Relatedness
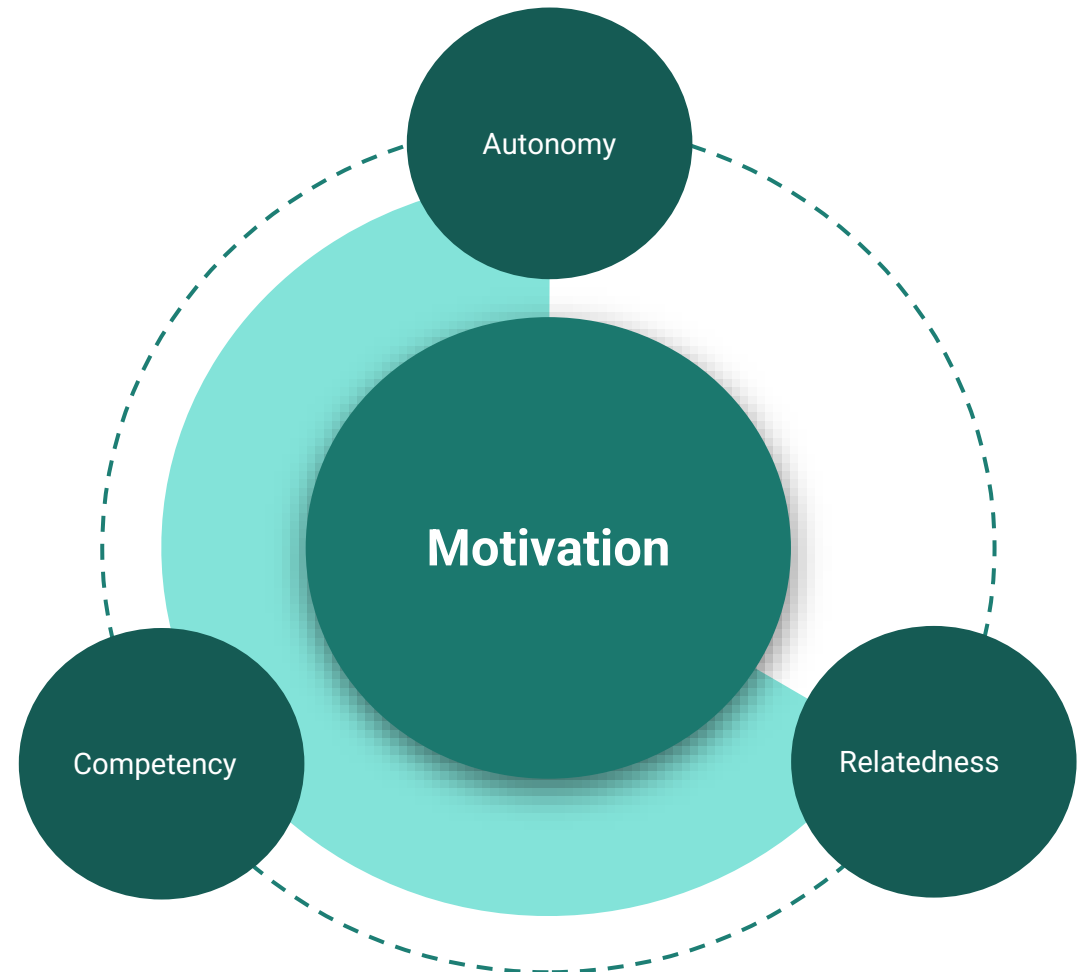
Motivational Strategies

Autonomy - Students possess choice and control, the sense that they can exercise some ownership over their learning experience.

- **Range of teaching resources and mediums**, such as live and pre-recorded classes, to cater to different learning approaches
- **Active Learning** to place greater responsibility on students for undertaking initial personal learning and facilitating formal learning
- Accessible feedback and appraisal forums that foster **student reflection** and development
- **Variety** of assessment methods that enable students to consolidate and express their learning in different ways.

Competency - Students possess the ability to engage with and complete challenges effectively, the sense that they can achieve mastery of the tasks presented to them.

- **Clear timetables** that use a standardized format
- Specifying lesson plans and **topics in advance**
- Outlining module **outcomes** and their contribution towards program **goals**
- **Detailing** assignments and tasks.

Relatedness - Students are connected with others through positive relationships, the sense that they are personally integrated into their learning environment and experience.

- Maintain accessible and **topical** discussion boards
- Setting **group-centered tasks** such as projects and presentations
- Retaining a "live" module **presence** through regular updates
- Facilitating group/breakout sessions that provide opportunities for more **personal dialogue**
- Keeping virtual classrooms open/live for **informal discussions** between students after the formal class has ended.

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Approaching Active Learning

Palm Beach State College worked closely with Steelcase and invited a consultant to help develop and shape our approach to adopting Active Learning.

We collectively chose these top four priorities:

- **Faculty Training** – Support and allow job-embedded professional growth opportunities

- **The Four Cs** – Promote creativity, collaboration, communication and critical thinking skills necessary for 21st century learners

- **Innovative practices** – support teachers adopting new strategies and methodologies encouraging varied student learning modes

- **Anytime Anywhere Learning** - Give students more choice and flexibility by supporting online and blended learning modes (HYFLEX MODELS)
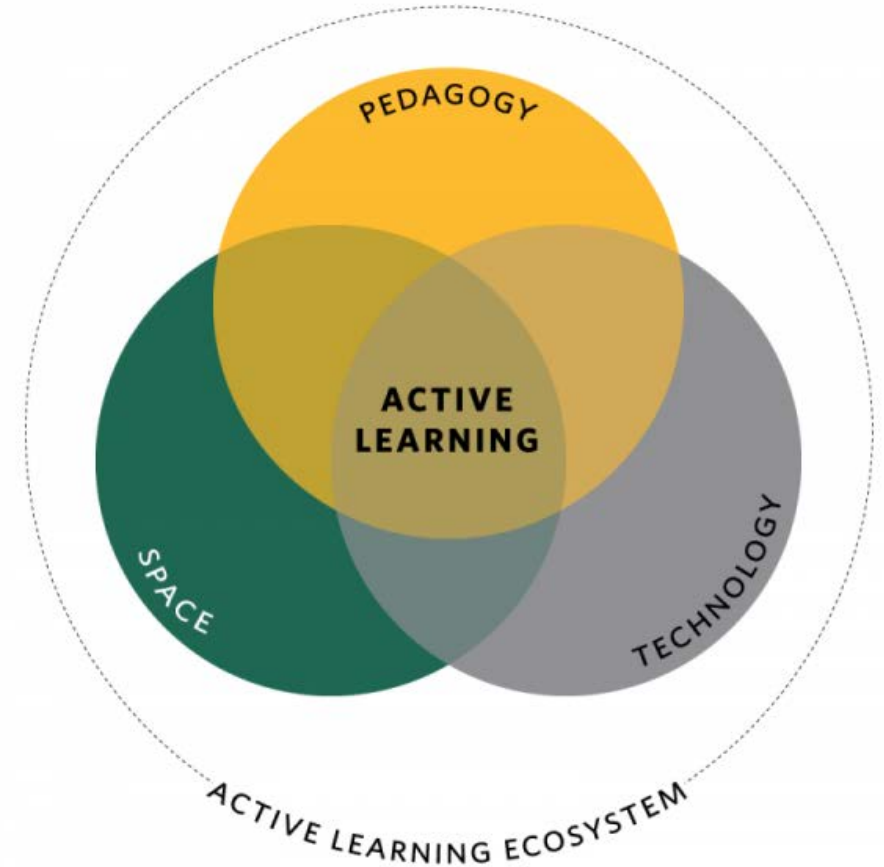
Active Learning Strategies

PEDAGOGY / ANDRAGOGY IS FOUNDATION

In our design process we closely aligned with the following TOP pedagogy tenets:

- **Design to support fluid transitions among multiple teaching modes: lecture, team project, discussion, etc.**
- **Design for peer-to-peer learning.**
- **Enable students to self-support and allow them to take ownership of their learning.**
- **Opportunities for individual learning.**

TECHNOLOGY WITH INTENT

In our design process we closely aligned with the following TOP technology tenets:

- **Integrate, use and allow access to BYOD and instructional technology tools and devices.**
- **Materials and Information to be persistent over time.**
- **Be intentional about what technologies should be used and how to support pedagogical strategies.**
- **Incorporate tools that support collaboration.**

ENVIRONMENT IMPACTS LEARNING (LMS)

In our design process we closely aligned with the following TOP space tenets:

- **Facilitate social learning where students can easily connect and collaborate online.**
- **Design to support quick reconfiguration among multiple modes: from lecture to project work to discussion, test taking and back again.**
- **Integrate the design to support and reflect the educational goals and mission of the institution.**

Effective Online Teaching Strategies Framework (ACUE)

ACUE's Framework https://acue.org/effective-practice-framework/

Implementation at PBSC

- Goal of 600 Faculty (FT + Adjunct Faculty)
- 25-Weeks (No work on Winter Break, Spring Break or Summer)
- FT Faculty receive $1000 stipend upon completion
  - *Negotiated through Collective Bargaining*
- Part of Continuing Contract (Our Tenure Process)
- Benchmark for future online teaching selection

- **Designing an Effective Course**
  Learn how to ensure learner-centered course outcomes, design aligned assessments and assignments, and build an inclusive syllabus.

- **Establishing a Productive Learning Environment**
  The learning environment you build impacts persistence, learning, and chances for student success. Learn how to lead a productive first day, promote a civil learning environment, motivate your students, and help students persist.

- **Using Active Learning Strategies**
  From group learning activities, to planning effective discussions – you'll unlock evidence-based strategies that promote active learning, giving all students the chance to be fully involved in their own education.

- **Promoting Higher Order Thinking**
  Advanced questioning, powerful note-taking skills, and strategies to develop self-directed learners. Learn the strategies that can deepen learning and enhance every teaching moment.

- **Assessing to Inform Instruction & Promote Learning**
  Learn the methods of formative and summative assessment that best promote learning and help you refine your teaching. Includes equitable grading practices and ways to provide useful feedback and check for student understanding.

PBSC Internal Development (VISTA)
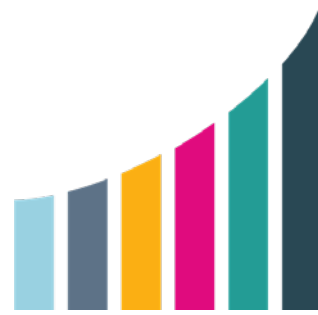
At Palm Beach State College, our VISTA program is sponsored by the Title V Grant and developed by the Center for Teaching and Learning Excellence (CTLE) in collaboration with Student Support Services, Institutional Research and Effectiveness (IRE), the Career Center, and Financial Aid.

"VISTA aims to inform and empower faculty with tools and resources that will foster a student-centered approach in their pedagogy."

Connecting with Student Support Services
- Student Entrance Ticket
- Student Services Contact
- EAB Navigate for Faculty Training

Career and Workforce Readiness
- Career Readiness Competencies
- Workplace Soft Skills
- PBSC's Career Coach and College Central

Financial Literacy
- FSFLEI Activities
- Candid Discussions on Finances
- FDIC How Money Smart Are You

Faculty Microcredentials at Wake Tech

Katie Surber, Instructional Design Coordinator
Wake Technical Community College, Raleigh, NC

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Professional Development

- To increase faculty involvement and to develop new trainings, the E-Learning Support and Instructional Design staff created several online faculty development microcredentials.
  - EPIC 30
  - OER (Fall 2023)
  - Visual Literacy (Fall 2023)
  - Culturally Relevant Pedagogy (Fall 2022)
- Creation of Center for Excellence and Teaching (Fall 2021)

Culturally Relevant Pedagogy

- Developed in 1995 by Gloria Ladson-Billings, **culturally relevant pedagogy** is a theory that learners should be engaged in course materials through their experiences
  - Stresses the importance of cultural backgrounds in course materials
  - The course should be developed based on social identities
  - Teaching should lead to academic success and should develop cultural identities and provide opportunities to recognize social inequalities
  - Each student understands that their life culture improves the educational experience for everyone

Ladson-Billings (1995). Toward a theory of culturally relevant pedagogy. *American Educational Research Journal, 32*(3), 465-491. https://doi.org/10.2307/1163320

Tenet 1: Academic Success

- How do you set expectations and goals for your class?
- What role does the student play in the learning process?
- The first tenet focuses on four ways to achieve high expectations:
  - Creating a student-centered classroom
  - Setting clear expectations and goals
  - Using groups for collaborative learning
  - Changing your teaching approach and growth mindset

Strategies to create a student-centered class

- The student is at the center of the learning, not instructor-led lecture
- Students can demonstrate how they understand the material
- Some ways to build this:
  - Pre-knowledge assessments
  - Demonstration
  - Self-paced assessments
  - Create more reflection

Strategies to create clear expectations and goals

- SMART goals
  - Specific, measurable, achievable, results-oriented, and time-bound
- Consistently reference learning goals
- Have students set their own goals
- Add self-evaluation and reflection
- Make feedback specific to expectations and goals

Tenet 2: Cultural Competency

- Providing students with opportunities to understand their own culture and identities and develop positive ethnic and social identities

- "The continuous pursuit of skills, knowledge, and personal growth needed to establish a meaningful background with people from various cultural backgrounds" (Connecticut Department of Education, 2023)

https://portal.ct.gov/SDE/Evaluation-and-Support/Professional-Learning---Cultural-Competence#:~:text=Cultural%20competence%20encompasses%3A,from%20various%20cultural%20backgrounds%3B%20and

Strategies to increase cultural competence

- Provide a sense of belonging
- Diversify course materials
- Provide representation in course readings
- Add updated experts with diverse backgrounds
- Bring in guest speakers
- Intentionally plan use of images
- Use inclusive terminology and names
- Make culture a part of the conversation

Tenet 3: Developing Social Consciousness

- Learning should support students' critical consciousness and their ability to recognize and critique social inequalities

- Address the "so what" question

- Ask students to connect their knowledge to something they care about

- Analyze real-world problems

Culturally Relevant Pedagogy Microcredential at Wake Tech

- To earn CRP microcredential, faculty complete four courses and a capstone

  - The first course introduces Culturally Relevant Pedagogy and the remaining 3 courses focus on one tenet each

  - As they complete the courses, faculty are asked to apply the strategies discussed into a course they are teaching

  - In the capstone, faculty submit the course they are teaching, with integrated CRP strategies, for review by an instructional designer

  - Those who complete the series and apply the theory receive a microcredential in Culturally Relevant Pedagogy

Examples from STEM faculty

BIO 110 Principles of Biology	MAT 152 Statistical Methods I

Faculty Member 1

- Added more reflection activities
- Increased critical thinking and social consciousness in discussion
- Added authentic assessment
- Added social initiative to use canvas bags instead of plastic

Faculty Member 2

- Added introduction survey, test reflection surveys, and mid-semester survey
- Incorporated discussion board prompt with community issue

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Examples from STEM faculty, cont.

GEL 111 Geology	BIO 169 Anatomy & Physiology II

Faculty Member 3

- Updated goal setting and survey
- Added self-reflection questions to exams
- Increased case studies

Faculty Member 4

- Added pre-knowledge assessments
- Added discussion on personal representation
- Added 3 case studies to evaluate common medical biases

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Choose-Your-Topic Discussion
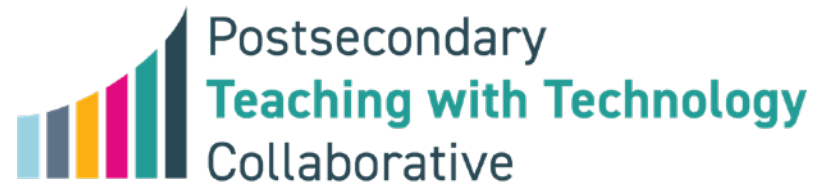
Discussion Topic Choices

1. **Supportive** online **teaching practices** for **students of color and other marginalized groups**
   a. What teaching approaches enable faculty to get to know their online students so that they can support them to succeed academically, be responsive to their identities and lived experiences, and help them be agents of their own learning?

2. **Examples of tools and resources** to support faculty in developing effective online instructional practices
   a. What resources have you found most effective in helping faculty teach in ways that address pedagogy, learning environment/space, and technology/course design?

3. Ways to **encourage STEM faculty** to integrate SDL strategies into their online courses
   a. How can these strategies be conveyed as supporting students' learning of STEM content rather than as strategies that belong in a student success course (i.e., not in an academic content course)?

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Thank you

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