EQUITY
INNOVATION
IMPROVEMENT
EQUITY
INNOVATION
IMPROVEMENT
EQUITY
INNOVATION
IMPROVEMENT
EQUITY
INNOVATION
IMPROVEMENT

GCA: A Collaborative Effort Addressing Equitable Improvement in Learning

March 21, 2024

UF Assessment Conference

Agenda

1. Introduction and Overview of the Grand Challenges in Assessment Project (GCA)
2. GCA Strategic Plan and Implementation
3. Measuring Self-Efficacy
4. Developing Self-Regulated Learning
5. Authentic Assessment and Self-Efficacy
6. Call to Action and Q&A

Who We Are and Who Are You?

Dr. Heather Maness, Assistant Director, Learning Analytics & Assessment, University of Florida

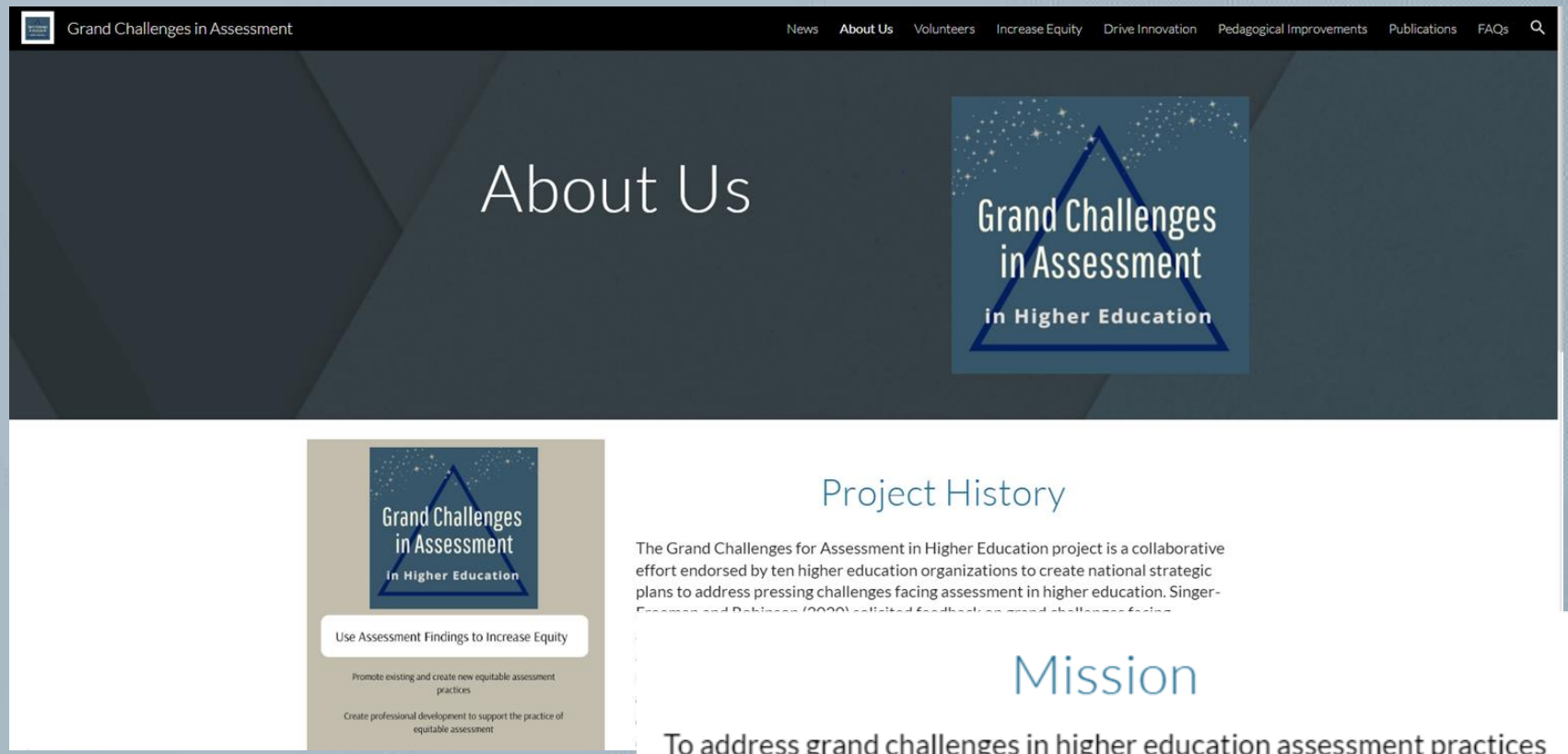
Dr. Deb Hokien, Associate Dean, Palm Beach State College

Dr. Rebecca Gibbons, Assistant Director, Assessment, University of South Florida

Dr. Bryant Hutson, Director of Assessment, University of North Carolina at Chapel Hill

We want to know more about you!

The Grand Challenges in Assessment Project



The Grand Challenges in Assessment Project

Project Directors

Karen Singer-Freeman
Wake Forest University

Christine Robinson
University of North Carolina
at Charlotte

Advisory Board and Endorsing Organizations

Association for the Assessment of Learning in Higher Education
AALHE
PROMOTING ASSESSMENT FOR LEARNING

National Institute for Learning Outcomes Assessment

air
ASSOCIATION FOR INSTITUTIONAL RESEARCH

STUDENT AFFAIRS ASSESSMENT LEADERS

CAS
Council for the Advancement of Standards in Higher Education

AAC&U
Association of American Colleges and Universities

ACPA
College Student Educators International

NASPA
Student Affairs Administrators in Higher Education

SCUP
The Society for College and University Planning

3 Implementation Teams

Use Assessment Findings to Increase Equity

Make Assessment Findings Visible and Actionable to Drive Innovation

Use Assessment Findings to Drive Rapid and Equitable Improvements in Pedagogy

GCA Strategic Plan: G1 Rapid Pedagogical Improvement

- **Goal 1: Improve measurement of student learning over time**
  - 1.1 Identify measurement strategies to evaluate the impact of using assessment to effect pedagogical changes
  - 1.2 Promote strategies that effectively measure student learning over time

GCA Strategic Plan: G2 Rapid Pedagogical Improvement

- **Goal 2: Increase the use of assessment to guide rapid and equitable improvements in learning**
  - ***2.1:*** *Identify equitable assessment practices that guide rapid improvements in pedagogy*
  - **2.2:** Translate research to teaching practices that guide rapid pedagogical improvements
  - **2.3** Broaden the use of data-driven rapid improvements to pedagogy

Rapid = during a learning experience: semester/ quarter/course

Participant survey Q

Assessment Practices

- Adaptive Learning/Individualized Instruction
- Case-based Learning
- Formative assessment (e.g., 1min paper, concept map, quiz, discussion board)
- Feedback practices
  - Growth mindset/Process-focused
  - Peer
  - Self/Reflection (e.g., exam wrappers)
- Grading approaches
  - Anonymous grading
  - Competency-based learning
  - Rubrics
  - Ungrading
- High Impact Practices (HIPs)
  - Community-based learning
  - Course-based Undergraduate Research Experiences (CUREs)
  - ePortfolios (assignments prompting for metacognition and reflection)
  - Writing-intensive courses
- Learning analytics
- Team-based Learning
- Transparency in Teaching & Learning (TILT) - Purpose, Task, & Criteria focus
- Universal Design for Learning (UDL) - Alternative means of expression

How we are implementing the strategic plan

Across disciplines, strategies to enhance pedagogy during a semester can focus on those non-cognitive factors that all students experience

To provide recommendations for improvement across disciplines, we propose targeting **student self-efficacy**

Gibbons, R.E., Hokien, D., Hutson, B.L., Janio, J., & Maness, H.T.D. (2023). Making a Grand Contribution: Fostering Learner Self-Efficacy Is the Key to Rapid Learning Performance Gains. *Assessment Update*, *35*(4), 12-13. https://doi.org/10.1002/au.30357

Self-Efficacy: Meaning in Context

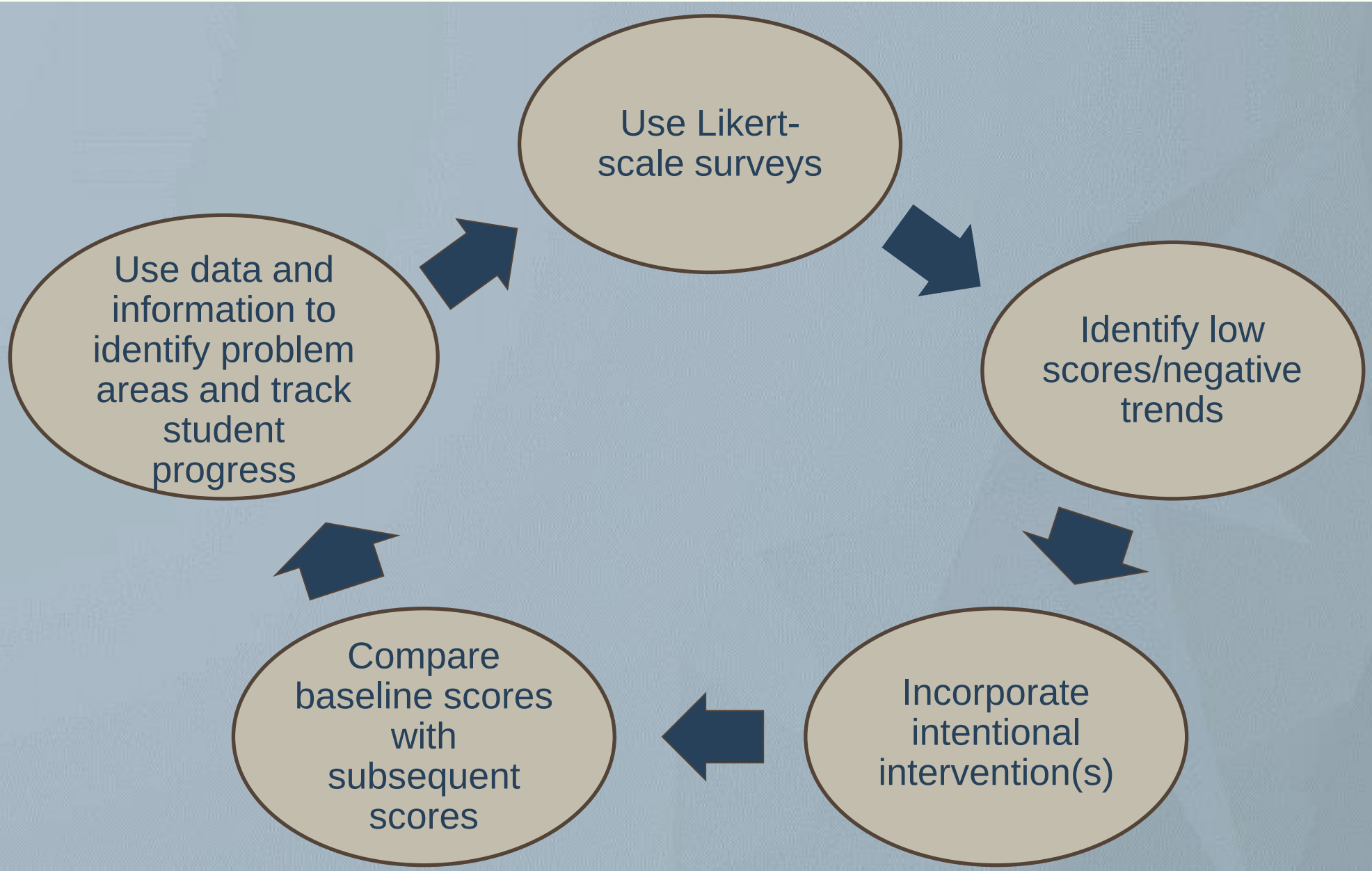
Formal Definition: The conviction that one can successfully execute the behavior required to produce the outcomes.

Functional Definition: Students' belief in their own ability to successfully achieve the learning outcomes.

Albert Bandura (1977, p. 193)

Measuring Self-Efficacy

Process Steps: Improving learning via self-efficacy



Self-Efficacy Measurement Tools

To improve content learning via improved self-efficacy, an instructor first must know what level of self-efficacy the students have.

Participant survey Q

What assessment tool(s) have you used to measure student self-efficacy in your classroom?

Measurement Example (Greco et al., 2022)

Academic Self-Efficacy Scale (30 items)

Rate: 1 (I am unable to do this) to 5 (I have complete confidence)

Survey Q examples: *How well can you…*

1. Keep exam anxiety under control
2. Raise your hand to ask the professor to explain parts of the lesson that you don't understand
3. Work together productively by defining specific goals and tasks
4. Keep with the study schedule you set up
5. Keep up continuous study habits throughout the school year
6. Start efficient study groups
7. Participate actively in in-class discussion
8. Glean and reprocess the essential points in a lecture
9. Organize your time in order to finish a paper by the deadline

Measuring Self-Efficacy: Strategies

Using the same >10-item survey, collect data on students' pre-instruction and post-instruction confidence levels to shape teaching practices

Pre-/Post-Learning: Measure self-efficacy before and after the learning context

Retrospective Pre/Post: Measures self-efficacy only ***after*** *the learning context; students self-assess from two viewpoints – BEFORE and AFTER instruction*

Pre-/Post-Course Measure

Pros

- Easy to implement
- Easy to interpret

Cons

- Snapshot insights only
- Inflated initial values due to “Illusion of knowing” (Glenberg et al, 1982)

Retrospective Pre-/Post-Course Measure

Pros

- Counteract inflated initial self-appraisals
- Increase accuracy of incoming self-efficacy to improve for future students

Cons

- More complex items for students to answer
- More accurate information does not come until after the learning context

Measurement Takeaways & Considerations

Student reflections, open-ended Qs, and quantitative survey data provide meaningful insights to responsive pedagogical refinement

Course instructors should carefully select their assessment approach to fit their assessment needs

Self-efficacy requires measurement with specific domains; instruments must provide actionable, situated data

Assessment of student self-efficacy can be a positive step toward rapid teaching adjustments (Drennan & Hyde, 2008)

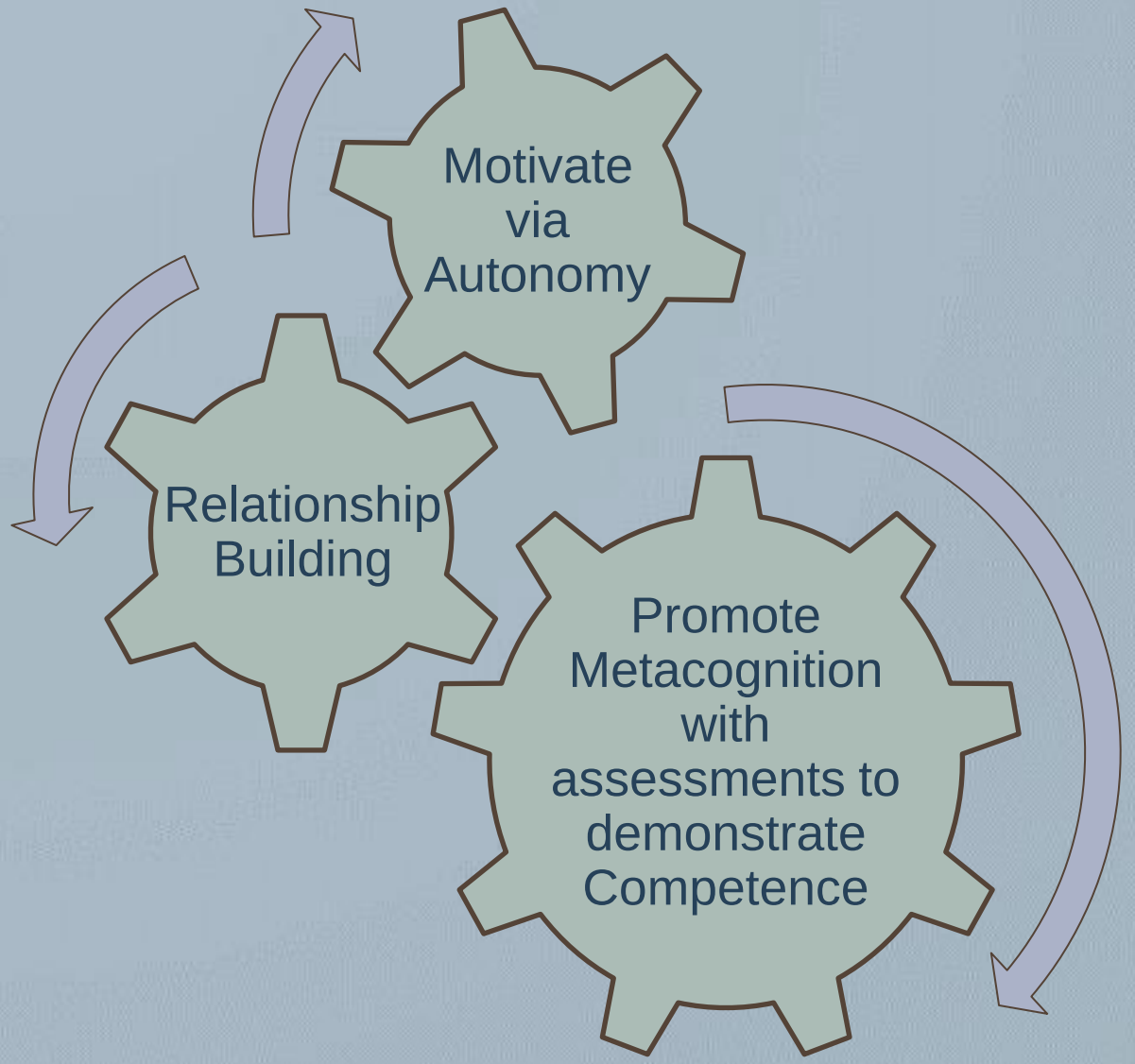
Now that we know the students' level of self-efficacy, we can move to the next step!

Participant survey Q

What teaching strategies do you implement in response to assessment data to try to improve student self-efficacy?

Selecting Interventions to Increase Self-Efficacy:
Examples Inspired by Self-Regulated Learning and Self-Determination Theory

Self-Efficacy: Develop Self-Regulated Learning



After understanding the students' current level of self-efficacy, we can increase student content learning by helping to increase the students' self-efficacy

What does is mean to build autonomy?

Autonomy is the freedom of choice within the learning environment; instructors build autonomy when they engage learning activities that activate students' intrinsic motivation, such as by allowing multiple demonstrations of knowledge.

How To Develop Autonomy (Ayllón, 2019)

Providing Learning Choices

Provide opportunity for students to select assignment topics and timing, when possible
Deliver content in various learning formats

Fostering Relevance

Involve students in decision-making about learning activities
Provide opportunities to reflect on their needs, resources, and values

Showing Respect

Involve students in decision-making about assessment methods
Use language that’s informational and solicit their perspective

Inspiring autonomy with Exam Wrappers

How did you prepare for this exam? How much time did you spend?

Reviewing preparation approaches and estimations of performance

Were your exam preparation strategies effective? Why or why not?

Analyzing successes, errors, strategy effectiveness, and knowledge gaps

How will you change your study strategies for the next exam? Be specific.

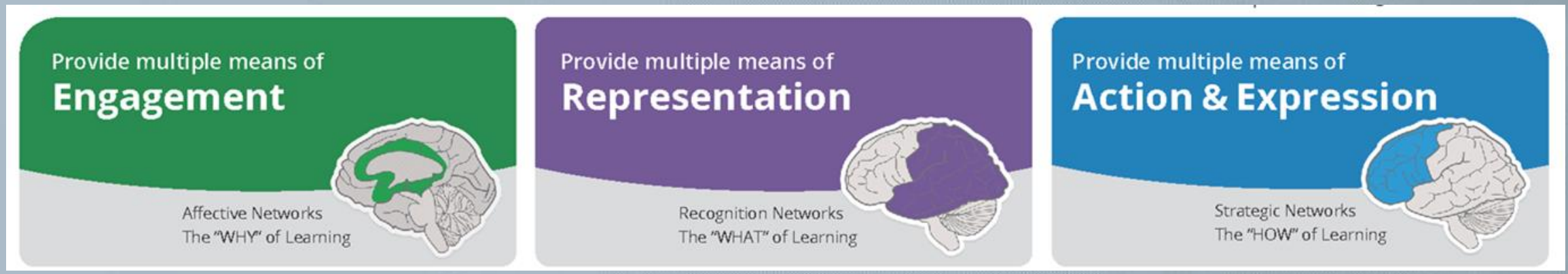
Setting specific goals and plans for the next assessment

Lovett, M. C. (2013). Make Exams Worth More Than the Grade: Using Exam Wrappers to Promote Metacognition. In Using Reflection and Metacognition to Improve Student Learning (pp. 18-52). Routledge.

Exam Wrapper Variations

- **Protocol deviations**
  - Not prompting for preparation reflection
  - Not returning the exam wrapper to the student
  - Post-only, no pre-exam reflection component
- **New additions**
  - Sharing/discussing with peers
  - SRL training
    - buy-in conversations
    - metacognition
    - note-taking/studying tips
    - strategic resource use exercise
  - Graded Assignment
    - required [variable nominal, %
    - earn points back on exam
    - extra credit
    - voluntary

Learn More about Autonomy!



Learn more about developing SRL via autonomy by using frameworks such as Universal Design for Learning

What does it mean to demonstrate Competence?

Competence is the students' ability to see that they have achieved a learning goal. Competence is a key component in building metacognition, as it requires tangible demonstrations of learning

How to Promote Competence

Frequent & Timely Feedback

Ensure students know their own level of achievement reasonably soon after demonstrating learning

Build assignments that allow students to reaffirm prior knowledge before moving to new content

Metacognition

Explicitly teach students how to consider their own level of attainment, especially when studying

Help students monitor their goals and achievement using exam wrappers

Scaffolding

Break down assignments into multiple attainable tasks

Confirm competence on the route to demonstrating overall achievement

Learn More about Competence!

Learn more about developing metacognition via competence by using frameworks such as the Transparency in Learning and Teaching Project (TILT!)

What does relationship-building mean?

The key to building strong relationships is creating a sense of connection, belonging, and positive interactions with the learning environment, including with both peers and instructors.

Where do you stand on building relationships?

Participant survey Q

How confident do you feel in creating a learning environment where students feel a sense of belonging?

How To Develop Relationships

Collaborative Learning

Small-Scale: Think-Pair- Share, Whiteboarding
Build collaborative projects with emphases on the shared goals of the group

Model Positive Relationships

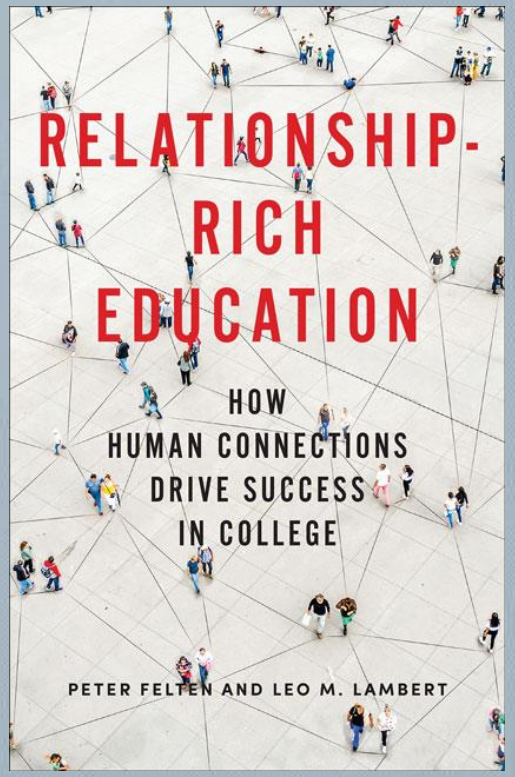
Use inclusive language when working with large groups, recognizing differences
Center empathy and respect, and students will follow your lead

Balance Technology Use

Consider half of office hours virtual to allow for those who cannot share physical space to feel included
Build online class environments that allow the conversation to continue when class is out

Learn More about Relationships!

Learn more about developing SRL via relatedness in “Relationship-Rich-Education: How Human Connections Drive Success in College” by Felten and Lambert



Authentic Assessment for Self-Efficacy

Beyond Assessment of Cognitive Skills

Assessment OF, FOR, & AS Learning

- Assessment of learning – assessing achievement based on standards (often summative)
- Assessment for learning – assessing learning progress to inform teaching and learning (often formative)
- Assessment as learning – student ownership of the integration of the assessment and learning process

Cognitive vs. Noncognitive

- Cognitive Skills - e.g., content knowledge, inquiry skills, critical reasoning
- Noncognitive Skills - e.g., self-efficacy, communication, teamwork

Authentic Assessment

Assessment as learning	beyond scripted classroom contexts
Application	of knowledge, competencies and attitudes through tasks in real-life professional setting
Embracing uncertainties	through open-ended problems and solutions
Iterative cycles	informing the evolvement of teaching and learning processes and capacity building
Student ownership of learning	for enhanced self-efficacy

Authentic Assessment Examples

Biology

- **CUREs** –
- authentic inquiry using seafood forensics based on DNA barcoding (Korzik, et al., 2019)

Geology

- **Makerspace** –
- design a physical, numerical, or computer model based on the experiment to address specific research questions (Plenge, et al., 2022)

Chemistry

- **Community-based service learning** –
- analysis of the concentrations of antioxidants in purslane through collaboration with community garden (Eskew, et al., 2023)

Challenges in Authentic Assessment Design and Pedagogical Implementation

Reliability	• Lack of known “correct” answers
Design	• Limited control by the instructors
Implementation	• Lack of standardization in the assessment process
Compliance	• Complexities in reporting student learning outcomes
Change	• Reluctance to move out of the comfort zone

Campus-wide Assessment Engagement (Hutson & Hogan, 2023)

Engaged Assessment Process

- Structure – boundary crossing
- Process – design-based
- Product – intentional data use
- Sustainability – mutual learning

Rubric Development

- Non-cognitive skill integration (e.g., self-efficacy)
- Feedback based on rubric
- Self-assessment and peer-assessment rubrics
- Rubric co-design

Learning Communities

Call to Action

Join us in conquering the challenge!

Volunteer with Grand Challenges in Assessment!

GCA Strategic Plan: G1 Rapid Pedagogical Improvement

- **Goal 1: Improve measurement of student learning over time**
  - 1.1 Identify measurement strategies to evaluate the impact of using assessment to effect pedagogical changes
  - 1.2 Promote strategies that effectively measure student learning over time

Seeking
- Institutional,
- Programmatic, and
- Course-level

data on measuring student learning through assessment practices

Complete the survey!

EQUITY

INNOVATION

IMPROVEMENT

EQUITY

INNOVATION

IMPROVEMENT

EQUITY

INNOVATION

IMPROVEMENT

EQUITY

INNOVATION

IMPROVEMENT

Grand Challenges in Assessment

in Higher Education

Questions?

GCA Website