Assessment that Connects with Institutional Performance Indicators to Advance Equity

Chat Conversation: What do you need to take away from this session?

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Please email mbrescia@sdsu.edu for these materials

- Good Practice Equity-Driven Outcomes-Based Assessment Framework

- Good Practice Criteria

- Examples of Equity-Driven High Achievement Performance Indicators that can also be used in Predictive Analytics [with Caution]

- Reflective Student Portfolio Instructions

For This Case Study:

Good Practice in an Outcomes-Based Framework:
Criterion Number One drawn from . . .
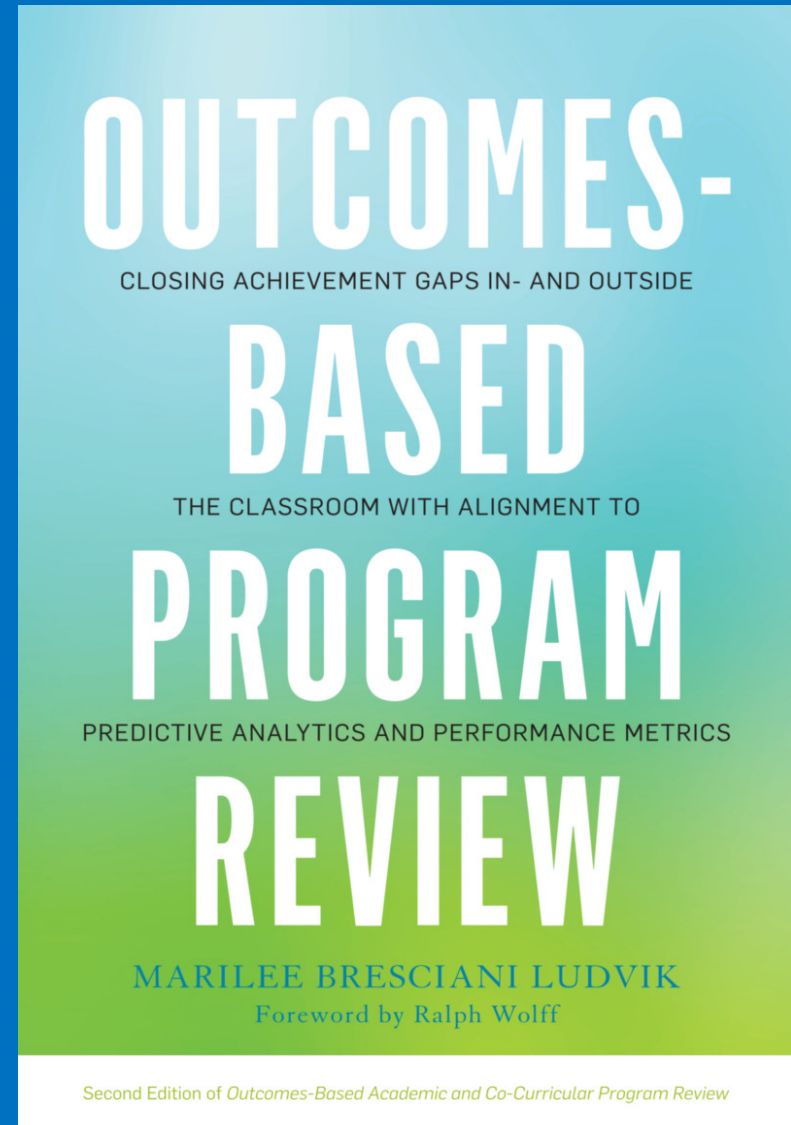
Good Practice in an Outcomes-Based Framework: Criterion Number One

1. While the institution may serve many purposes, **its primary priority is to demonstrate that it is a learning organization committed to human flourishing for all and to continuously investigating how it can improve high-quality student learning and development for all of the students it serves**.
   a. The institution embodies evidence that it is a learning organization, engaged in continuous collaborative and reflective inquiry and dialogue and finding ways to improve its inquiry and dialogue processes, as well as committed to the professional development of all of its people.
   b. There is notable differentiation in the processes used to collect and report for compliance purposes and in the use of that same data as well as OBPR data to inform decisions for improvement.
   c. Evidence of intentional cultivation of human flourishing for every being that is associated with the organization is apparent.
   d. Every meaningful piece of data is scrutinized and investigated for its system connections (e.g., connections across department/division lines).
   e. Authentic generative questions are posited to investigate where improvements can be made or to explore what other questions need to be asked.
   f. There is a passion to discover how to improve and a playful curiosity in discovering how to improve it.
   g. Evidence of a meta-assessment of the organization's own inquiry process or that it is continually researching how well it embodies a learning organization is present.
   h. The organization posits lines of institutional research inquiry and refines processes to better understand how well it is creating what was intended.

THEORETICAL CONTEXT SETTING: NEURODIVERSITY

Learning and Development are inextricably intertwined

Student Learning Imperative, 1996

Performance Metrics such as graduation rates, persistence rates, time to degree, matriculation into graduate school, and job placement

Easily Identified Learning through test scores and standardized exams
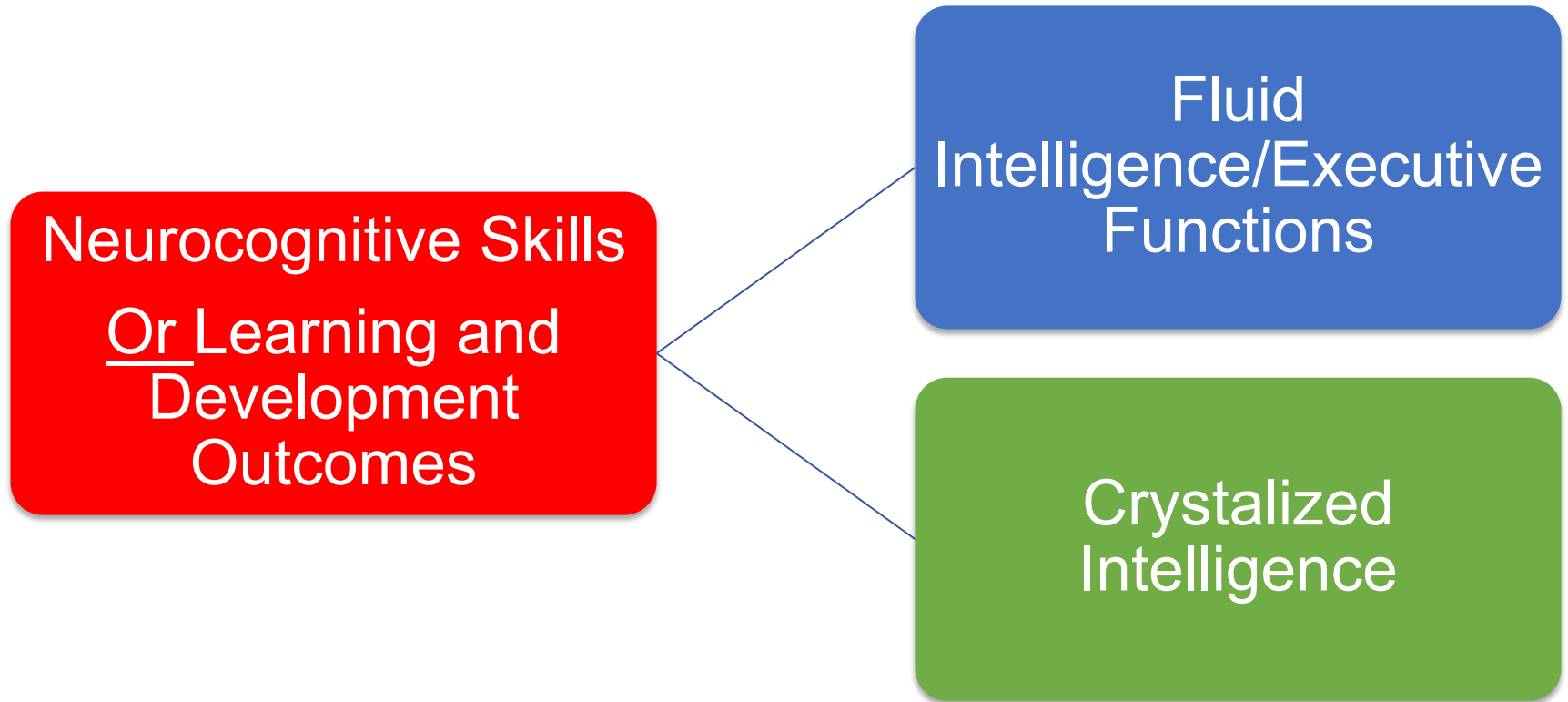
Application of skills such as:
- Attention Regulation,
- Emotion Regulation,
- Active Listening,
- Empathetic Listening,
- Growth Mindset,
- Resilience,
- Prosocial Behavior,
- Implicit Bias Regulation,
- Implicit Stereotype Threat,
- Empathy,
- Openness,
- Reflective Learning,
- Conscientiousness,
- Effortful Control,
- Academic Self-Efficacy, and
- Deliberate Problem Solving

Iceberg Analogy of Dispositional Learning
Adapted from Bresciani Ludvik (2019)

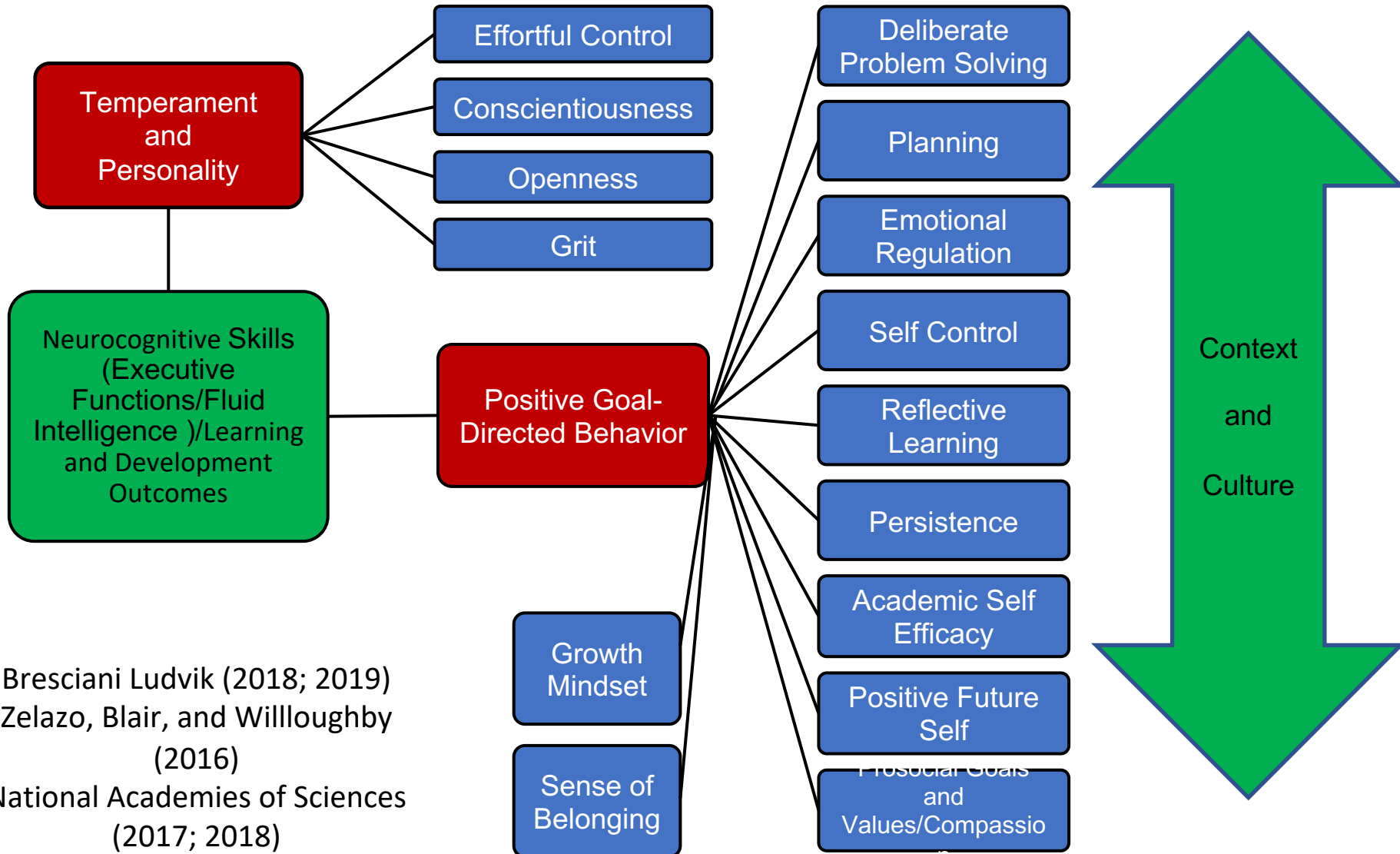# Learning and Development as
Neurocognitive Skills
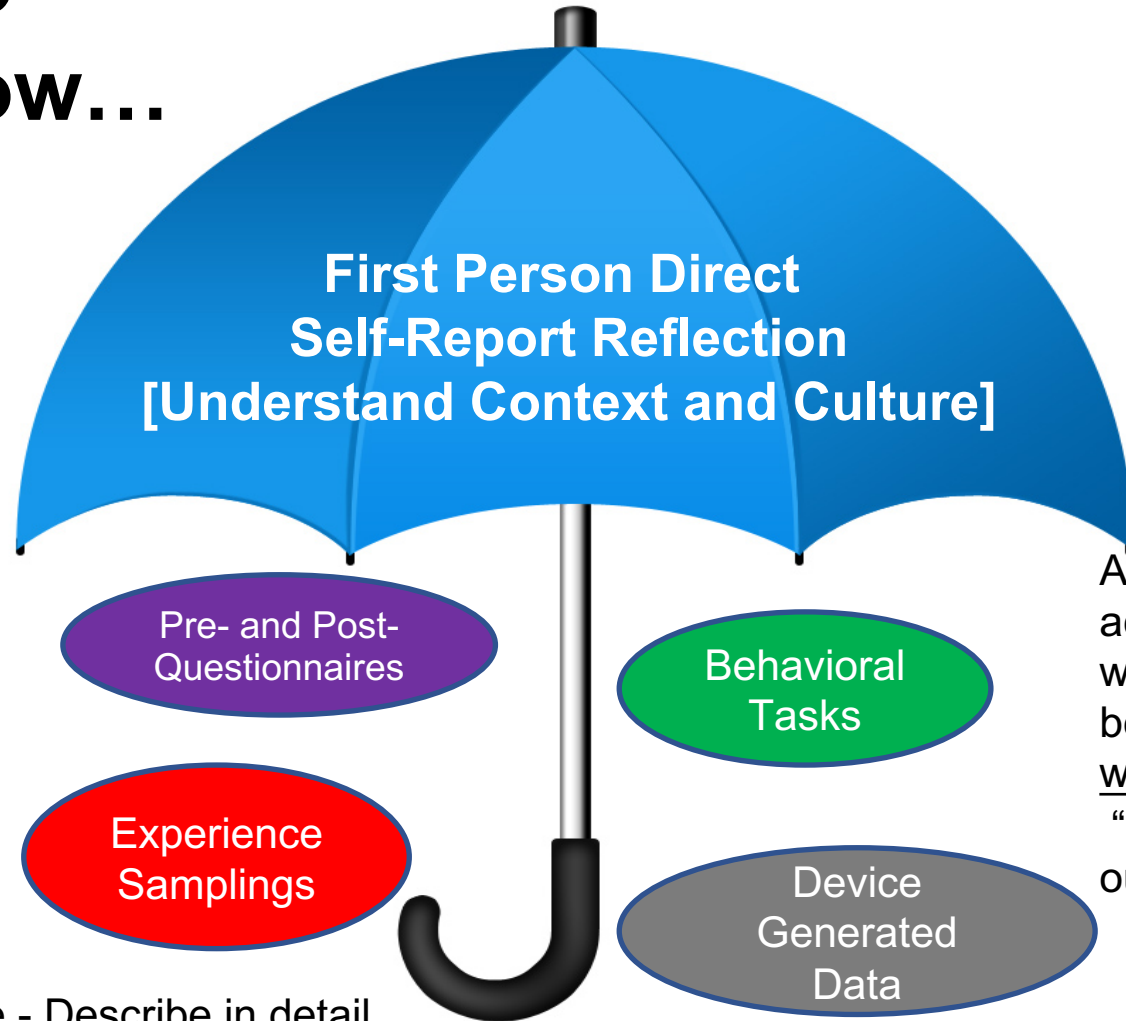(Bresciani Ludvik, 2018; Zelazo, Blair, and Willloughby, 2016)

Neurocognitive Skills

Or Learning and Development Outcomes

Fluid Intelligence/Executive Functions

Crystalized Intelligence

Map of Fluid Intelligence/Executive Functions to Specific Learning and Development Outcomes

Temperament and Personality

- Effortful Control
- Conscientiousness
- Openness
- Grit

Neurocognitive Skills (Executive Functions/Fluid Intelligence)/Learning and Development Outcomes

Positive Goal-Directed Behavior

- Deliberate Problem Solving
- Planning
- Emotional Regulation
- Self Control
- Reflective Learning
- Persistence
- Academic Self Efficacy
- Positive Future Self
- Prosocial Goals and Values/Compassio

Growth Mindset

Sense of Belonging

Context and Culture

Bresciani Ludvik (2018; 2019)
Zelazo, Blair, and Willloughby (2016)
National Academies of Sciences (2017; 2018)

How Do We Know…

**First Person Direct
Self-Report Reflection
[Understand Context and Culture]**

Examples include: BAI; PSS; FFMQ; MDCS, etc

Pre- and Post-Questionnaires

Behavioral Tasks

Experience Samplings

Device Generated Data

Assessed activity/assignment where behavior can be observed either <u>within</u> the designed "intervention" or outside of

Reflective Practice - Describe in detail where emotion regulation was experienced – <u>within</u> or outside the designed "intervention" and 360 observations

Not Applicable Here

(Bresciani Ludvik, 2020)

Emphasizing Equity
(Bresciani Ludvik et al., In Press)

- Neurodiversity teaches us that not all students learn and develop in the same ways; it as an absolute truth!

- Pre-post-equity institutional indicators (aka Intrapersonal Competencies) help us identify who needs more or less alternative methodologies

- When in doubt, ask the students what they would love to share with you or observe them "doing" what they love – there are clues for us in all of that

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3. Write your answer and submit!

4. We'll show the results so you can see how your peers answered.

Participant Critique and Application

- Based on the science of learning and development, how do you see your institution applying Criterion 1 to provide evidence that your "There is notable differentiation in the processes used to collect and report for compliance purposes and in the use of that same data as well as OBPR data to inform decisions for improvement"?

Participant Critique and Application, Cont.

- Where are your opportunities to gather authentic student voice to inform your data analytics and performance indicators?

Context of Case Study

The University needed to repair inequities with Commuting students who historically were largely first-generation, URM, and Pell-eligble

- This led to the creation of several interventions

Commuter Life Evolution and Interventions

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Overarching Learning Community

Peer Academic Mentoring

Co-Enrollment in Three-Unit GE Course

One-Unit Supplemental Discussion

GENS 100A

One-Unit Seminar
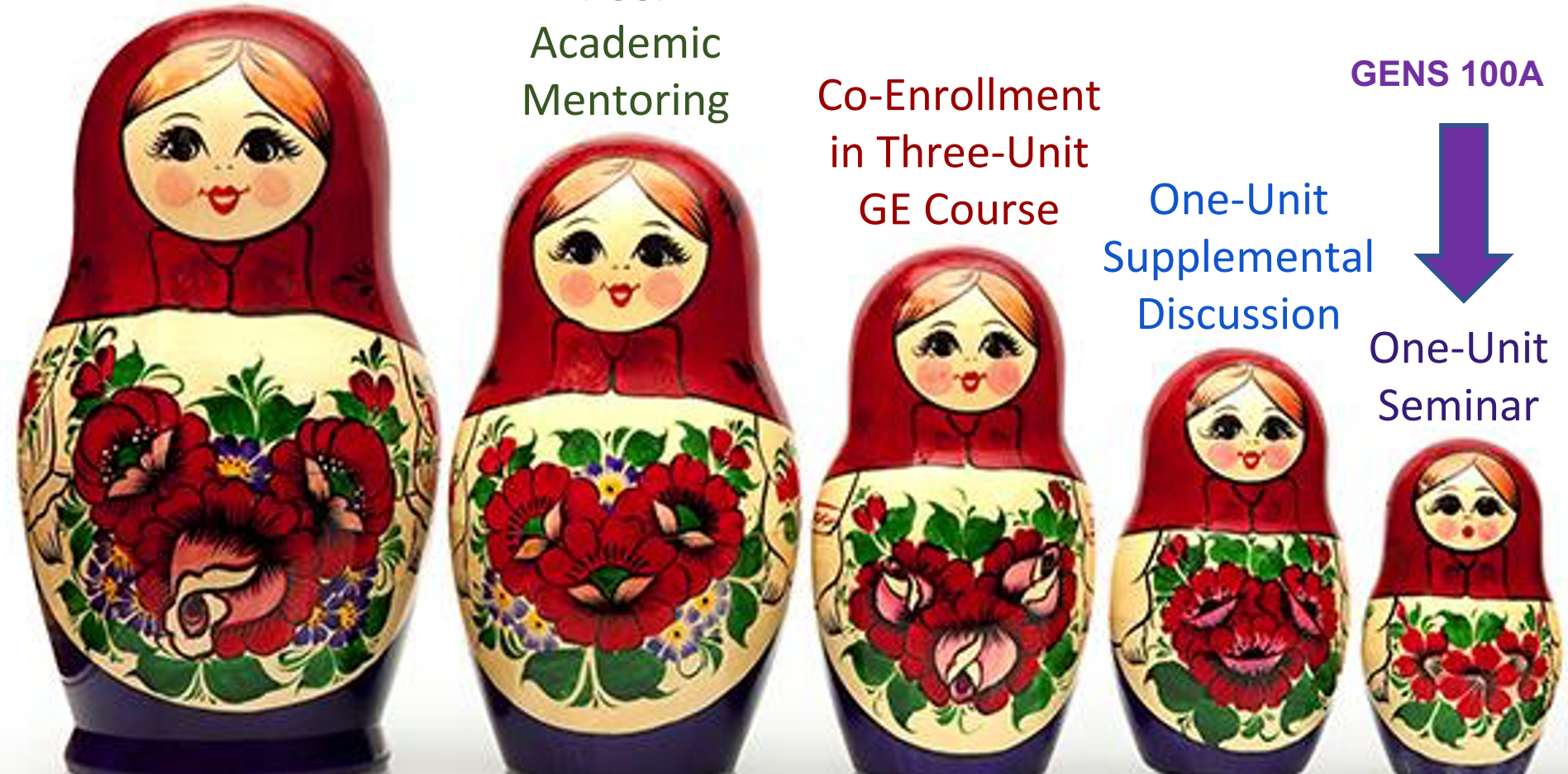
Fall 2018 Redesign
of One-Unit Seminar

- Flipped the Classroom

- Collaborated with faculty and staff experts across the campus to redesign this experience

- Put forward many of the people who cared

- Put forward a variety of faces and lived experiences with whom to connect

- Enhanced the Learning Community for the Course Instructors (PELSA Graduate Students) and provided them with weekly support

Fall 2018 Redesign Data Collection Strategies

First-Person Direct Self-Report Reflections
- Journal Entries
- Focus Groups
- Survey of Students' Perspective on the Seminar

Other Data
- Instructor Observations
- Survey of Instructors' Perspective on the Seminar
- Program Coordinator notes from meetings with students (indirect student voice)
- Pre- and Post-Assessment Inventories (e.g., sense of belonging, psychological well-being, metacognitive awareness, anxiety, leadership)

Comparison Groups to Check for High Achievement for All

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Within Group and Across Group Comparative Analysis of Pre- and Post-Equity Indicators

Groupings:

1. **GENS 100 A – Commuter Life (n=87)**

2. GENS 100 B – Commuter and Residential Life with additional interventions (n=61)

3. ARP 296 – Leadership Minor (n=20)

4. Residential Life (No University Seminar) (n=129)

Pre/Post Equity Measure Findings

(p = 0.05; analysis by Potter & Kahn in collaboration with Bresciani Ludvik, Timm, and Monzon)

1. **GENS 100A Commuter Life:** *Sense of Well-Being (ONS)* .

2. GENS 100B Commuter and Residential Life:
   - *Sense of Belonging*
   - Perceived LO Achievement
   - *Autonomy (Ryff's PWB)*

3. ARP 296 Intro To Leadership:
   - *Metacognitive Awareness*
   - *Sense of Belonging*
   - *Perceived LO Achievement*
   - *Autonomy (Ryff's PWB)*

1. **GENS 100A Commuter Life:**
   - *Purpose in Life (Ryff's PWB)*
   - *Environmental Mastery (Ryff's PWB)*

2. ARP 296 Intro. to Leadership:
   - *Environmental Mastery (Ryff's PWB)*

3. Campus Residents:
   - *Personal Growth (Ryff's PWB)*

> *Green: 0.20 - 0.44 Effect Size*
> *Black: 0.45 - 0.79 Effect Size*

Controlling for Pre-Test Score and Sub-divided by First Gen, URM, Gender, and Pell = Pell recipients

(p = 0.05; analysis by Potter & Kahn in collaboration with Bresciani Ludvik, Timm, and Monzon)

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1. **Leadership:**
   - *ARP 296 – Intro to Leadership*
   - *GENS 100B*

2. **Autonomy (Ryff's PWB)**
   - *ARP 296 – Intro to Leadership*
   - *GENS 100B*

3. **Personal Growth (Ryff's PWB)**
   - *GENS 100A*
   - *GENS 100B*

4. **Positive Relationships (Ryff's PWB)**
   - *GENS 100B*

1. **Leadership**
   - *Campus Residents*
   - *GENS 100A*

2. **Autonomy (Ryff's PWB)**
   - *Campus Residents*

3. **Personal Growth (Ryff's PWB)**
   - *Campus Residents*

4. **Positive Relationships (Ryff's PWB)**
   - *ARP 296 – Intro to Leadership*
   - *Campus Residents*

Relationship of Measures to First-Semester GPA

(p = 0.05; analysis by Potter & Kahn in collaboration with Bresciani Ludvik, Timm, and Monzon)

- Spearman Correlation between **GPA** and Equity Measures were **significant for:**

  ➢ *Metacognitive Awareness*

  ➢ *Environmental Mastery* – Ryff's Psychological Well-Being

  ➢ *Personal Growth* – Ryff's Psychological Well-Being

  ➢ *Purpose in Life* – Ryff's Psychological Well-Being (p=0.01)

Relationship of Measures to First-Semester GPA

(p = 0.05; analysis by Potter & Kahn in collaboration with Bresciani Ludvik, Timm, and Monzon)

- *Perceived LO Achievement*, *Environmental Mastery* (Ryff's PSW), and *Metacognitive Awareness* were significant predictors of GPA controlling for other academic preparedness variables

- Only demographic variable that significantly predicted GPA was gender (females higher)

- **Residential students** continue to have a higher GPA than commuting students

- **ARPE 296** students had a higher GPA than those not enrolled in ARPE 296

Inquiry Model to Ascertain how Context and Culture Influence Students'/Organizational Learning and Development

(Ludvik Bresciani, 2020)

- Examine Institutional Performance Metrics/Indicators To Identify Equity Gaps
- Collect Pre-assessment Learning Disposition (NCS) Data, Align with Career Readiness Skills, and Disaggregate Findings
- Articulate Student Learning and Development Outcomes for Learning Disposition/NCS/Career Readiness Interventions/in- and Out-of-Class Experiences
- Offer Diverse Interventions to Specific Students
- Collect Students' First Person Direct Self-Report of the Experience
- Collect Outcomes – Based Measures
- Collect Post-Assessment Learning Disposition (NCS) Data
- Run Inferential Analysis to determine which Learning Dispositions (NCS) are Significantly Correlating with which Institutional Performance Indicators
- Interpret - What underlying institutional mental models, beliefs, values and behaviors are contributing to these findings?
- Apply - Who specifically needs more or less or different opportunities to learn and develop?

Participant Critique and Application

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- What portions of the design of this one-unit course and its assessment would work well for you to adopt and adapt at your institution?

Participant Critique and Application, Cont.

- Where are your opportunities to gather authentic student voice to inform your data analytics and performance indicators that are also based on the science of learning?

These Findings Have Informed . . .

- **Fall 2019:**
  - ➢ Continued refinement of one-unit USEM course
  - ➢ Expanded Course Instructor training/support
  - ➢ Inclusion of shared reflection using weekly academic planner
  - ➢ Expansion to other colleges to join an expanded pilot
  - ➢ Inclusion of additional pre- and post-questionnaires
- **Fall 2020:** Course proposal for three-unit USEM with GE Area E designation (supported by large majority of GENS100A/B students)
  - Fully online
 - Random Forest, Cluster Analysis, and Regression

These Findings Have Revealed a Need for. . .

- Continued and expanded dialogue and collaboration across campus, such as:
  - ➢ General: *Does the broader campus value these neurocognitive skills (aka learning dispositions) and equity indicators?*
- Strategic implementation of pre- and post-seminar surveys:
  - ➢ Leverage In-College Shape and final seminar session to increase sample
  - ➢ Leverage survey technology to optimize transparency and randomization
- Increased infrastructure for data collection, processing, and analysis
- Effective project management software for coordination/collaboration, confidential data sharing, and note keeping (e.g., Asana, Trello, etc.)
- Development of systematic solution for tracking meaningful engagement in various intervention opportunities
- FTE-based and other resources to sustain/expand this "First-Year Experience"

Questions and Comments
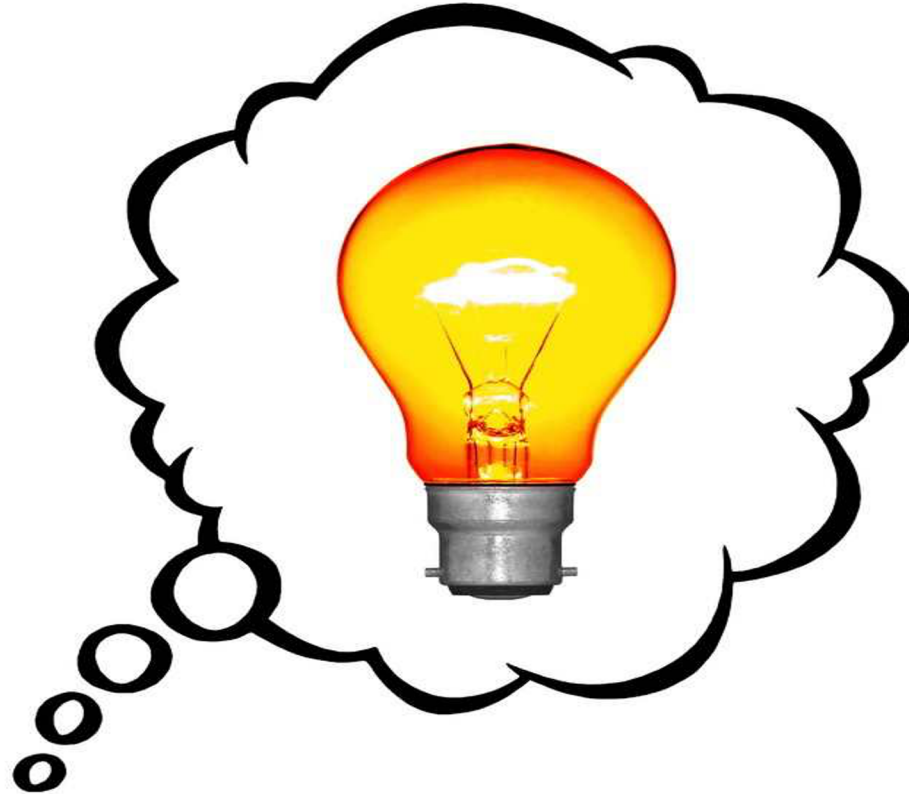
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Foreword by Ralph Wolff

OUTCOMES-
CLOSING ACHIEVEMENT GAPS IN- AND OUTSIDE
BASED
THE CLASSROOM WITH ALIGNMENT TO
PROGRAM
PREDICTIVE ANALYTICS AND PERFORMANCE METRICS
REVIEW

MARILEE BRESCIANI LUDVIK
Foreword by Ralph Wolff

Second Edition of *Outcomes-Based Academic and Co-Curricular Program Review*