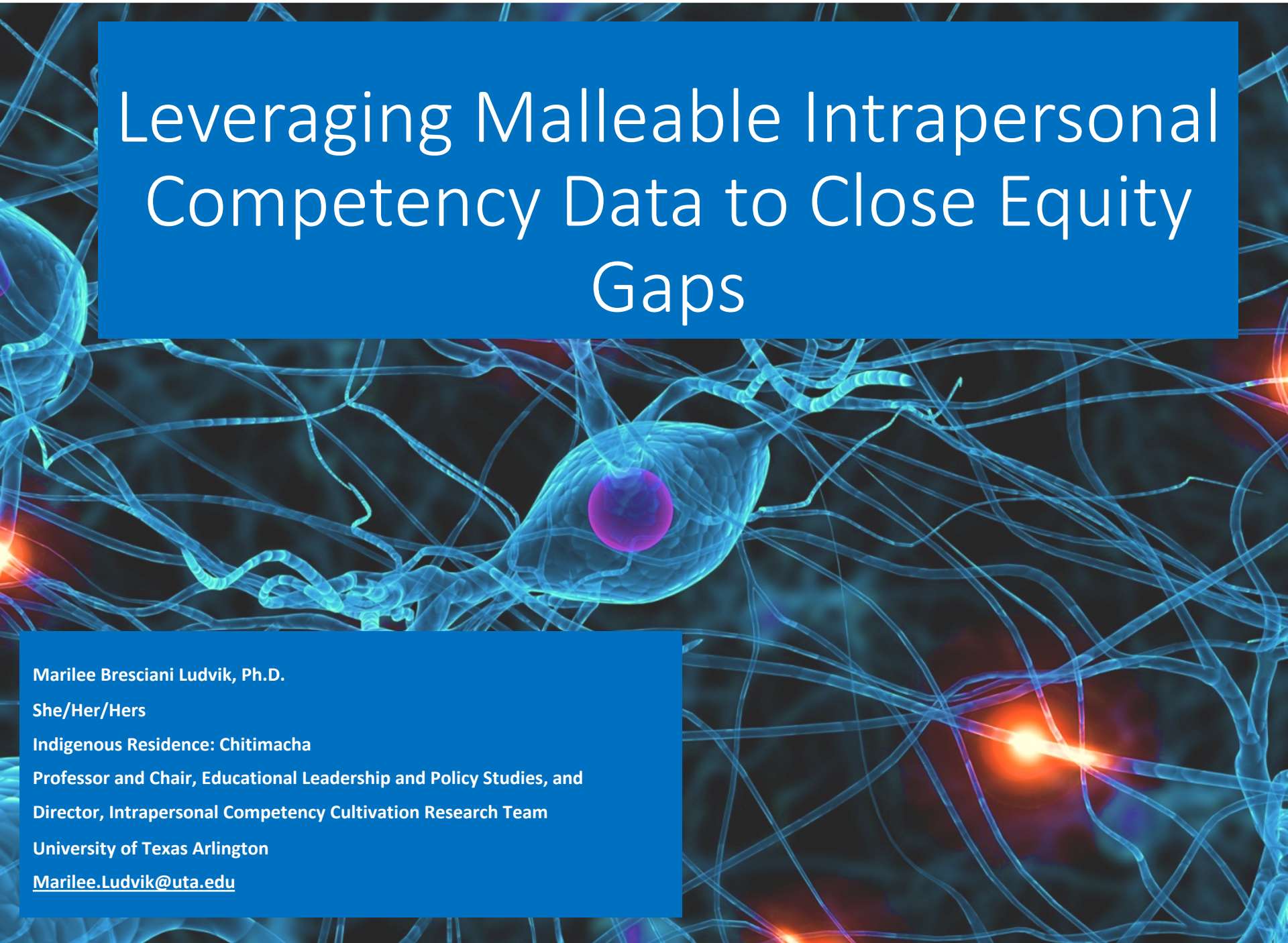
Leveraging Malleable Intrapersonal Competency Data to Close Equity Gaps



Marilee Bresciani Ludvik, Ph.D.

She/Her/Hers

Indigenous Residence: Chitimacha

Professor and Chair, Educational Leadership and Policy Studies, and

Director, Intrapersonal Competency Cultivation Research Team

University of Texas Arlington

Marilee.Ludvik@uta.edu

Thank you to the Whole Team

From University of Texas Arlington

Marilee Bresciani Ludvik
Kimshi Hickman
Catherine Robert
Amanda Olsen
Nasima Subedi
Haein Won

Pete Smith
Elizabeth Powers
Henry Anderson
Farhan Fahim
Ashley Purgason
Denisse Avila
Mitch Strahlman
Danielle Klein

From SDSU:

Stephen Schellenberg
Sandra Kahn
Nina Potter
Rey Monzon (In Memoriam)
Randy Timm
Lisa Gates

From UT Health Sciences Center:

Shiming Zhang

What drew you
To this workshop?

Session Learning Outcomes

- *explain how the assessment of intrapersonal competencies can be integrated into their current data analytic processes*
- *posit questions and identify key stakeholders needed on their own campuses to engage in dialogue intended to close achievement gaps and improve career readiness skills using this intrapersonal competency analytic approach*

Session Overview

Mini Lecture

Reflection Questions and Comments

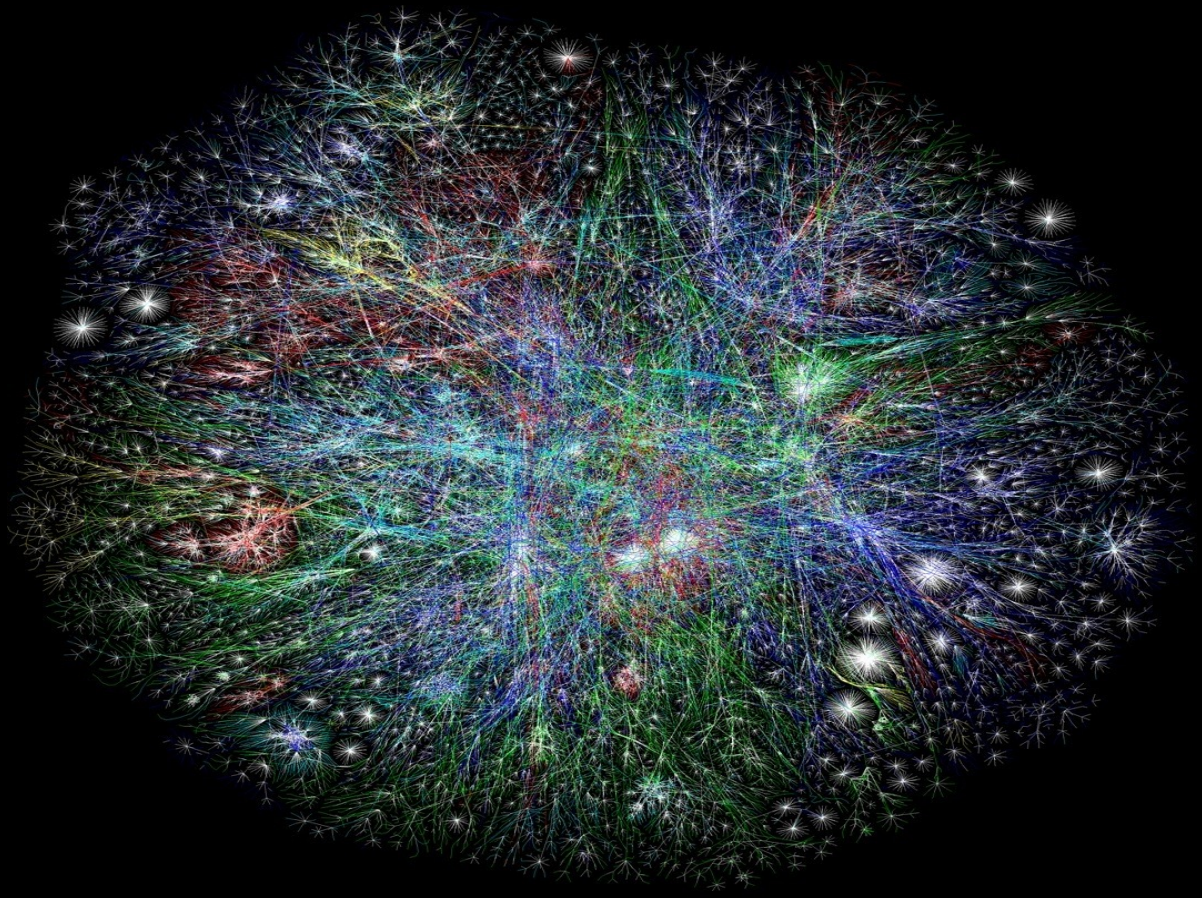
THEORETICAL CONTEXT SETTING:

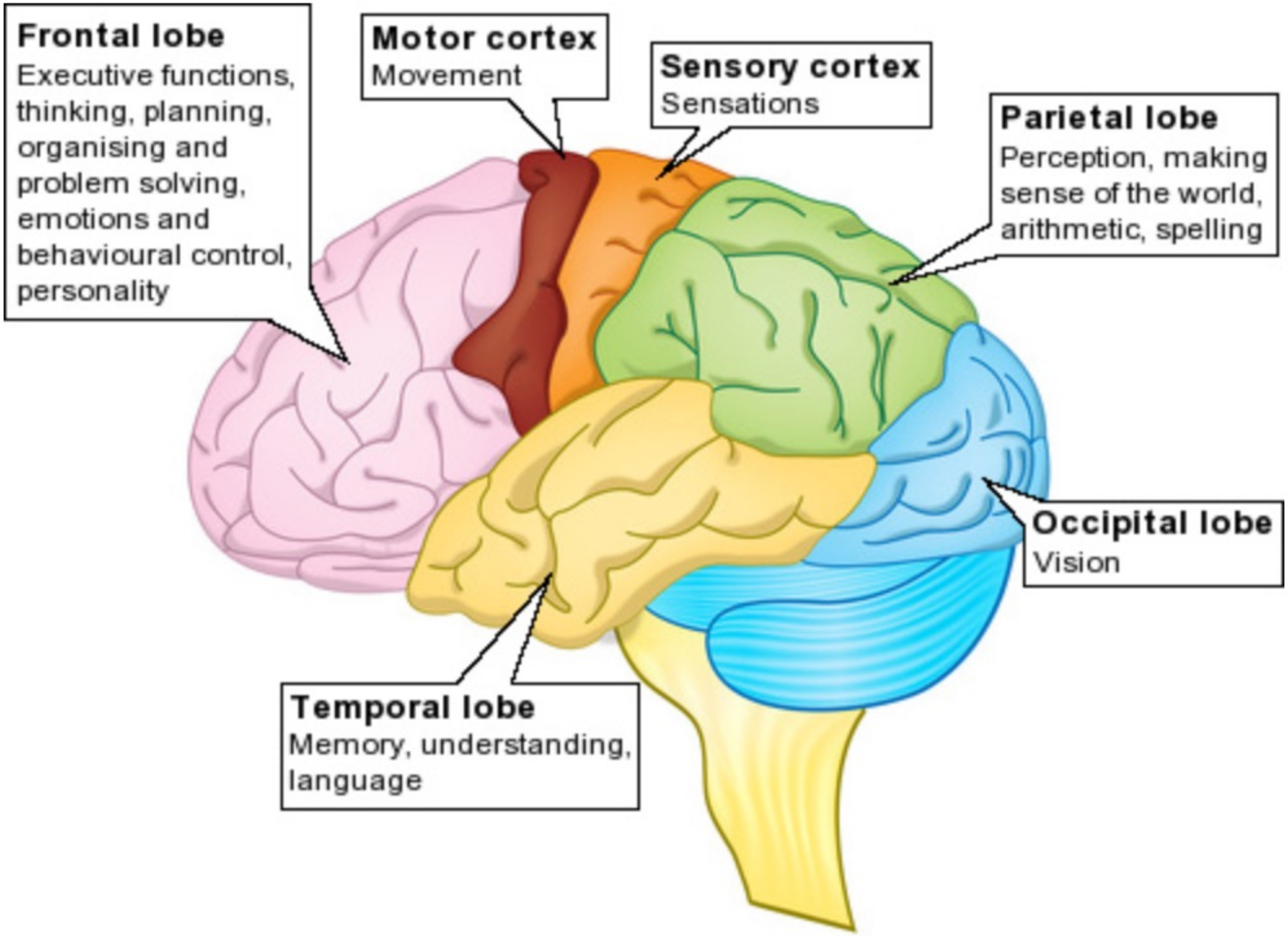
Learning and Development are inextricably intertwined

Student Learning Imperative, 1996

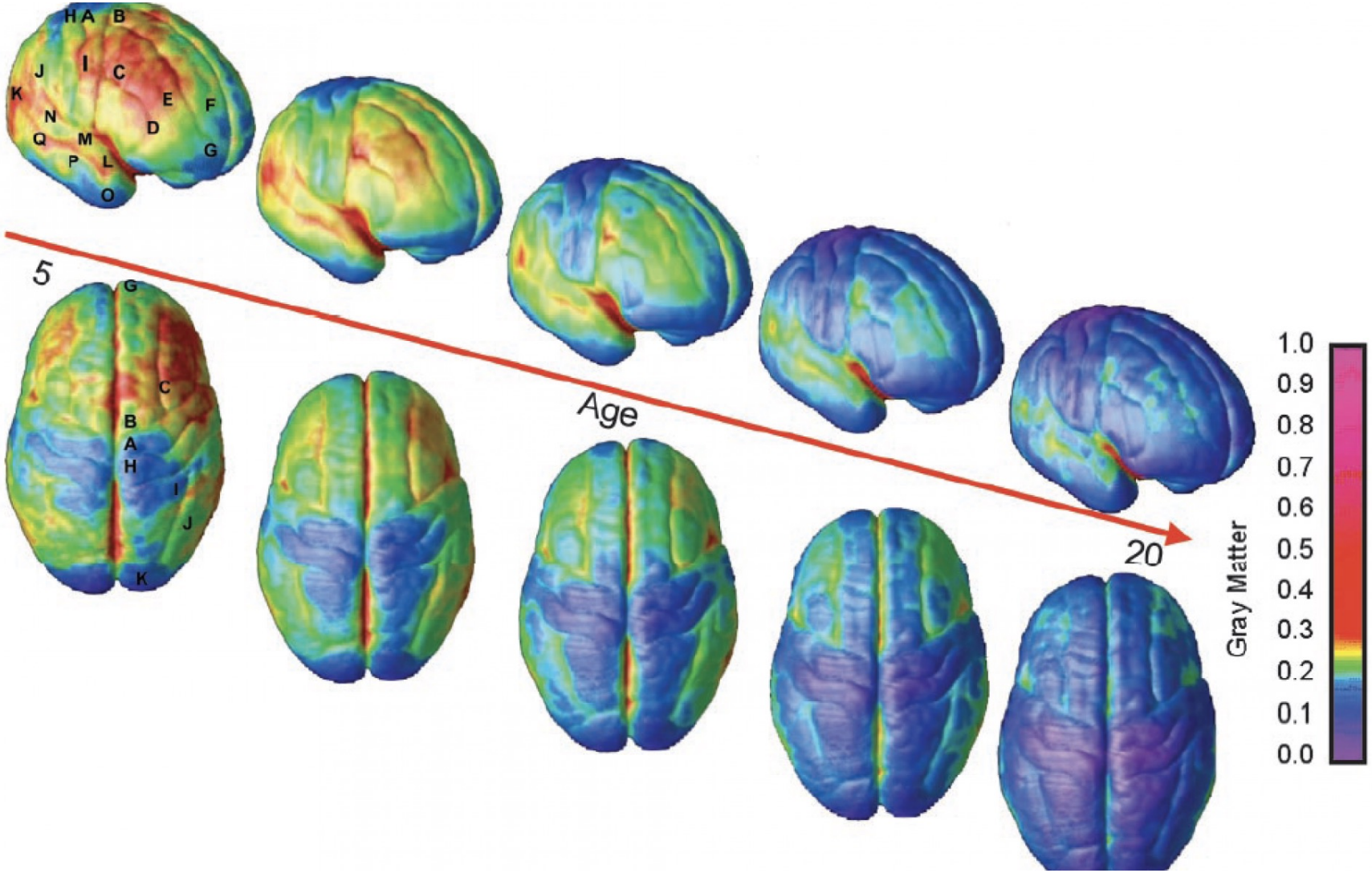
“When we try to pick out anything by itself, we find it hitched to everything else in the universe.”

- John Muir




Frontal lobe
Executive functions, thinking, planning, organising and problem solving, emotions and behavioural control, personality
Motor cortex
Movement
Sensory cortex
Sensations
Parietal lobe
Perception, making sense of the world, arithmetic, spelling
Occipital lobe
Vision
Temporal lobe
Memory, understanding, language

Connectivity and Neural Development of a Typically Developing Brain



Typical Developing Brain Keys

Optimal Neural Development

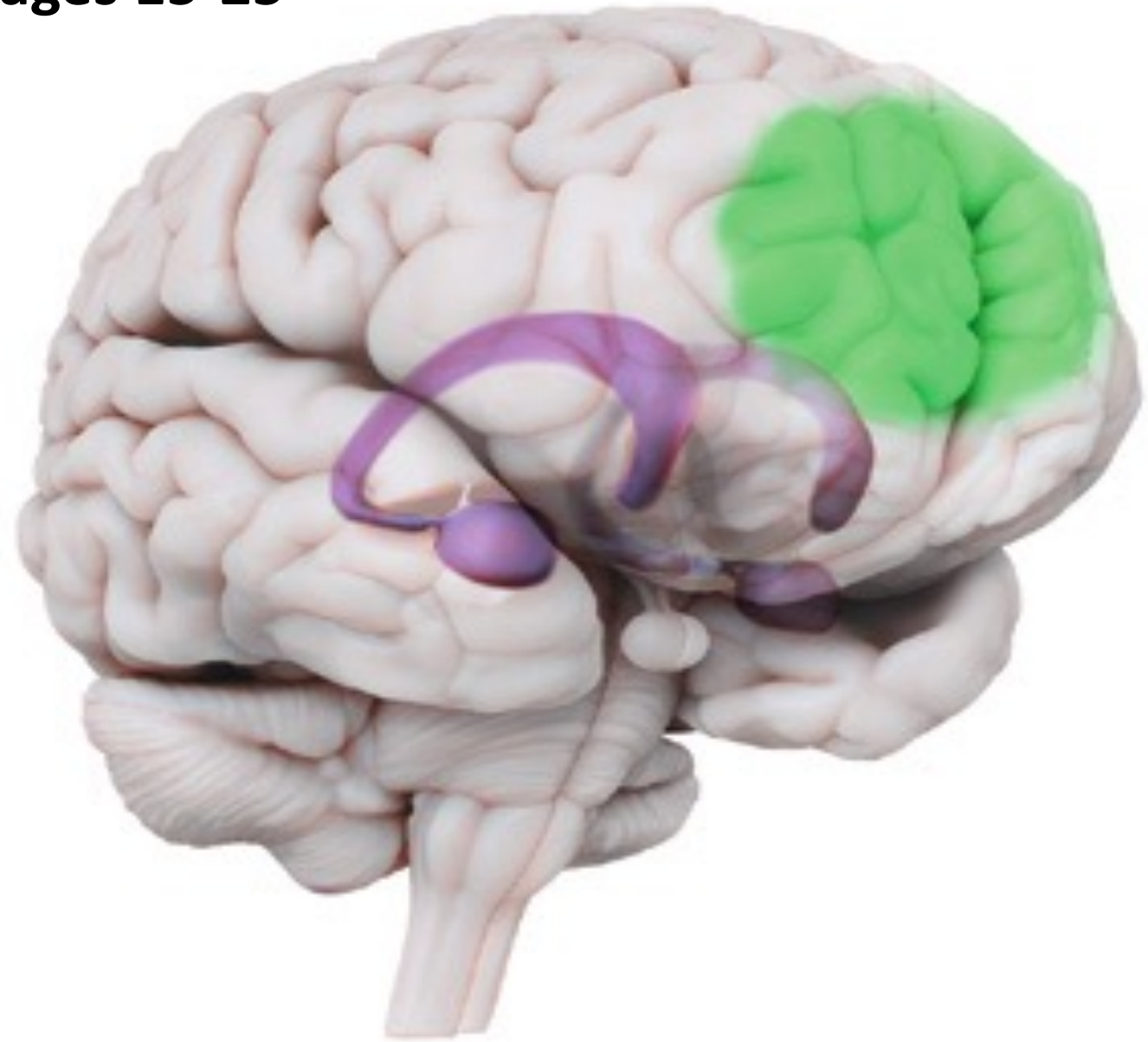
- Ages 0-2-ish
- Ages 16-20-ish

Neural Pruning Quickly Follows

- Neural connections are strengthened or pruned away
- Environment influences pruning
- Choice influences pruning

Typically Significant Developmental Mismatch
between ages 15-25

(Giedd, 2015)



Context and Culture Matter

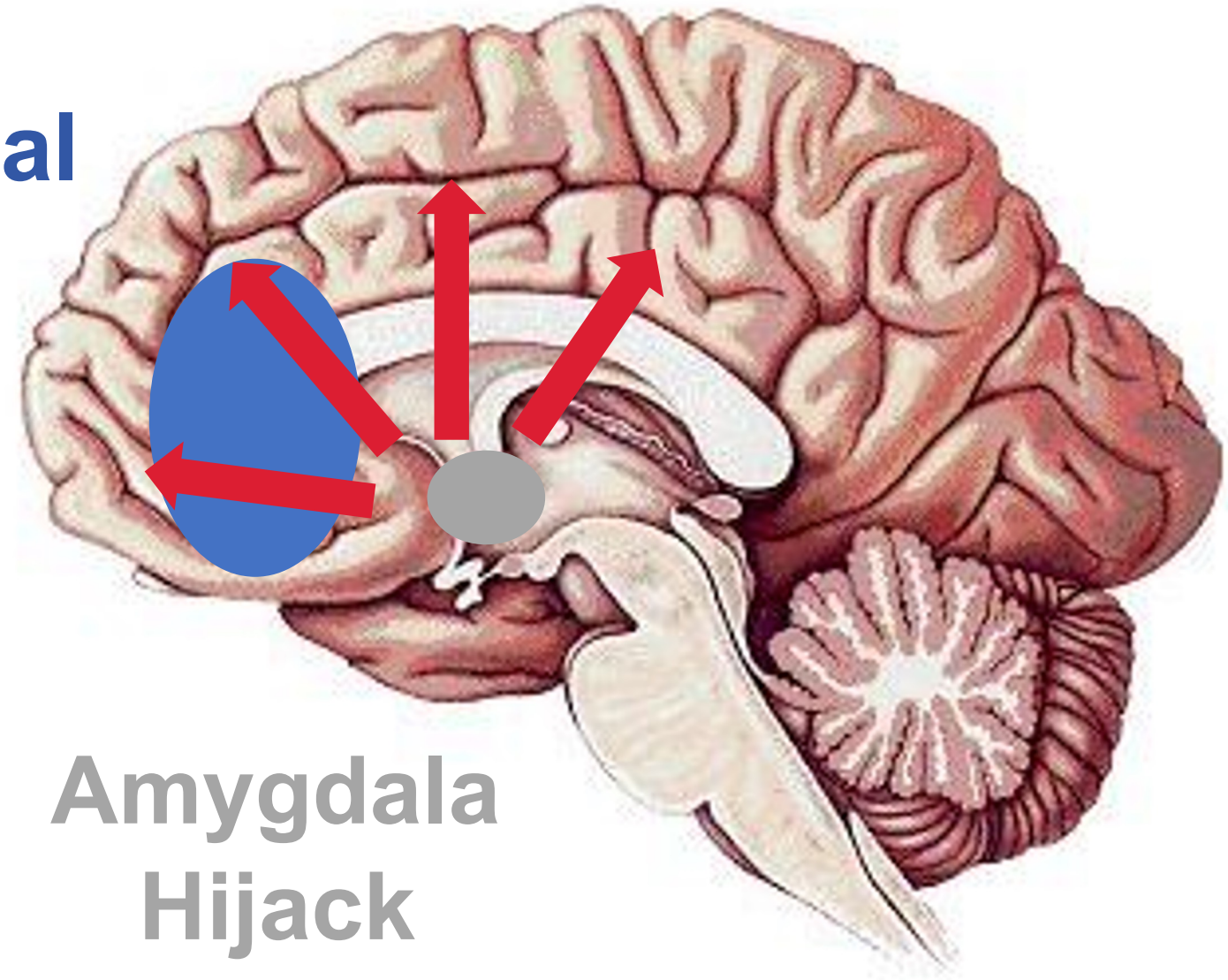
Pandemic has already had a negative effect on students' mental health and well-being

(Duckworth et al, 2021; Camacho-Zuniga, et al, 2021; Baloran, 2020)

Global
Pandemic
Brain is in
Survival Mode

Hijack

Prefrontal Cortex



Amygdala Hijack

Typically Significant Developmental Mismatch
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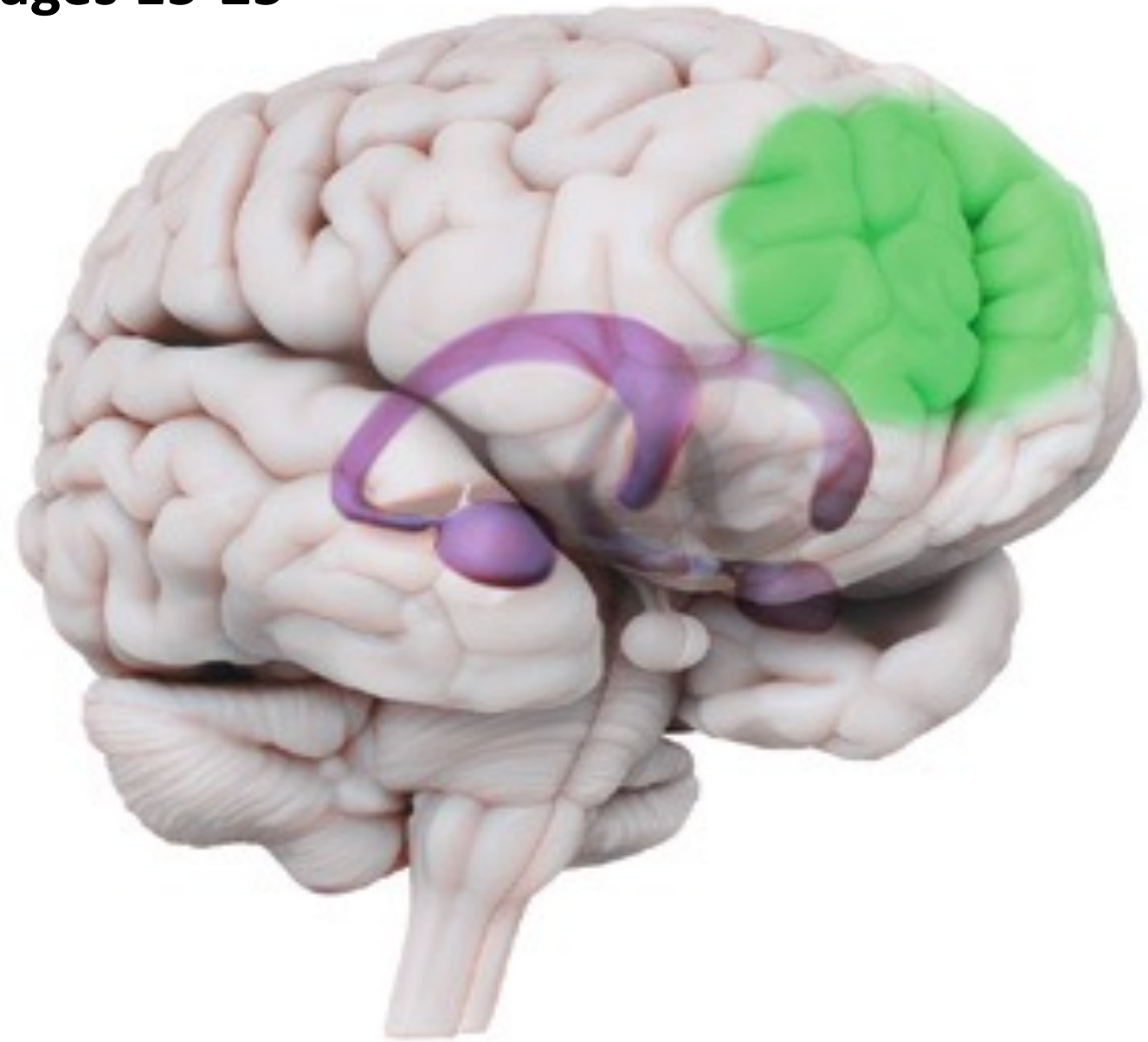


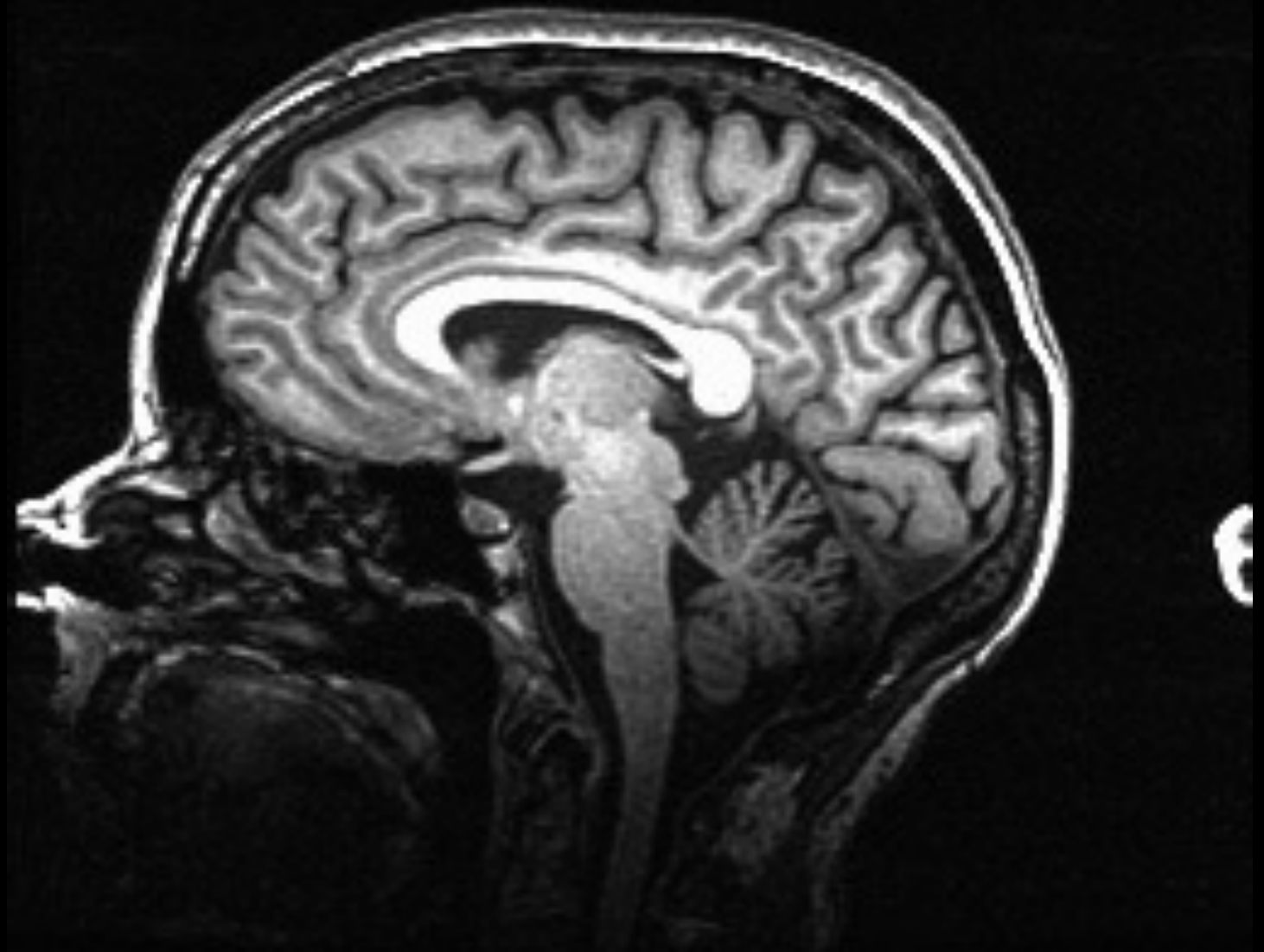
Emotional Awareness

Emotions Play a Role in Regulating our Decisions

…Whether we are aware of them or not!

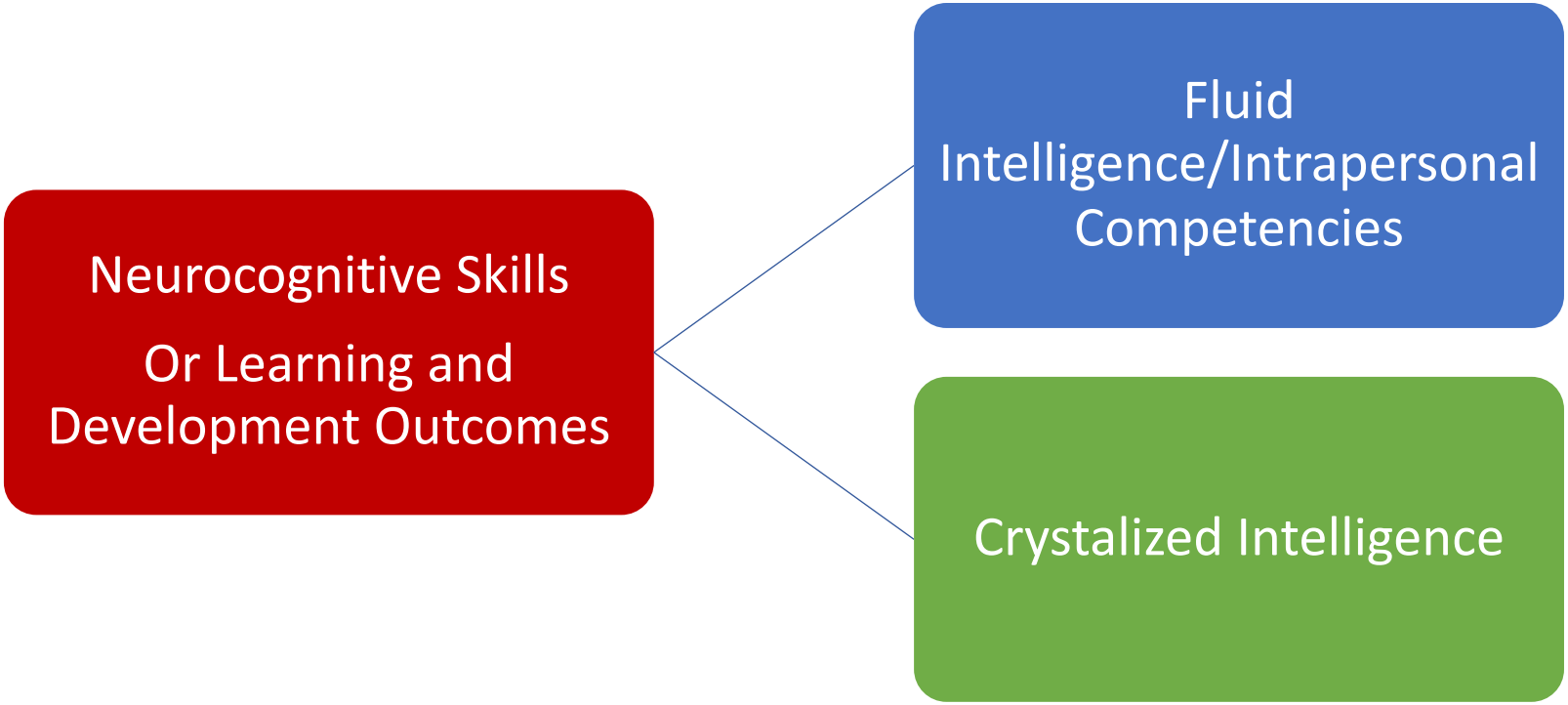
- Antonio Damasio

NEUROPLASTICITY

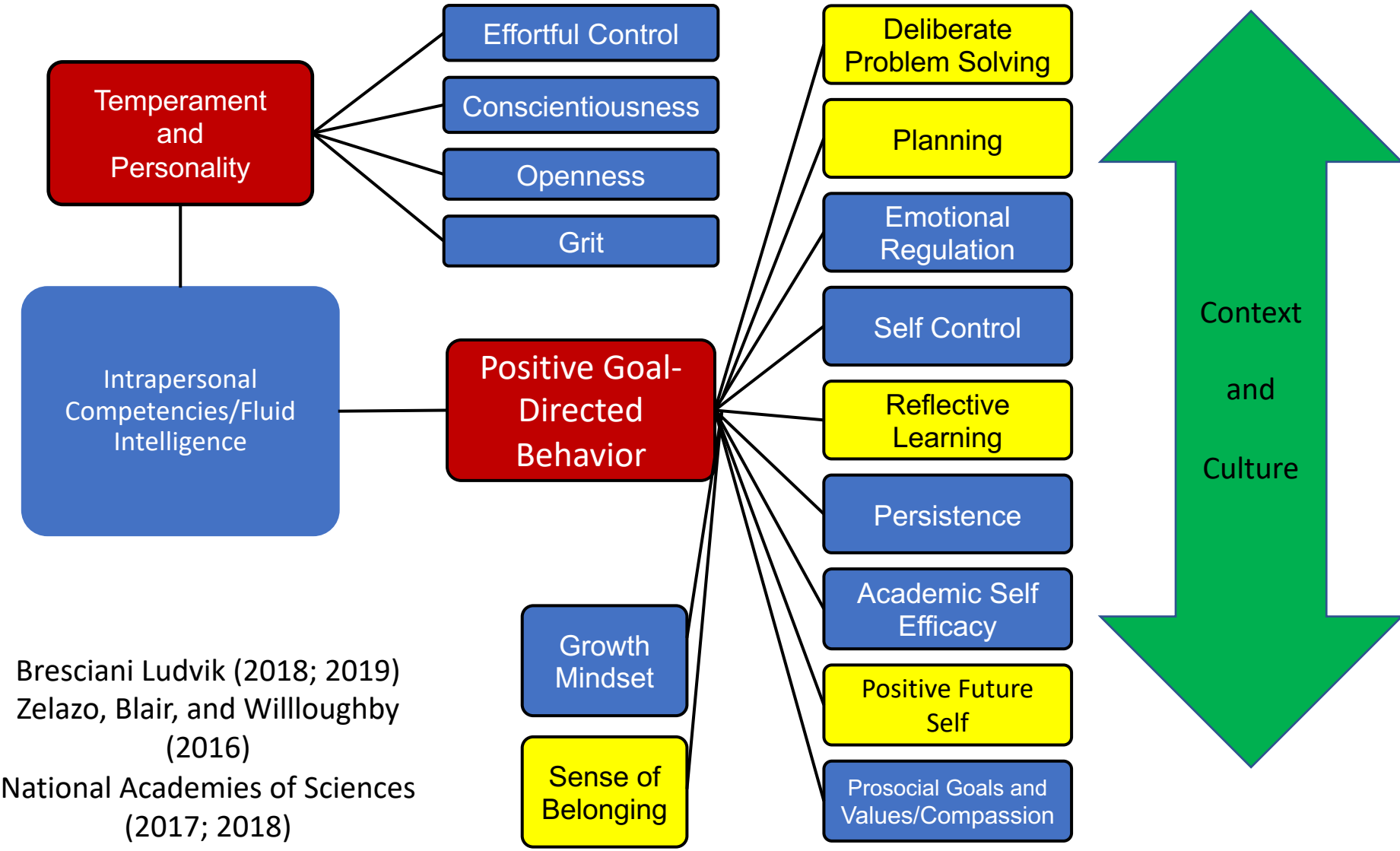


Learning and Development as Neurocognitive Skills

(Bresciani Ludvik, 2018; Zelazo, Blair, and Willloughby, 2016)

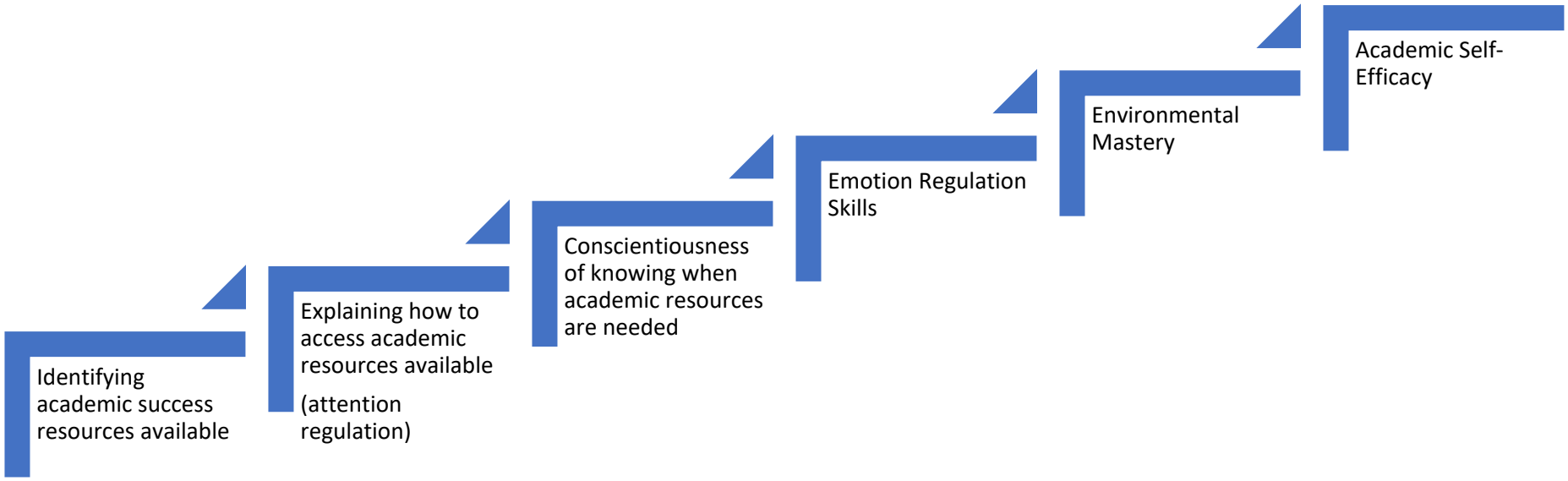


Malleable Intrapersonal Competencies Correlate with and Predict Student Success



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

Example: Building Blocks of Learning and Skill Development Applied in UNIV



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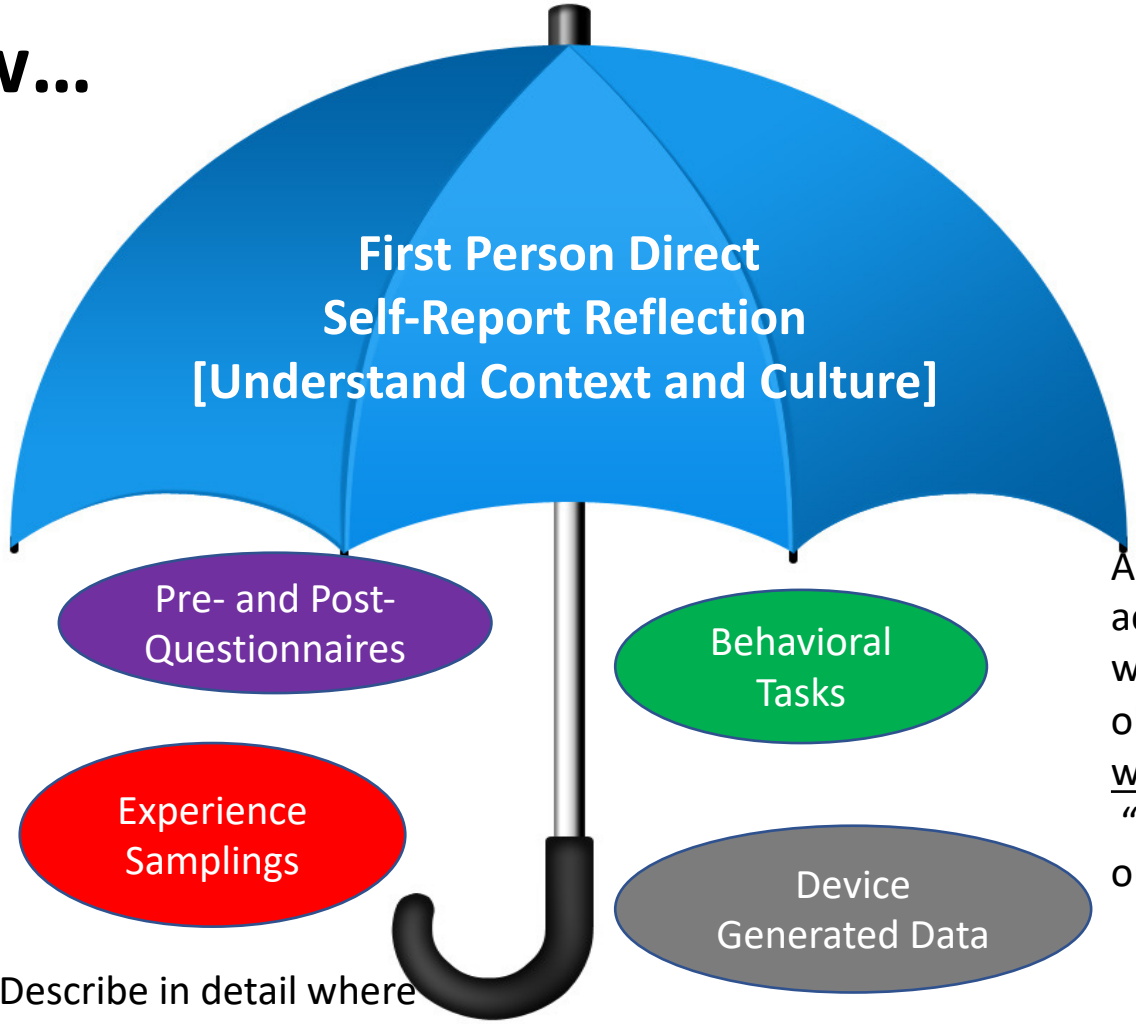
How Do We Know…



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

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

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

Not Applicable Here

(Bresciani Ludvik 2020)

Questions and Comments?

Reflection Question:

Given the importance of IPCs, context, and culture what might be useful to apply to your in-class and out-of-class design and evaluation?

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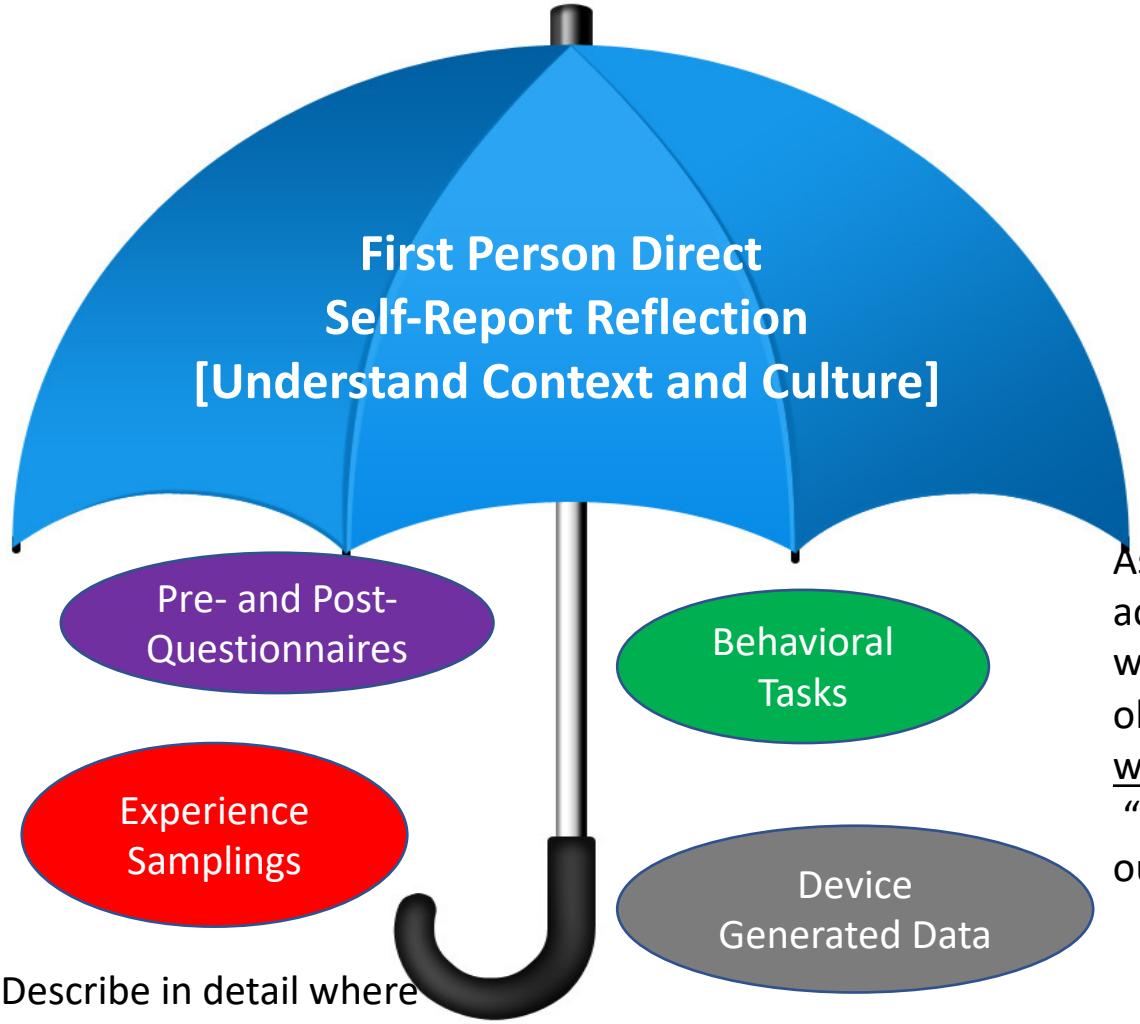
Assessment Tools For IPCs



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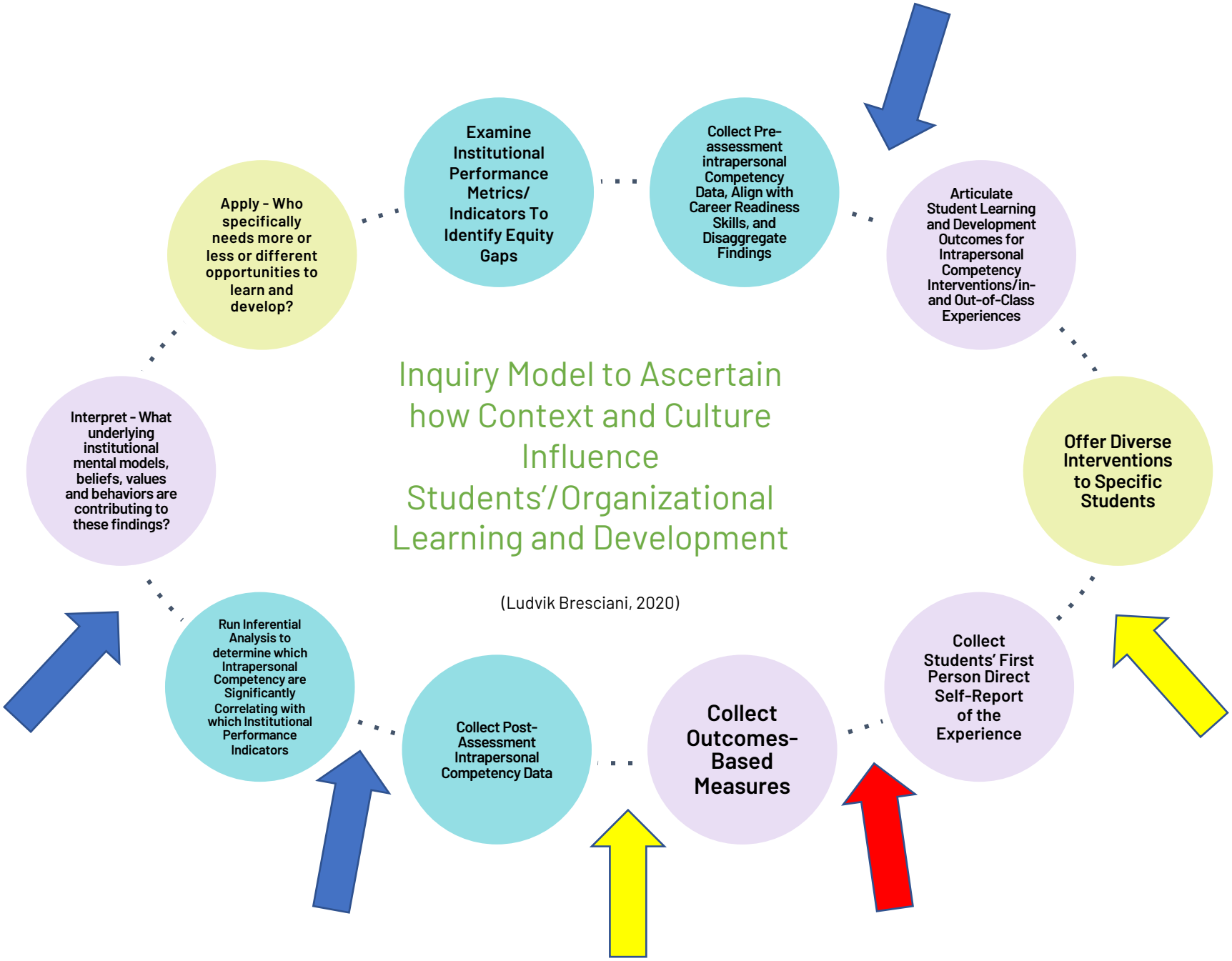
Inquiry Model to Ascertain how Context and Culture Influence Students'/Organizational Learning and Development
(Ludvik Bresciani, 2020)
Collect Pre-assessment intrapersonal Competency Data, Align with Career Readiness Skills, and Disaggregate Findings
Examine Institutional Performance Metrics/ Indicators To Identify Equity Gaps
Apply - Who specifically needs more or less or different opportunities to learn and develop?
Interpret - What underlying institutional mental models, beliefs, values and behaviors are contributing to these findings?
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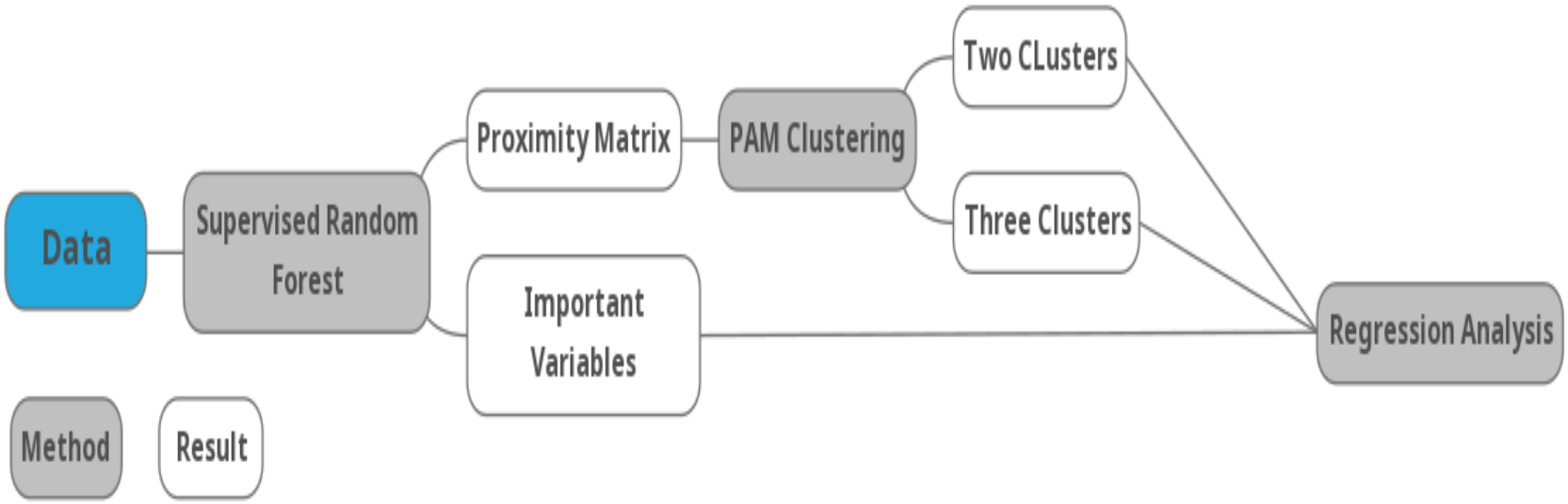
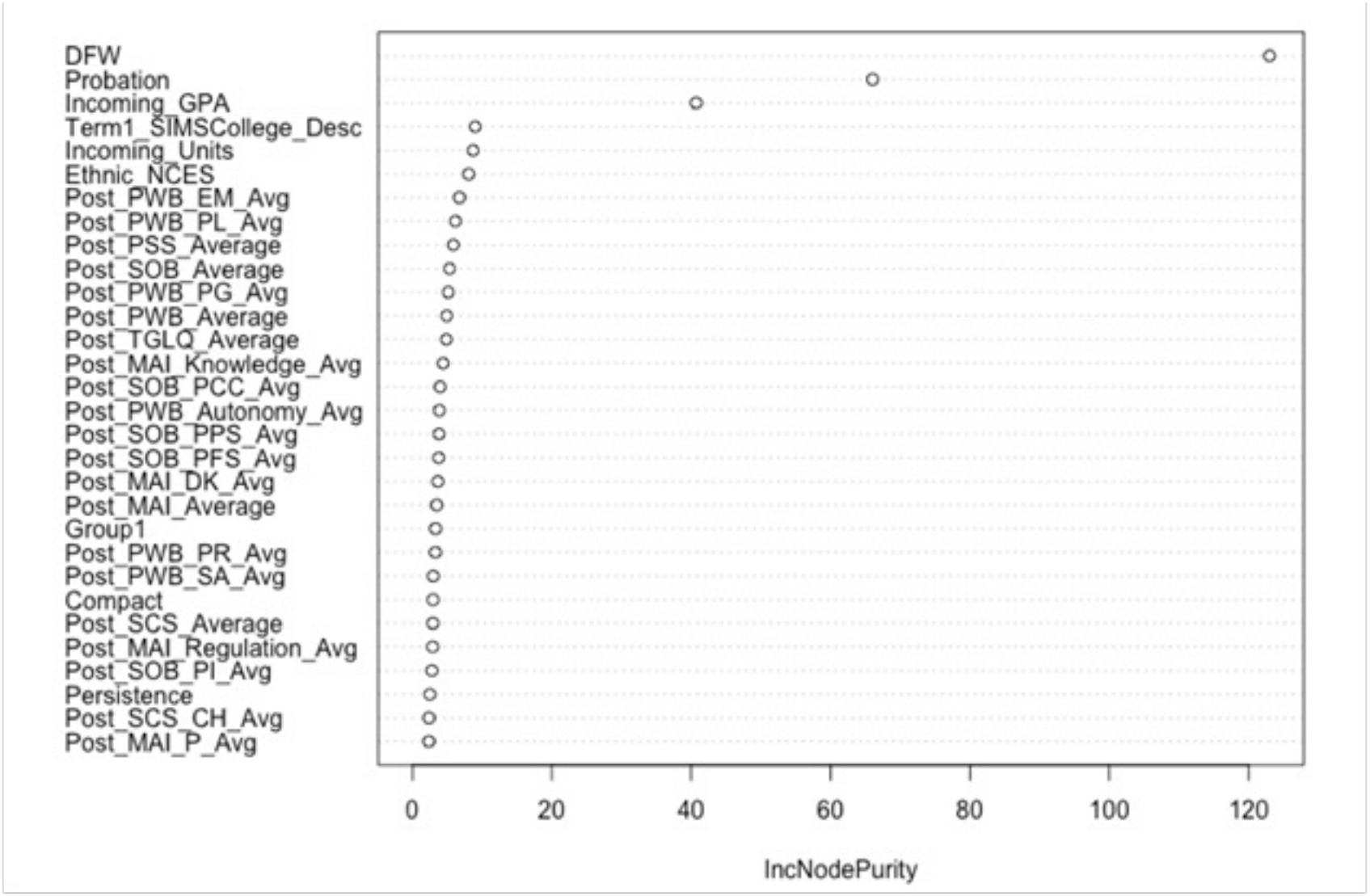
Articulate Student Learning and Development Outcomes for Intrapersonal Competency Interventions/in- and Out-of-Class Experiences

Data Analysis Model All Credit to Shiming Zhang



Bresciani Ludvik, et al, In Press



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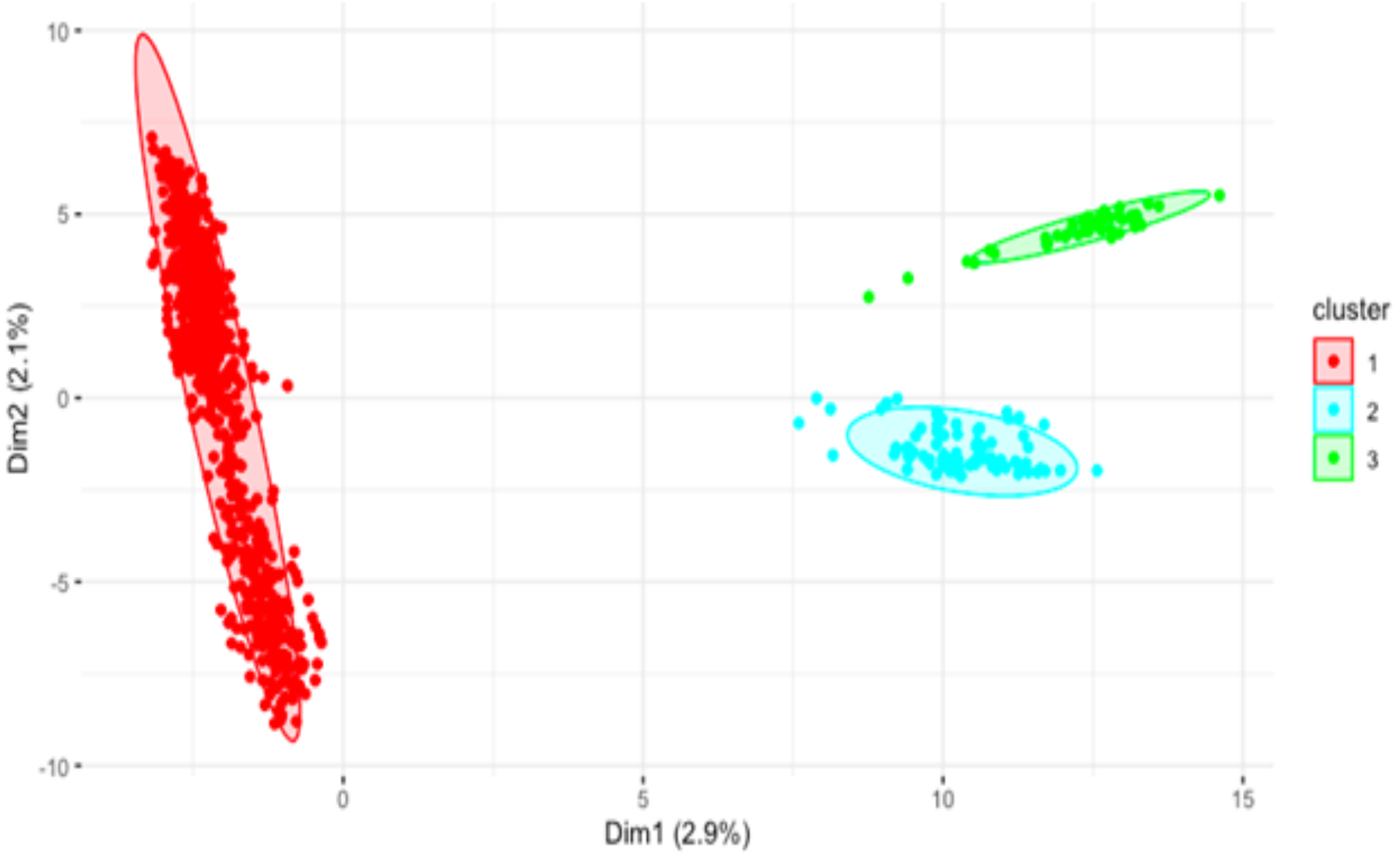

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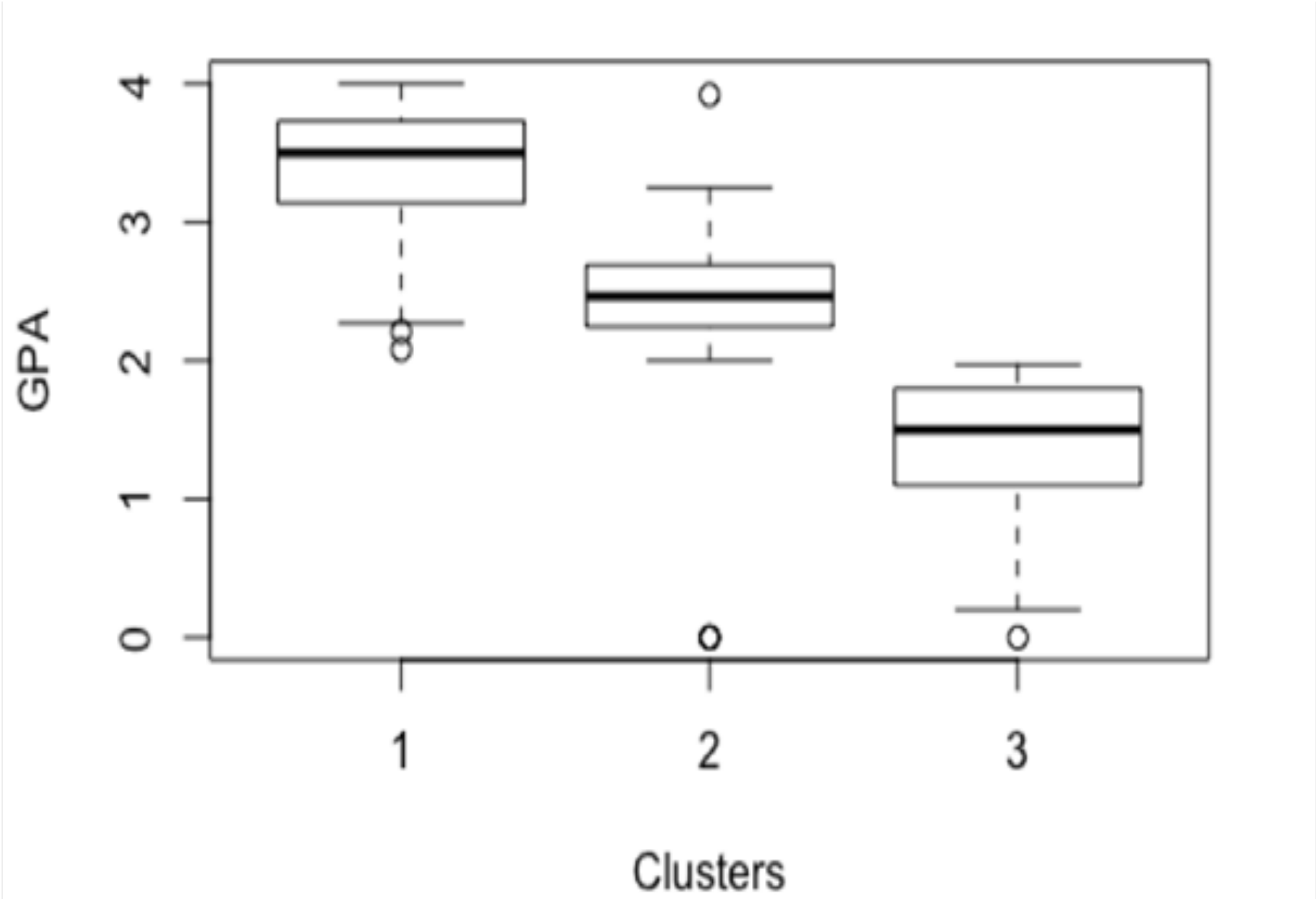
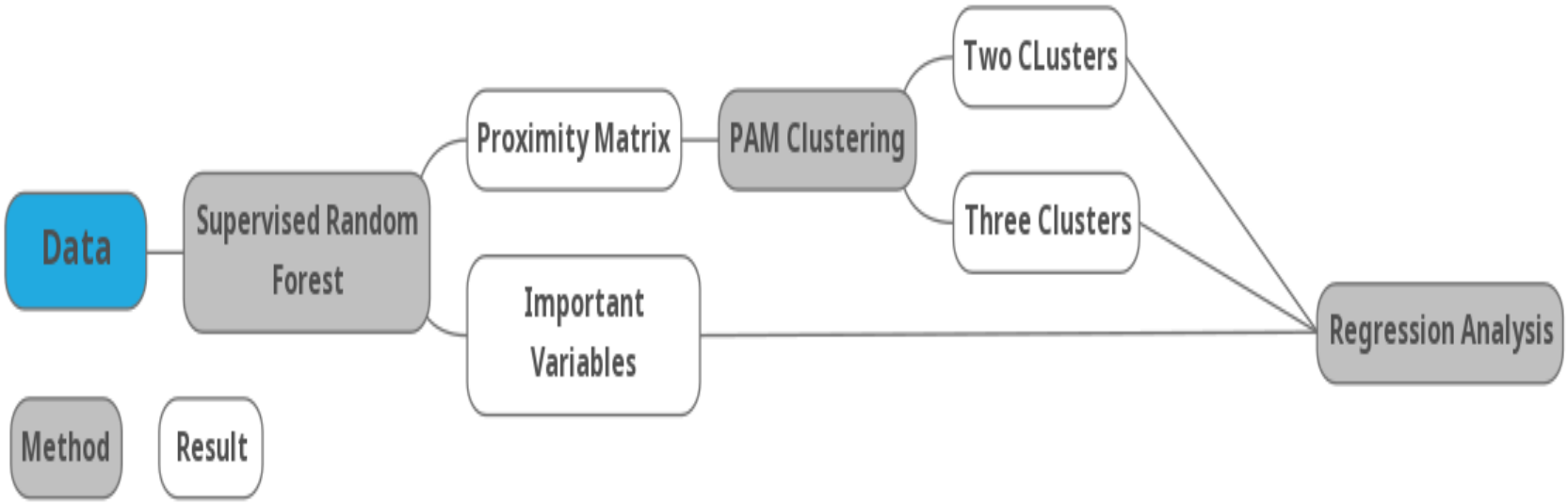


(Bresciani Ludvik, et al, In Press)

Next…

- Disaggregate the Clusters by Identities and other meaningful variables
- Search for Descriptive Differences
- And Significant Differences between

Credit to Shiming Zhang



Bresciani Ludvik, et al, In Press

Types of Decisions this Process has Informed

IMPROVED PROFESSIONAL DEVELOPMENT FOR INSTRUCTORS

IMPROVED FIRST-YEAR STUDENT COURSE DESIGN

IMPROVED SUMMER-BRIDGE DESIGN

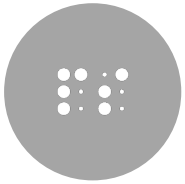
IMPROVED IN-BETWEEN TERM COMMUNICATIONS WITH AND SUPPORT SYSTEMS FOR STUDENTS

IMPROVED COMMUNICATION ACROSS THE COLLEGES AND DIVISIONS TO CHANGE POLICY AND PRACTICE TO PROMOTE SUCCESS

IMPROVED ASSESSMENTS AND LINKAGE OF THOSE TO INSTITUTIONAL PERFORMANCE INDICATORS

Limitations

BUCKETS OF MATHEMATICAL MODELING – THE MATH MAY BE DRIVING OUR DECISION MAKING, BUT WE CAN'T PROCESS 400,000 OR MORE WORDS FROM STUDENTS, SO WE NEED MATH'S HELP.



EVEN WITH NLP, WE MAY NOT UNDERSTAND WHAT STUDENTS ARE REALLY TRYING TO CONVEY AND WE ARE OK WITH THAT.

BECAUSE HUMANS WILL BE INTERPRETING ALL OF THIS AND APPLYING IT ANYWAY.

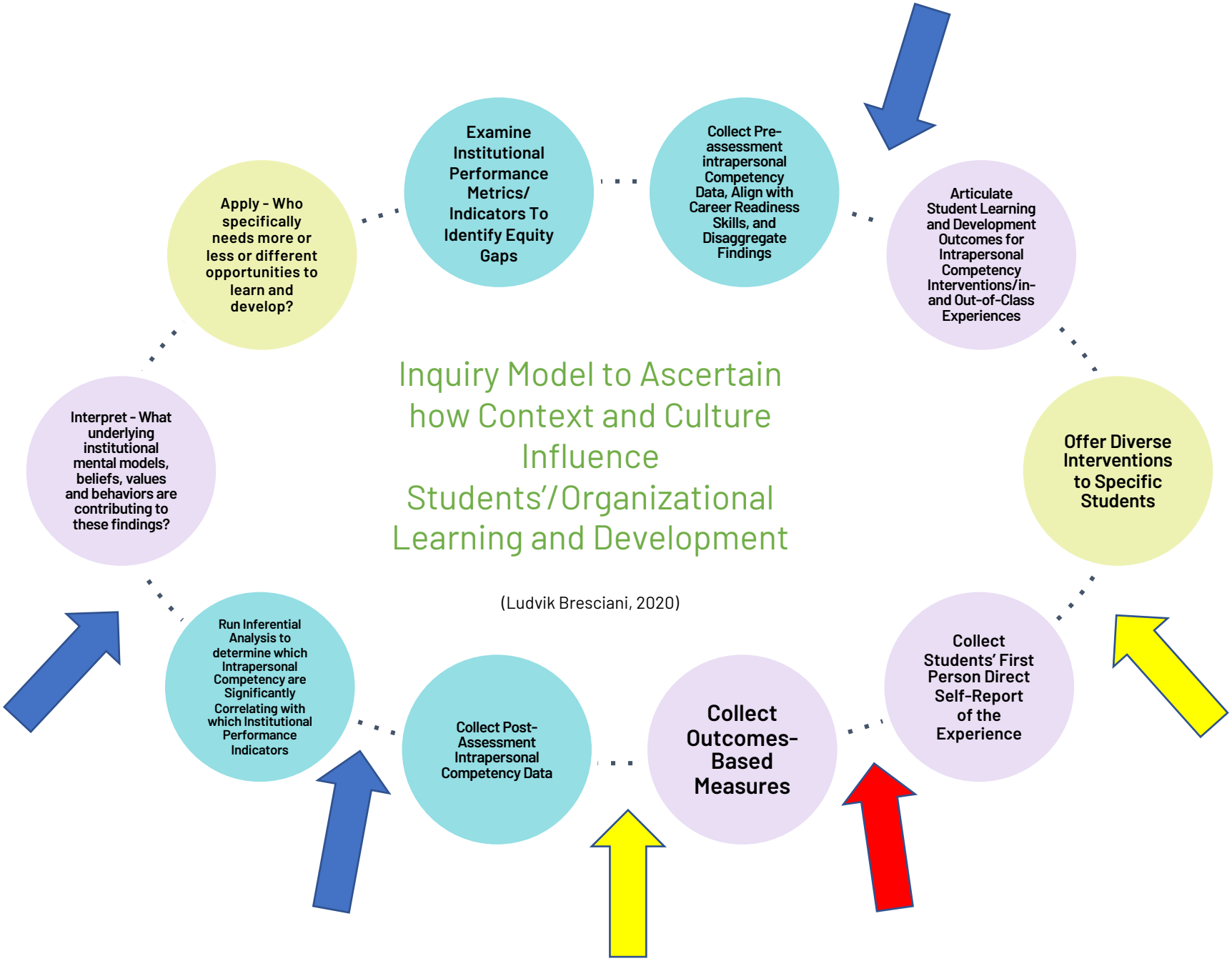
EVEN IF WE CAN IMPROVE JUST IN TIME SUPPORT FOR 5% MORE OF OUR STUDENTS, THOSE STUDENTS ARE HUMAN BEINGS WHO ARE COUNTING ON US TO PREVENT AND REPAIR NEGATIVE STUDENT SUCCESS OUTCOMES.

WHAT ELSE?

Our Team is Now Focusing on…

- The integration of First-Person Voice into this Model via Natural Language Processing

- More to Come….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Questions and Comments?

Reflection Question:

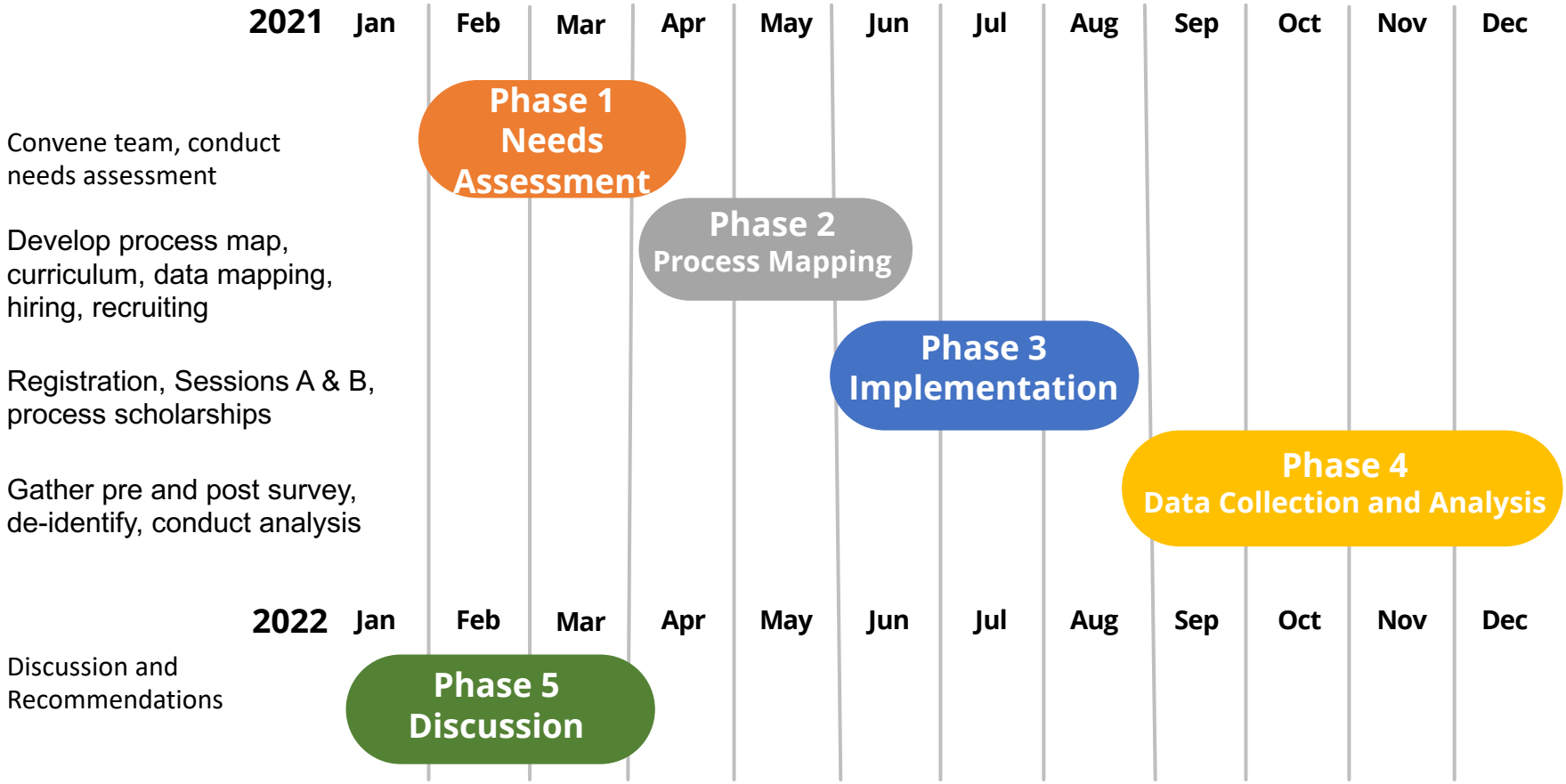
In what context(s) might you want to integrate a process like this?

Remember to Have the Process Conversation

- Invite in the team members
  - Diverse skill sets (instructional designers, assessment scholars, institutional researchers, data scientists, research methodologists, faculty, student success experts and the people who can say YES to getting you the data)
  - Embodied commitment to social justice
  - Commitment to data integrity and “do no harm”
  - Commitment to learning from each other
- Leverage Volunteers to get started
- Use the Evidence while stating what is not known
- Build in the Systemic Commitment
  - With course buy-outs, stipends, re-worked workload and responsibilities, professional development

Success U

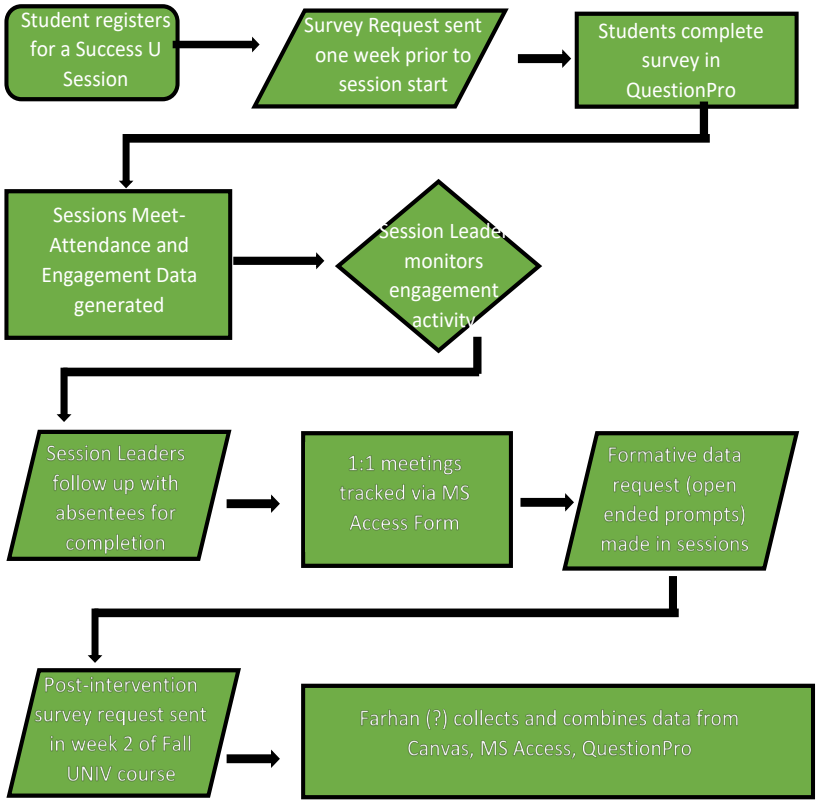
TIMELINE



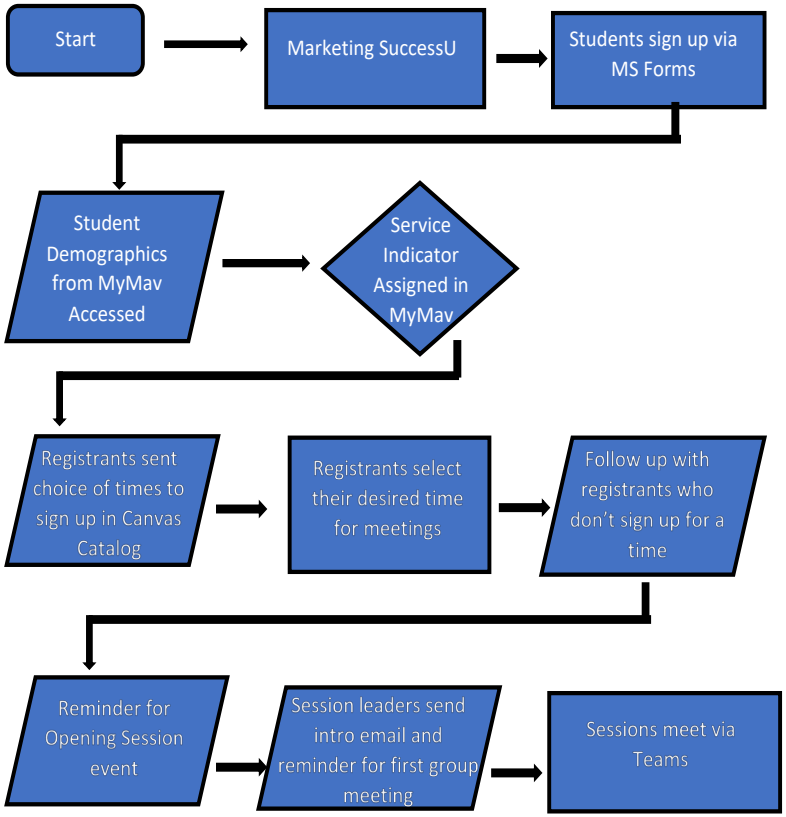
Process Mapping

Pre-Implementation Drafts

Success U – Initial Process Map for Data Collection



Success U – Initial Process Map for Program Enrollment



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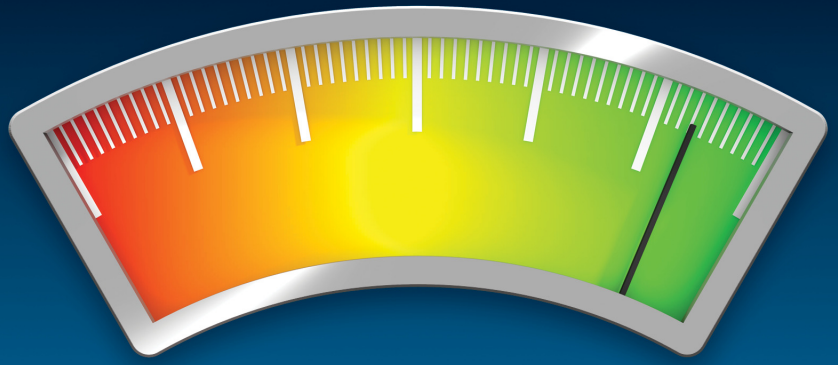


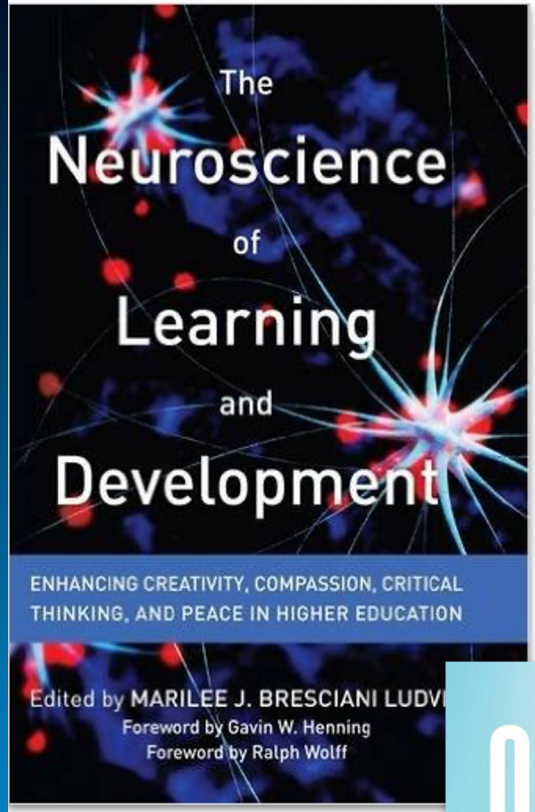
EQUITY-DRIVEN, HIGH ACHIEVEMENT

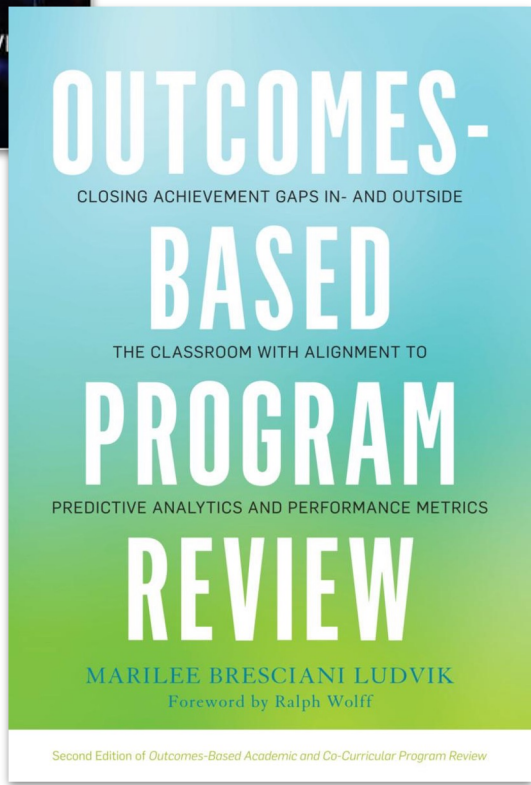
Assessment of Student Learning and Development

Marilee Bresciani Ludvik

With contributions from Marjorie Dorimé-Williams, Lara Evans, Mari Guillermo, Brianna Lynn Kuhn, Valerie Nye, Bill Sayre, Caren Sax, Charlene Teters, Andrea Vonny Lee, Stephen Wall, and Felix Wao

NASPA | Student Affairs Administrators in Higher Education





Marilee Bresciani Ludvik, Ph.D.

619-733-3278
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