Educating Potential

The Future of Smart

Preparing young people for a VUCA world

Association of Colorado Independent Schools
June 9, 2022

Outcomes

During our time together, we will:

- Explore what a VUCA future and the latest in brain science means for young people and the education we provide them;
- Become present to the challenges and opportunities that exist in shifting our programs in ways that center the needs of diverse students and families;
- Build meaningful relationships with each other as unique and committed individuals, and as partners in this work.

Overview and agenda

- Getting connected to our purpose and to each other
- The context of our work
  - A VUCA world
  - Cognition, learning and development
- Where are we and how *did* we get here?
- Compelling conversations
- Closing activity

Tree of life

The Roots

Where you come from (e.g. home town, culture you grew up in, organizations/experiences that shaped you).

The Ground

Things you choose to do on a weekly basis – not things you must do, rather things you do for yourself.

The Trunk

Your skills and values.

The Branches

Things you have done or hope to do – personal or professional – that reflect your hopes and dreams.

The Leaves

The legacies you hope to leave to others.

Connection exercise

- Draw your tree of life (~10 min)
- Form groups of 3, ideally people you know less well
- Each person takes 2 mins to share their tree
- Large group debrief

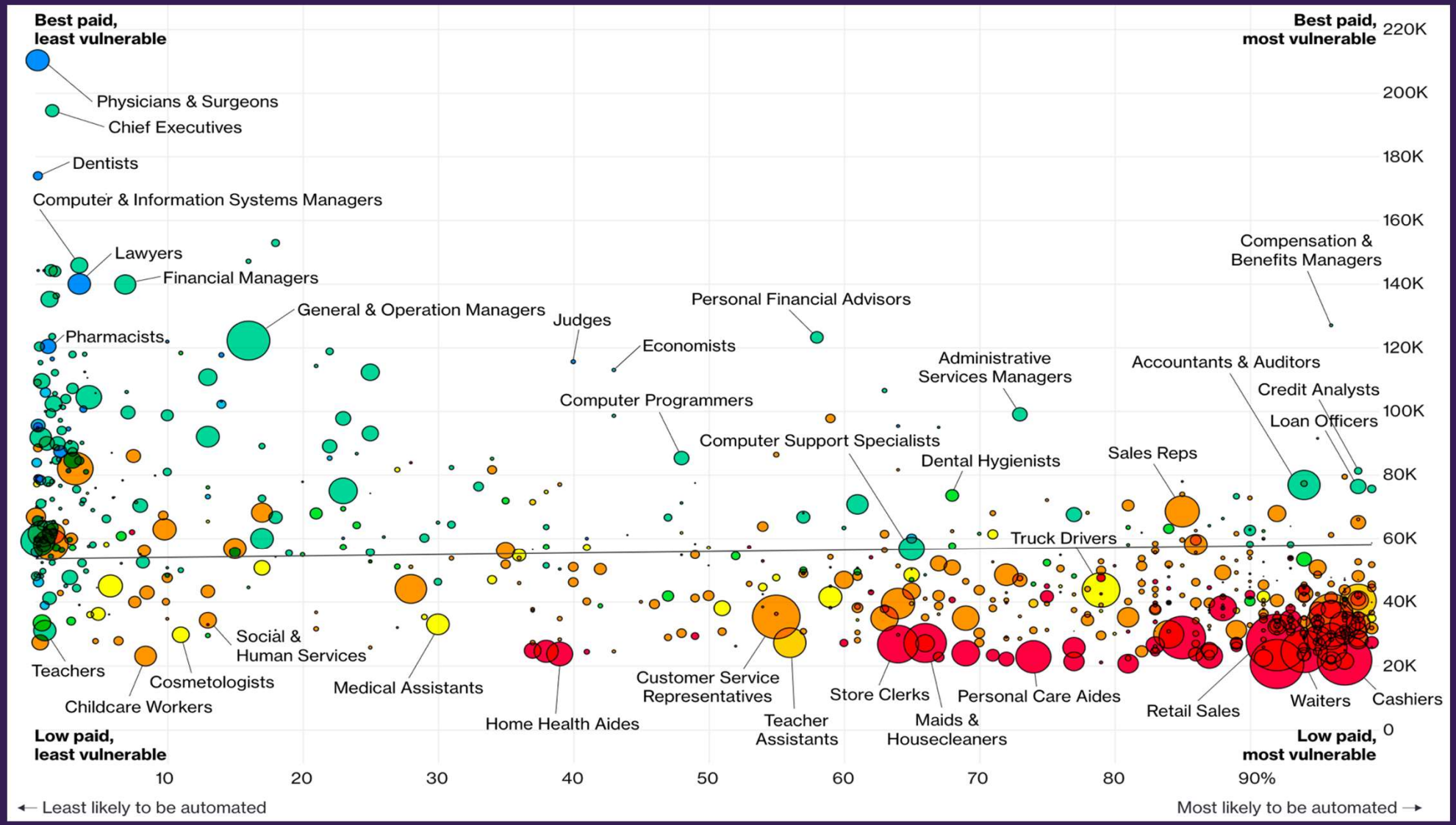
Who is in the room?

- Your name
- School

How we want to be together

- Mutual respect and active listening
- Contribute from your own experience and what you know directly
- Assume positive intentions; be responsible for how what you say is heard and own the impact
- Frankness and clarity about what we believe, what we question and why
- Non-attribution; share what you learned but not anyone's specific story without permission

Our context


Best paid, least vulnerable
Best paid, most vulnerable
Physicians & Surgeons
Chief Executives
Dentists
Computer & Information Systems Managers
Lawyers
Financial Managers
General & Operation Managers
Pharmacists
Judges
Economists
Personal Financial Advisors
Compensation & Benefits Managers
Administrative Services Managers
Accountants & Auditors
Credit Analysts
Loan Officers
Computer Programmers
Computer Support Specialists
Dental Hygienists
Sales Reps
Truck Drivers
Social & Human Services
Teachers
Cosmetologists
Childcare Workers
Medical Assistants
Home Health Aides
Customer Service Representatives
Teacher Assistants
Store Clerks
Maids & Housecleaners
Personal Care Aides
Retail Sales
Waiters
Cashiers
Low paid, least vulnerable
Low paid, most vulnerable
220K
200K
180K
160K
140K
120K
100K
80K
60K
40K
20K
0
10
20
30
40
50
60
70
80
90%
Least likely to be automated
Most likely to be automated

What young people need

- Ability to manage ambiguity
- Communication
- Collaboration
- Empathy
- Adaptability
- Knowing how to learn and access what they need to learn
- Knowledge of their own strengths and areas of interest and passion
- Digital literacy including discernment and the ability to manage technology
- Understanding of ethics and values

* Annie Murphy Paul, *The Extended Mind*

Human cognition

- Brain-based concepts of cognition dominate in our culture (e.g. brain as a muscle, grit and exercise to “strengthen” that muscle)

- Three additional aspects of cognition that make up the “extended mind” *
  - *Embodied cognition*
  - *Situated cognition*
  - *Distributed cognition*

- Need to provide all young people access to the raw materials of learning and cognition

* Annie Murphy Paul, *The Extended Mind*

Right Hemisphere

Holistic Processing
Contextualized
Embodied Sensations
Implicit Meaning
Large Flows of Information
Images and Patterns

Left Hemisphere

Sequential Processing
Decontextualized
Abstractions
Explicit Meaning
Linear
Reductive and Familiar

Early and late childhood

Myth: Early childhood is the best time to help children develop foundational "cognitive skills" that help make them "ready to learn" when they enter school

Reality: Early childhood is a period when we should be especially attentive to providing the kinds of experiences that help develop right-hemispheric tendencies (e.g. play-based, embodied learning, social learning).

Myth: Learning and develop occur in linear, sequential and uniformly paced ways

Reality: Human development and learning are both jagged and highly individual. Between birth and age 8 children develop at different rates across a range of critical developmental areas, among them social competence, emotional regulation, fine motor skills, gross motor skills cognitive capabilities, and foundational academic skills.

Adolescence

Myth: Early childhood is the period when the brain exhibits the most plasticity and malleability

Reality: Adolescence rivals early childhood for brain plasticity and malleability.

Myth: Whether a child has good early childhood experiences and quality early childhood education is the best predictor of their future success.

Reality: Adolescence is a period of development when the ***kinds*** of connections that are made are those that predict lifetime success better than factors like IQ or family socio-economic status.

Myth: The transition to early adulthood happens around age 18.

Reality: Adolescence runs from age 12 to age 25.

Adolescence

Myth: Adolescents are impulsive risk-takers who don't respect boundaries

Reality: The work of adolescence is is exploration, curiosity and novelty, the development of passions, motivation and purpose. This is a period when capacities for more ***complex and purposeful thinking***, reflecting, discovery, and self-awareness get established; they are most correlated with success in early adulthood..

Myth: Adolescents want independence and don't value adults

Reality: Adolescents crave meaningful relationships and connections with adults inside and outside their families; they crave ***interdependence*** more than independence

Myth: Adolescents live in the present.

Reality: Where adolescents really live and want to live is in the future. They are focused on what comes next.

Table conversation

In pairs:

- What was new for you?
- What might be new for your faculty?
- What might be new information for your parents (and students)?

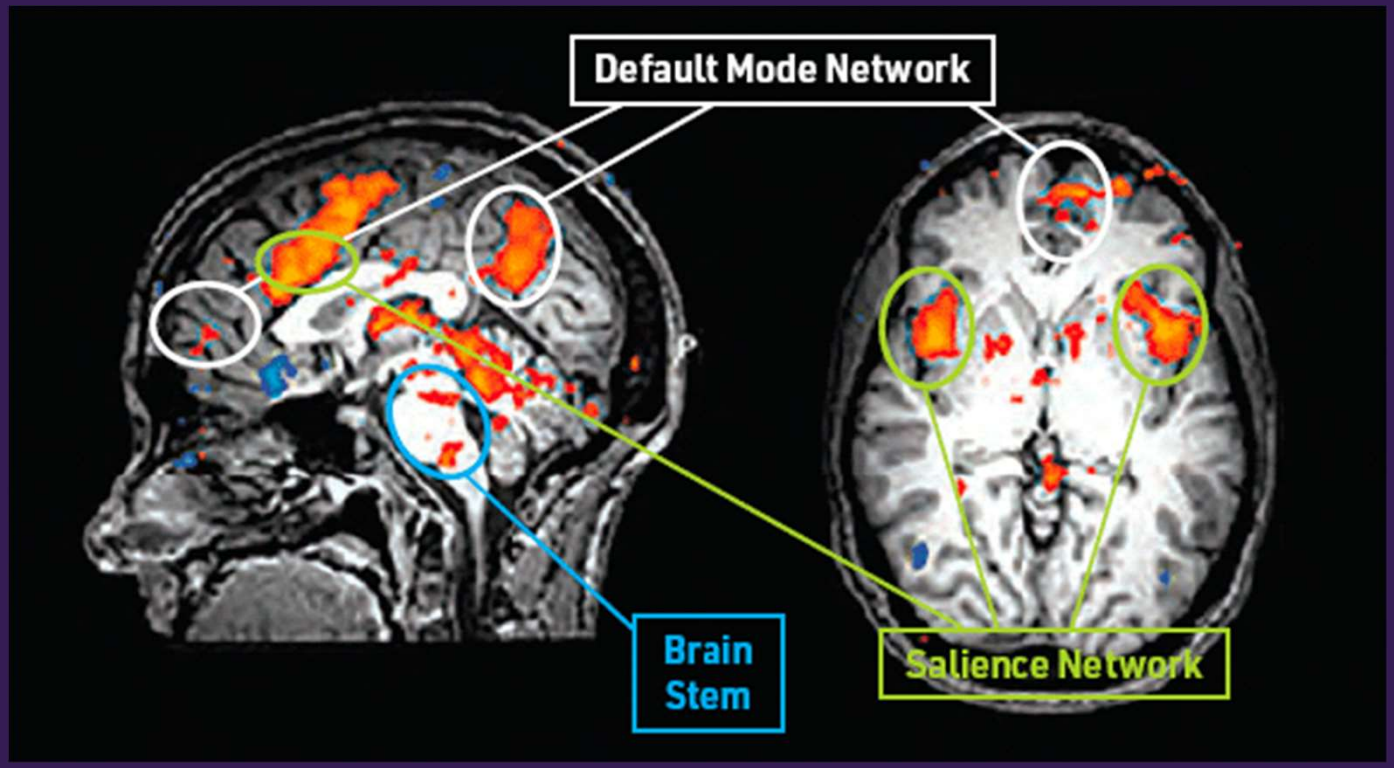
Neurobiology of learning

- neurobiological and sociocultural factors developmentally interact in complex and civic thinking.
- Culture shapes the brain mechanisms involved in emotional reactions to real-world social scenarios;
- exposure to social circumstances in and outside the classroom influences the neural systems implicated in self-processing, memory and error monitoring during academic problem solving;
- activation patterns in the executive control systems in the brain contribute to abstract thinking in teachers and brain development in adolescents.

Neurobiology of learning

- adolescents grow the power of their brains by thinking with and through complexity, cycling between concrete and abstract thought; this process both drives and is driven by their emotions.
- Teens' tendencies to engage empathically in the here-and-now helps them to manage, regulate, and maintain good relationships. But it is their growing dispositions to also transcend the here-and-now, to build narratives that connect their skills to big ideas that reflect systems, histories, and values, that enables more fully their brain development and fulfillment in young adulthood. The implication is that educators must create cultures and learning experiences that enable this developmental process. Consistent with a century of progressive educational thinking, it seems to be that the way kids think, more than what they know, grows their brains over time.

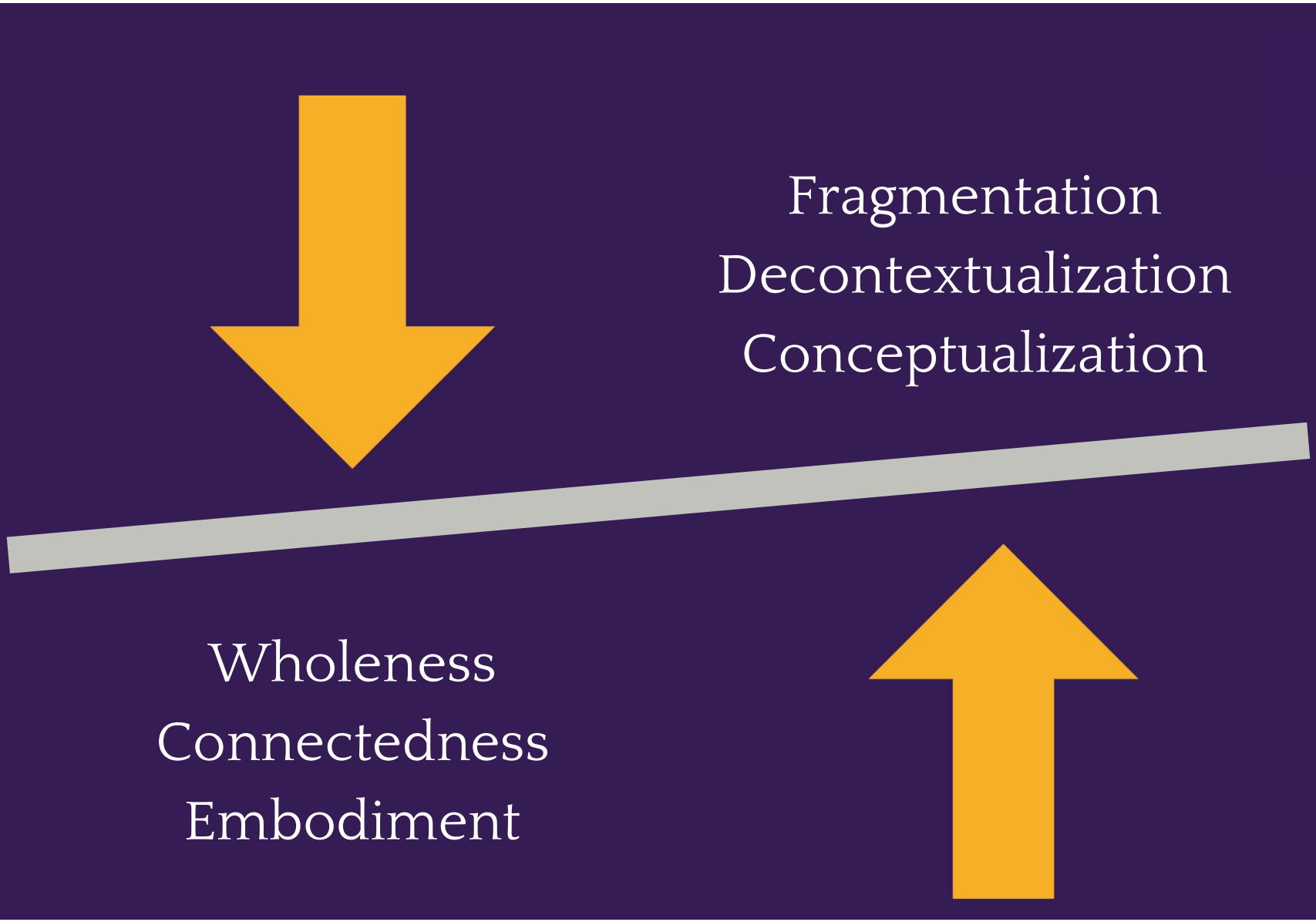
Break


Default Mode Network
Brain Stem
Salience Network

How did we get here?

A story

Medieval


Fragmentation
Decontextualization
Conceptualization
Wholeness
Connectedness
Embodiment

Right Hemisphere

Holistic Processing
Contextualized
Embodied Sensations
Implicit Meaning
Large Flows of Information
Images and Patterns

Left Hemisphere

Sequential Processing
Decontextualized
Abstractions
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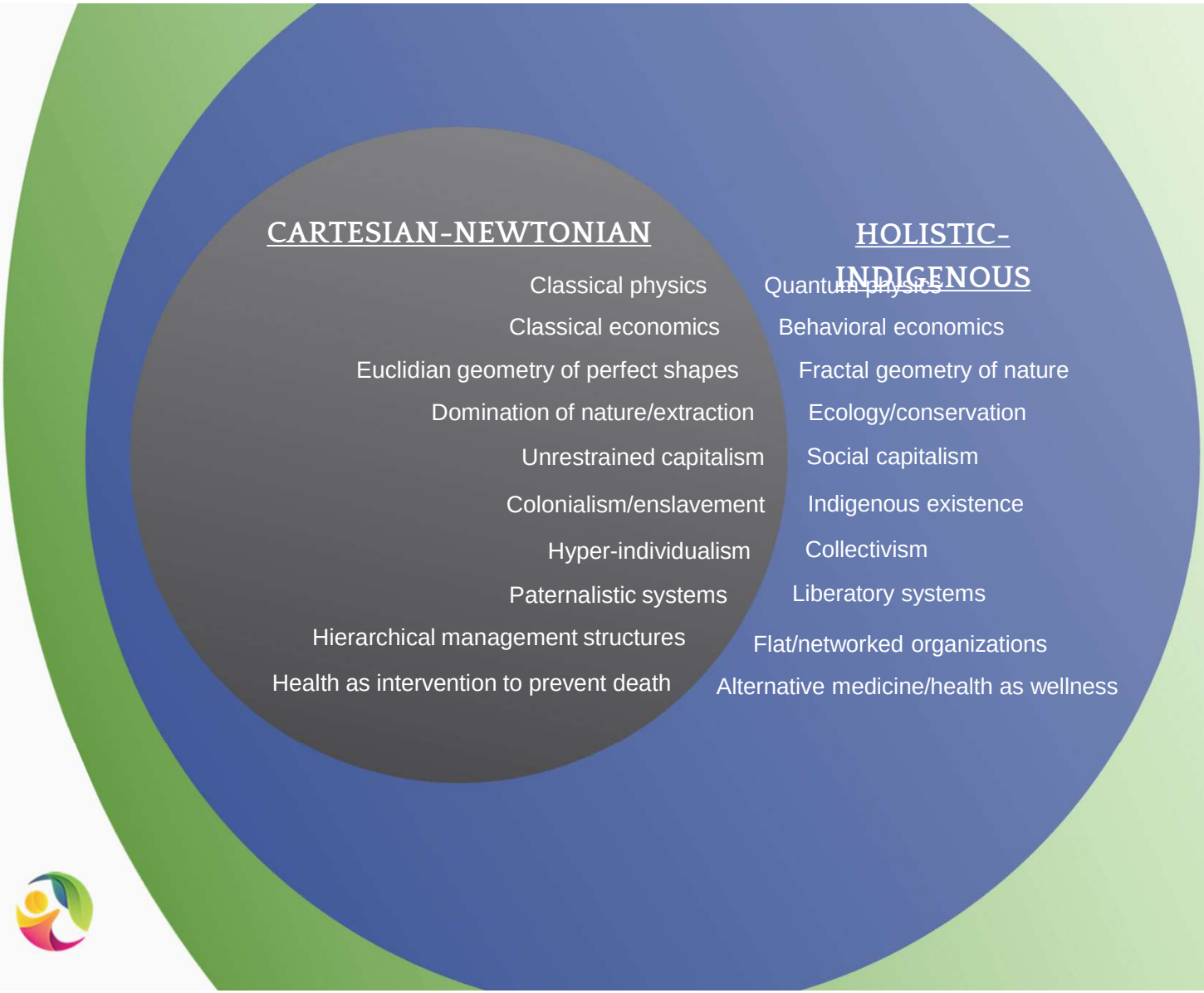
Reductive and Familiar



Different worldviews birth different systems

Individual reflection

Personal reflection:

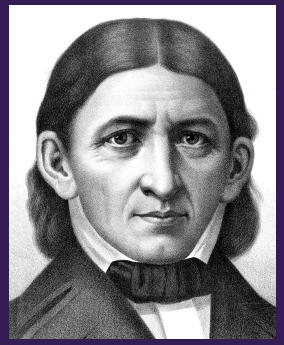
- What resonates?
- How does this framework relate to other work you've done on racial justice/equity?

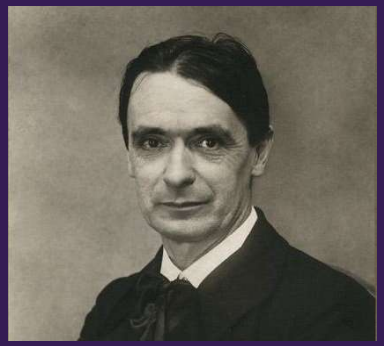
Pair share:

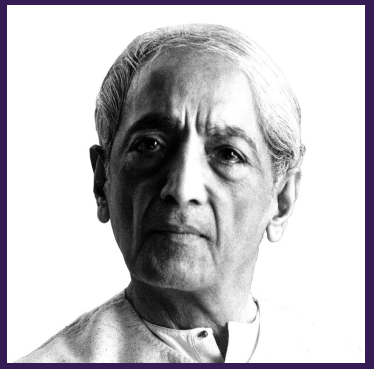
- What questions do you have or what ideas would you like to explore further?

Worldviews and education

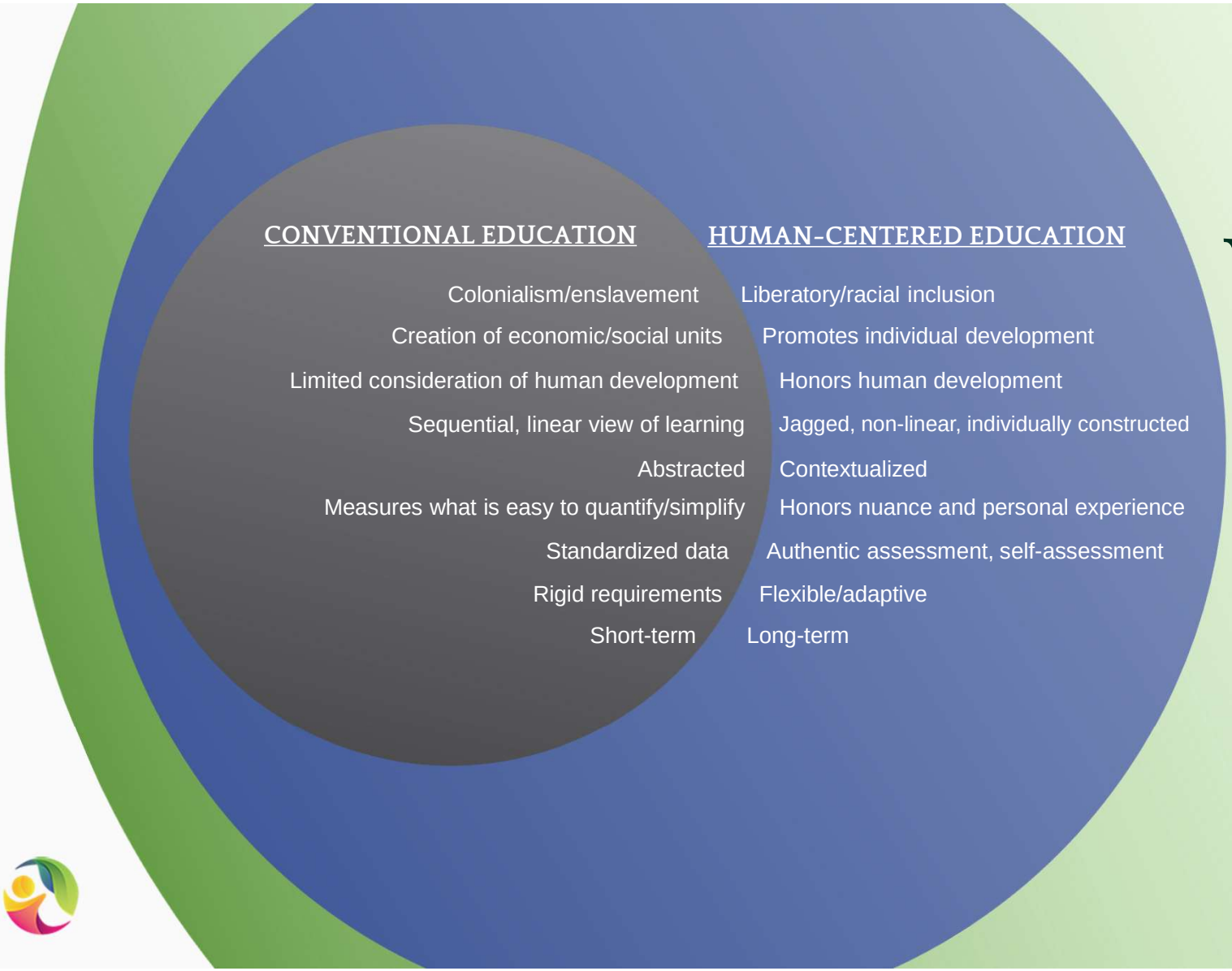
Dissenting voices in education



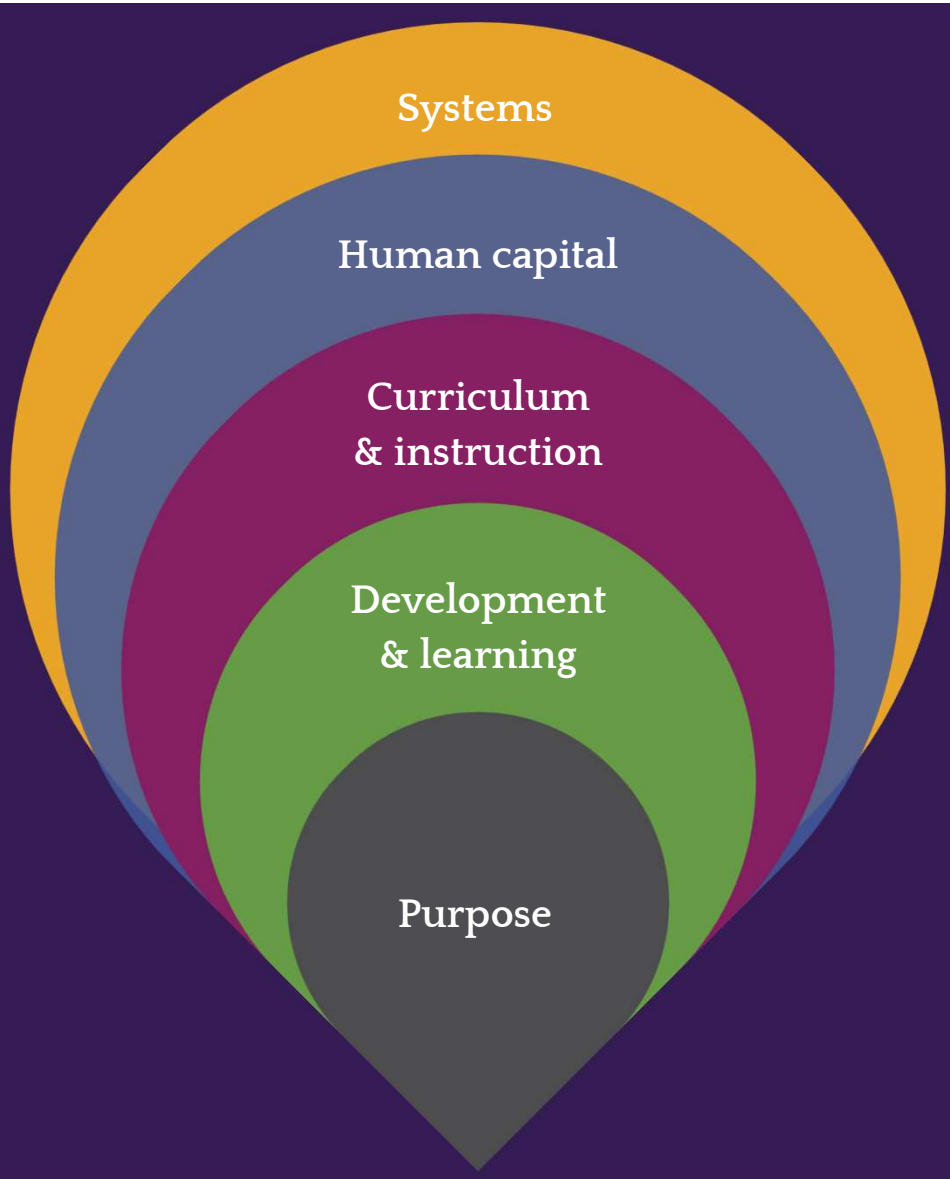




Worldviews and education



Instructional models



Primary purpose(s) + Aligned Curriculum	Developmental Needs	Learning Theories	Cognitive Profile Strengths	Pedagogy	Approach to Discipline	Assessment
(1) Academic ("core" focus) (2) Cognitive (reasoning, remembering) (3) Physical (4) Social (5) Emotional • *Functionalist* • *Systems* (6) Moral/character education • *Values articulation* • *Curriculum-embedded* (7) Relationship to community • *Functional* • *Foundational* (8) Sense of self (9) Sense of purpose (10) Social justice (11) Educational equity • *Addressing disparities (group)* • *Meet needs of each learner (individual)*	(1) Academic (2) Cognitive (3) Physical (4) Social • *Social awareness* • *Relationship skills* • *Responsible decision-making* (5) Emotional • *Self-awareness* • *Self-management* (6) Relationship to community • *Authenticity* (7) Sense of self • *Self-concept (self-understanding, authenticity)* • *Self-esteem* (8) Sense of purpose	<u>Teacher-focused</u> (1) Behaviorism (2) Cognitivism <u>Student-centered</u> (3) Constructivism (4) Connectivism	(1) Verbal (2) Visual/perceptual (3) Processing speed (4) Working memory (5) Attention: executive functioning (6) Attention: planning and organization (7) Attention: memory (8) Socio-emotional factors	(1) Teacher-directed (2) Teacher-guided (3) Enquiry-based (4) Situational learning (5) Design-based learning (6) Play-based	(1) Consequentialist (modified zero tolerance) (2) Positive Behavioral Interventions and Supports (PBS) (3) Restorative connection	(1) Summative standardized (2) Interim standardized (3) Teacher observation (4) Student self-assessment (5) Student-developed summative projects • *Portfolios* • *Exhibitions* • *Passages* (6) Authentic assessment pieces

Primary Purpose(s) + Aligned Curriculum

(1) Academic (“core” focus)

(2) Cognitive (reasoning, remembering)

(3) Physical

(4) Social

(5) Emotional
- *Functionalist*
- *Systems*

(6) Moral/character education
- *Values articulation*
- *Curriculum-embedded*

(7) Relationship to community
- *Functional*
- *Foundational*

(8) Sense of self

(9) Sense of purpose

(10) Social justice

(11) Educational equity
- *Addressing disparities (group)*
- *Meet needs of each learner (individual)*

Differences within an element are associated with different orientations to the work

Assessment

(1) Summative standardized

(2) Interim standardized

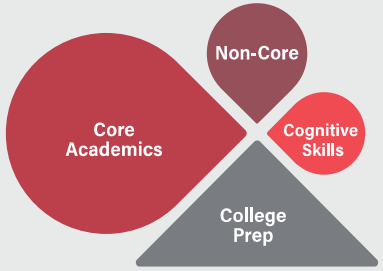
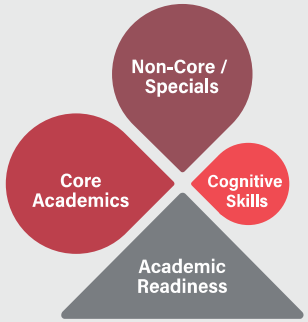
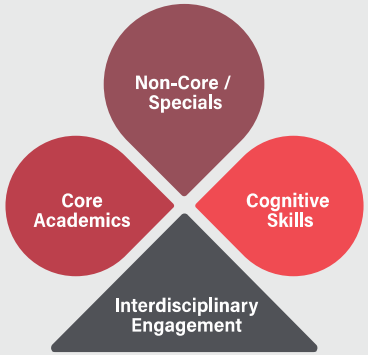
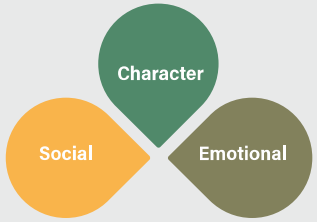
(3) Teacher observation

(4) Student self-assessment

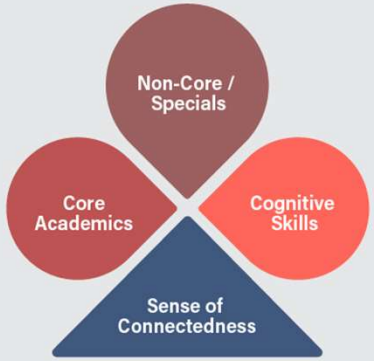
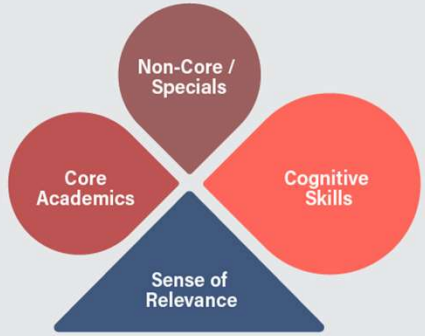
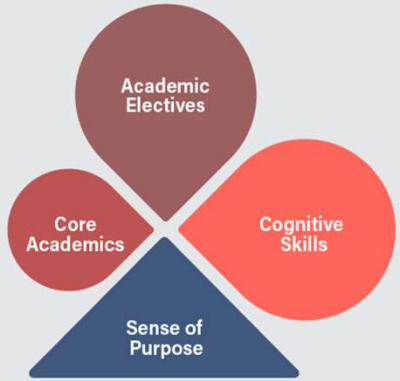
(5) Student-developed summative projects
- *Portfolios*
- *Exhibitions*
- *Passages*

(6) Authentic assessment pieces

EDUCATIONAL ORIENTATIONS

	CONVENTIONAL	WHOLE CHILD/INNOVATIVE REFORM	HUMAN-CENTERED/LIBERATORY
ACADEMIC DEVELOPMENT			
SOCIAL-EMOTIONAL DEVELOPMENT			

HUMAN-CENTERED/LIBERATORY K-12

	ELEMENTARY SCHOOL	MIDDLE SCHOOL	HIGH SCHOOL
ACADEMIC DEVELOPMENT			
SOCIAL-EMOTIONAL DEVELOPMENT			

Paired/triad conversation

What is compelling to you about this framework?

What questions do you have?

What would you like to explore further?

Small group activity

- Elementary parents
- Middle school parents
- High school parents
- Students

- Elementary educators
- Middle school educators
- High school educators
- Other

What about these ideas might be compelling to your stakeholder group?

What questions/challenges can you anticipate?

Chart your responses. We will have a gallery walk so think **legible**

Gallery walk

Take note of what strikes you or surprises you – put dots next to them

Debrief

What did you notice?

What do you want to spend more time thinking about?

Gifts conversation

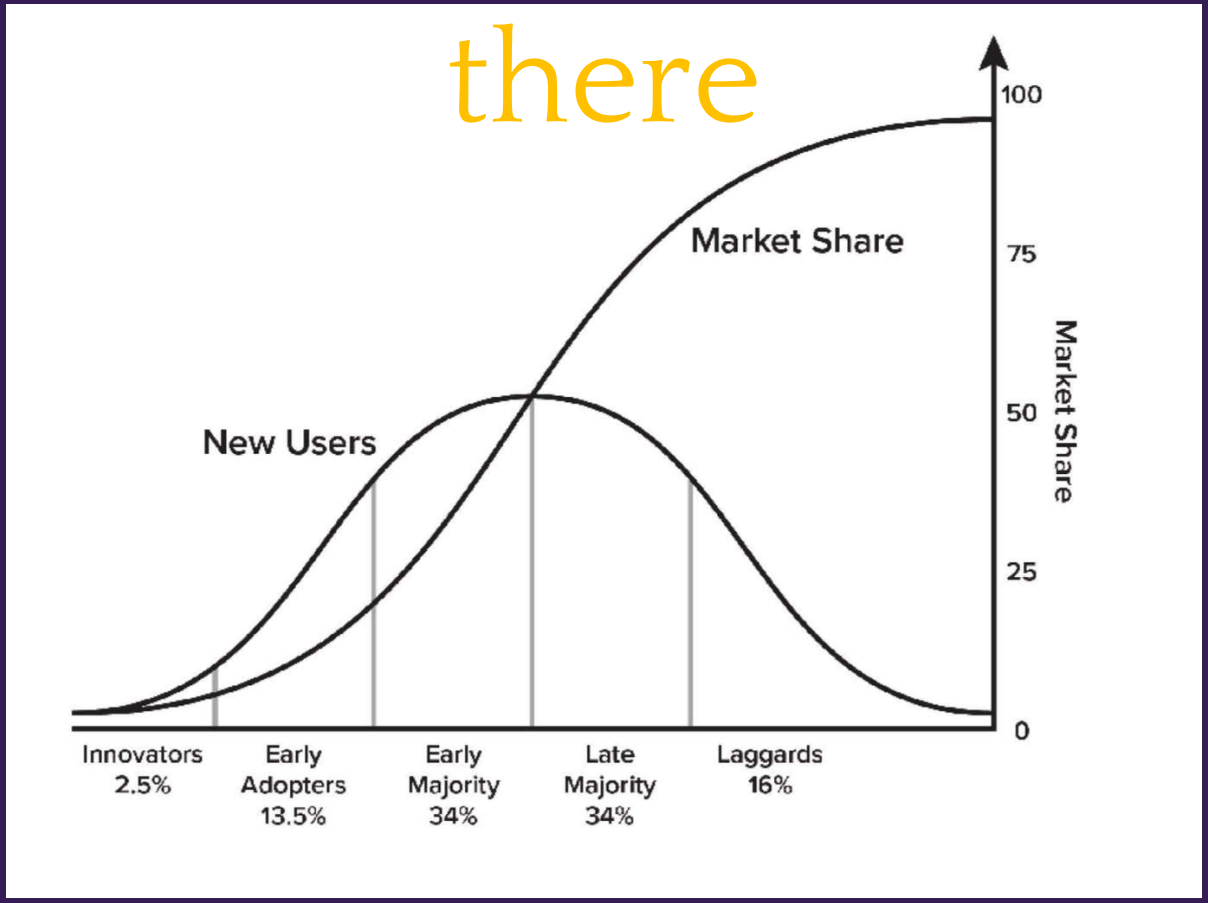
1) Each person takes a turn receiving others' reflections on the gifts they contributed to the table and our work together today. Set a timer for three minutes per person.

2) There are three acceptable responses when it is your turn to receive:

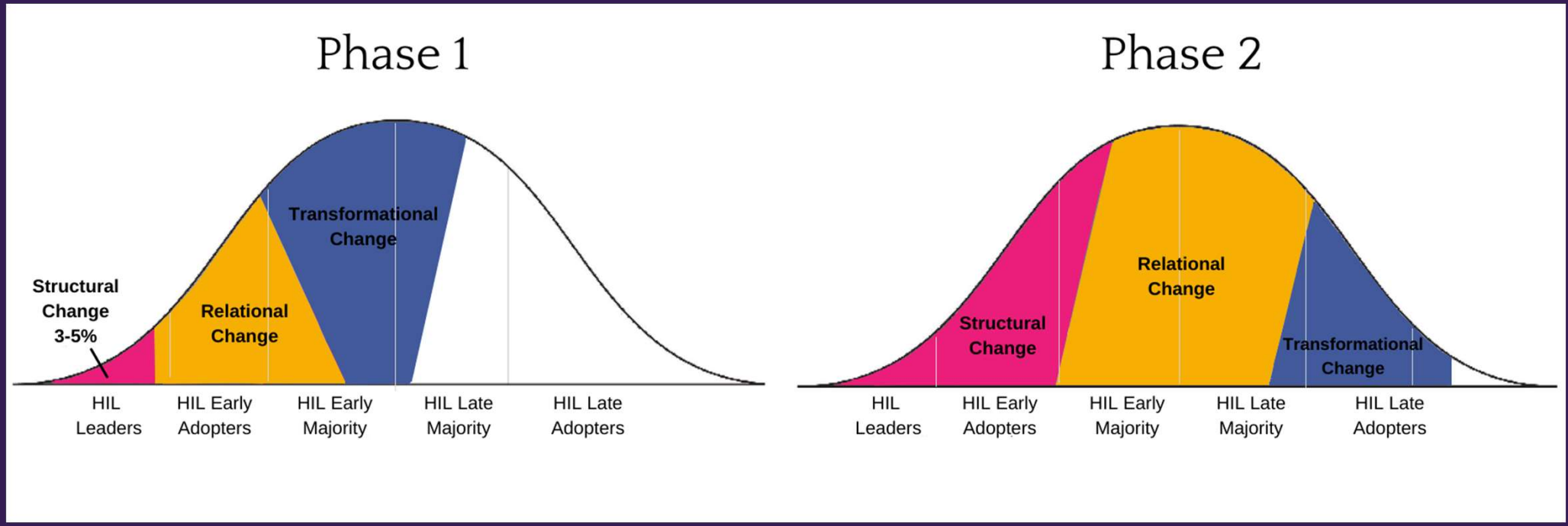
    - Thank you.
    - Thank you, I liked hearing that.
    - Thank you. Tell me more.

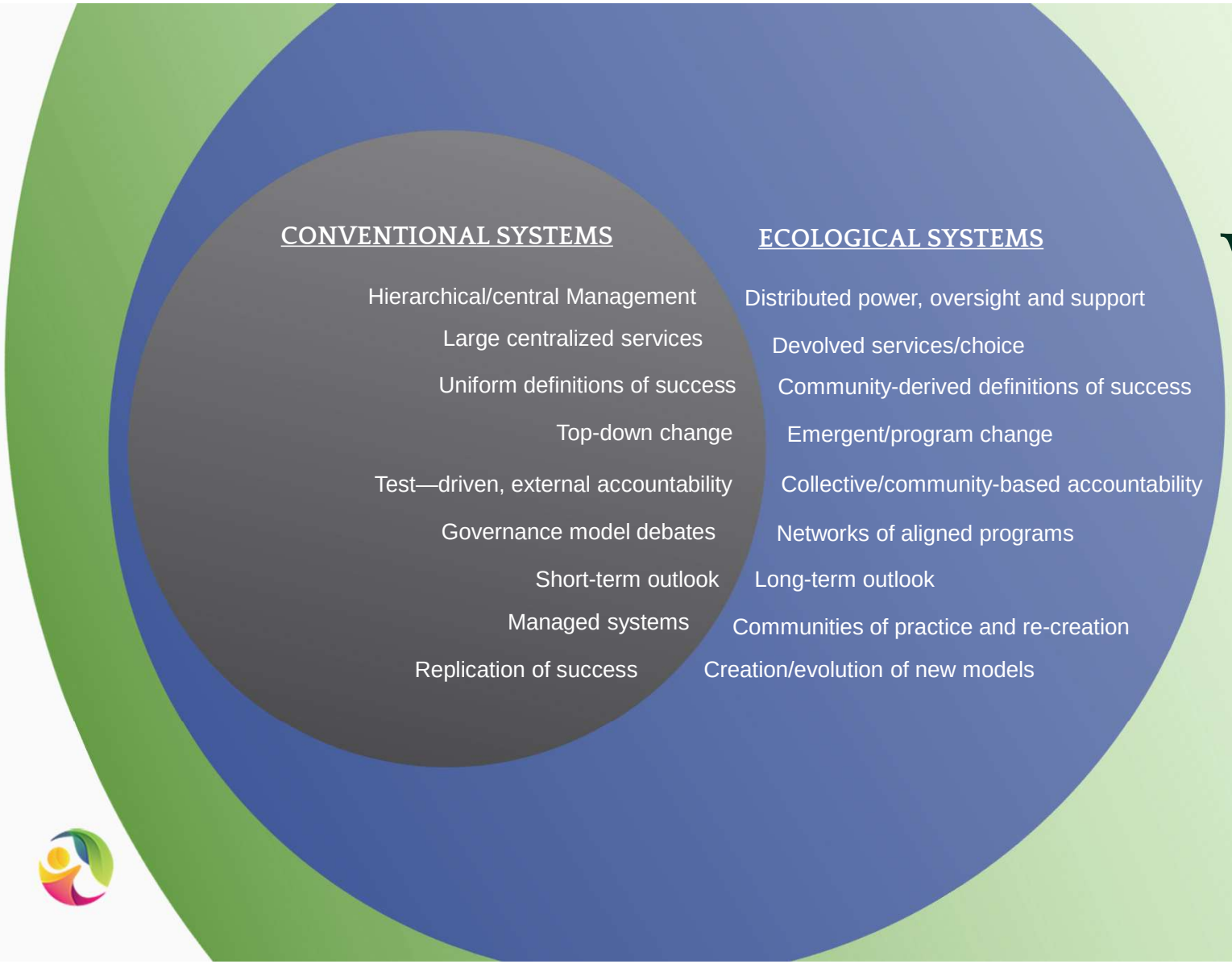
What did you notice?

Getting from here to there



Phases of Change





Worldviews and education systems