

A look inside the Taxonomy Project

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Grantmakers for Thriving Youth



Brief Agenda

I. The Challenge

Background & Motivation

II. The Taxonomy Project

Goals & Methods

III. A walk through Explore SEL

exploresel.gse.harvard.edu

The Challenge

Background & Motivation

The Challenge



- It can be difficult to navigate the complex and sometimes conflicting terminology in the field
- A large number of fields and disciplines that contribute to what we know about the “non-academic” domain
- Each discipline uses organizing frameworks and terminology specific to its own research tradition and goals

How it plays out...

many
names

WHAT'S IN A NAME

Research, policy makers, and practitioners have used many names to describe various parts of the non-cognitive domain. These are often rooted in different applications and disciplines, but the underlying constructs are similar. A selection of relevant fields include:

- | | |
|--|--|
| <ul style="list-style-type: none">• Social and Emotional Learning• Non-Cognitive Skills• 21st Century Skills• Deeper Learning• College and Career Readiness• Soft Skills | <ul style="list-style-type: none">• Academic Mindsets• Character• Student Agency• Emotional Intelligence• Life Skills• Employability Skills |
|--|--|

Furthermore, the non-cognitive constructs within each field are described using a wide range of terms, including:

- | | |
|---|--|
| <ul style="list-style-type: none">• Skills• Mindsets• Attributes• Competencies• Traits• Strengths• Behaviors• Progressions• Virtues | <ul style="list-style-type: none">• Constructs• Abilities• Dimensions• Feelings• Attitudes• Strategies• Strands• Habits |
|---|--|

many
things

Words Matter

Moffitt et al. (2011): A gradient of childhood self control predicts health, wealth, and public safety. PNAS.

What did we learn?

observational ratings of children's **lack of control**, parent and teacher reports of **impulsive aggression**, and parent, teacher, and self reports of **hyperactivity, lack of persistence, inattention, and impulsivity.**

What we know:
Research

SELF-CONTROL

Self-control is an umbrella construct that bridges concepts and measurements from different disciplines (e.g., **impulsivity, conscientiousness, self-regulation, delay of gratification, inattention-hyperactivity, executive function, willpower, intertemporal choice**).

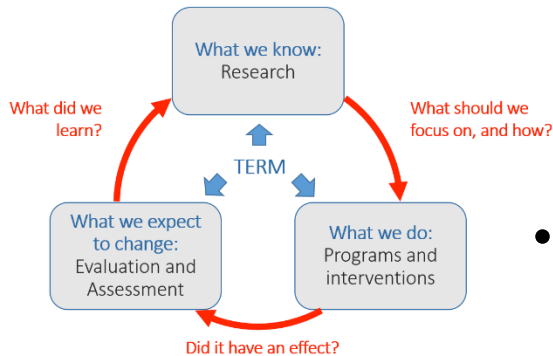
What we expect to change:
Assessment and Evaluation

What we do:
Strategies and Programs

???

Did it have an effect?

Why it matters...



Without **greater clarity, transparency, and precision** we risk:

- Creating interventions or standards and measuring impacts in ways that:
 - Narrowly focus on single skills; miss other areas that matter for children's success
 - Broadly focus on vague notions; miss discrete skills
 - Target skills different than those intended using strategies or measures meant for another application altogether
- Wasting time, money, and effort → decreasing confidence in the value of the domain as a whole

The Taxonomy Project

Goals & Methods

The What: A System for Navigating the Field

Our response to this challenge is a **taxonomy of skills/competencies**:

- System for transparently **navigating between and communicating across** different disciplines, perspectives, organizing systems in the field
- Uses a common coding system to look at widely-used frameworks and determine **what skills/competencies they include** and **how they are defined**
- Designed to function as a **Rosetta Stone**, allowing users to:

Understand how
skills and terms are
defined in various
frameworks

Navigate between
frameworks that
employ different
language

Communicate
clearly & precisely
across disciplines,
perspectives &
sectors

The How: A Set of Practical Online Tools

A **set of online tools** housed on the [Explore SEL Website](#):

Framework Profiles

“Look Inside Frameworks”

- General info about each framework (developer, age range, etc.)
- Which areas does it focus on/emphasize?
- Which skills does it include, and how are they organized?

Interactive Data Visualizations

“Compare Two Frameworks”

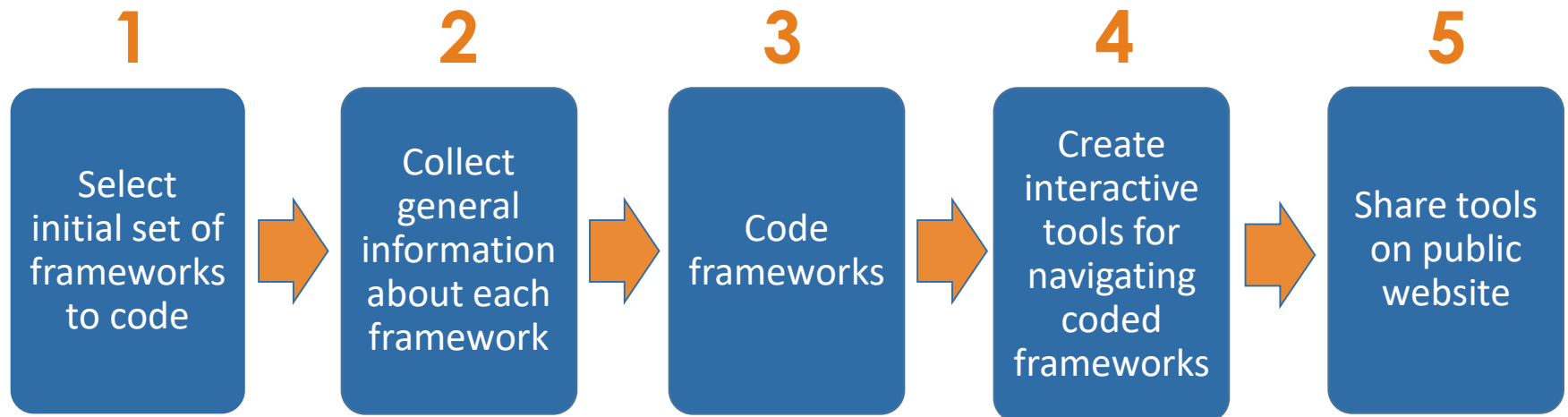
- Compare areas of emphasis across frameworks
- See when/where frameworks overlap (i.e. target similar skills)
- Find where a specific skill appears in different frameworks

Thesaurus of 200+ Terms

“Search for Skills”

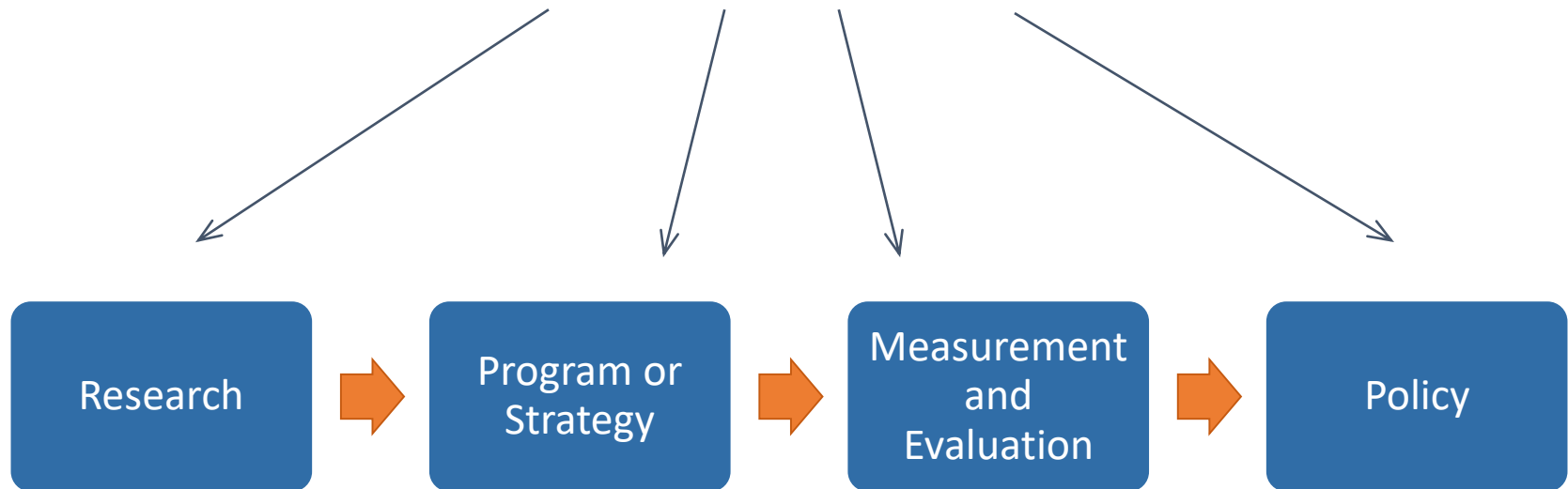
- See how a skill is defined in a particular framework
- Connect to related skills in other frameworks

Creating a Taxonomy



What is a Framework?

Frameworks define
the skills that matter



Selecting Frameworks

FRAMEWORKS



Inclusion Criteria

- Representative of a wide range of disciplines
- Widely adopted by educators, researchers, or policy-makers
- Descriptive skills, traits, competencies, strengths, mindset and/or attributes that are defined and can be coded

1. ACT's Holistic Framework (ACT)
2. Building Blocks for Learning (Turnaround for Children)
3. **SEL Competencies (CASEL)**
4. Character Strengths (Character Lab)
5. Clusters of 21st Century Competencies (National Research Council)
6. Connecticut State Standards
7. Early Learning Outcomes (Office of Head Start)
8. Emotional Intelligence
9. Employability Skills Framework (Office of Career, Technical, and Adult Education, U.S. Department of Education)
10. Foundation for Young Adult Success (UChicago CCSR)
11. Character Strengths (KIPP)
12. MESH (Transforming Education)
13. **Skills for Social Progress (OECD)**
14. Social and Emotional Learning: Standards and Benchmarks (Anchorage School District)
15. **21st Century Skills (Partnership for 21st Century Skills)**
16. **Big Five Personality Traits**

General Information

FRAMEWORK DETAILS

- 1 Name of Framework**
(e.g., CASEL's Five Core Competencies)
- 2 Organization**
(e.g., what group or organization authored or developed the framework)
- 3 Type**
(e.g., theoretical model, list of skills, hybrid)
- 4 Scope**
(e.g., field-wide, domain-specific, single construct)
- 5 Key Publications**
(e.g., draw on specific researcher's work, key citations used as evidence for the framework)
- 6 Constructs Included**
(e.g., list of all the skills/terms and definitions)

FRAMEWORK DETAILS

- 7 Key Features or Parameters**
(e.g., intended setting, age, etc.)
- 8 Importance or Use in the Field**
(e.g., used in charter school network; as guidance for schools, OSTs, or other settings)
- 9 Specificity of Constructs**
(e.g., vague or concrete observable behaviors)
- 10 Developmental Considerations**
(e.g., specified for a particular age range, whether and how it provides learning progressions for skills)
- 11 Context Considerations**
(e.g., culture, context, risk/promotive factors)
- 12 Measurement and Assessment**
(e.g., any suggested or indicated measures)

Coding System

Coding system is designed to capture **whether (and using what terminology)** each framework addresses common “non-cognitive” skills using three types of codes:

Cognitive Regulation

- Attention Control
- Working Memory/Planning
- Inhibitory Control
- Cognitive Flexibility

Values

- Ethical Values
- Performance Values
- Intellectual Values
- Civic Values

Emotion Processes

- Emotion Knowledge/Expression

- 2201** Uses feeling words appropriate to situation
- 2202** Appropriately uses a range of feeling words of varying intensity
- 2203** Expresses emotions to others effective ways
- 2204** Identifies emotions in self or others
- 2205** Identifies intensity of emotions/feelings in self and others
- 2206** Differentiates between feelings and behaviors

(etc.)

Interpersonal Skills

- Understanding Social Cues
- Conflict Resolution
- Prosocial Behavior

Identity/Self-Image

- Self-Knowledge
- Purpose
- Self-Efficacy/Growth Mindset
- Self-Esteem

Example: Zest (KIPP)

Definition: Enthusiastic and energetic participation in life.

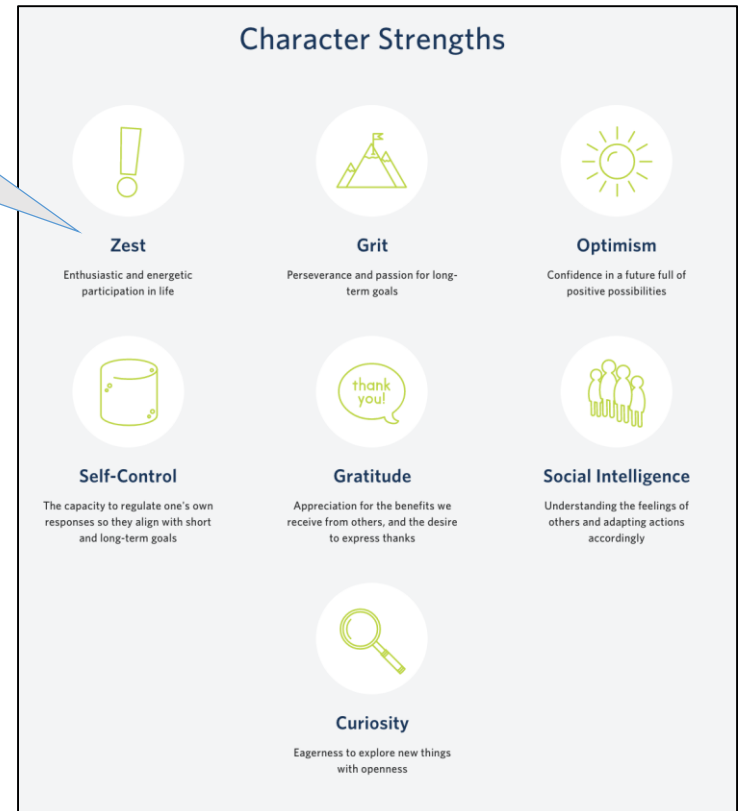
5401

Approaches activities with enthusiasm and excitement

Code applied: 5401

Sub-domains: **Enthusiasm/Zest**

Domains: **Perspectives**



Example: Self-management (MESH)

Definition: Self-management, also referred to as “self-control” or “self-regulation,” is the ability to regulate one’s emotions, thoughts, and behaviors effectively in different situations. This includes managing stress, seeking gratification, motivating oneself, and working toward personal and academic goals. Students with strong self-management skills arrive to class prepared, pay attention, follow directions, speak without interruption, work independently, and focus.

2204

2204

4204

4205

4205

1210

1208

1101

1303

1203

1101

transforming education

CORE

Introduction to Self-Management

Self-management, which is also referred to as “self-control” or “self-regulation,” is the ability to regulate one’s emotions, thoughts, and behaviors effectively in different situations. This includes managing stress, delaying gratification, motivating oneself, and setting and working toward personal and academic goals. Students with strong self-management skills arrive to class prepared, pay attention, follow directions, allow others to speak without interruption, and work independently with focus. Self-control in children as young as age 5 can predict important life outcomes such as high school completion, physical health, income, single parenthood, substance dependence, and criminal involvement.

Why This Matters: Strong self-management skills may contribute to better outcomes in school and beyond:

Fewer Dropouts: One recent report demonstrates that, controlling for academic achievement, children with better self-management at age 4 were almost 40% more likely to complete college by age 25.

Better Life Outcomes: As summarize in the graphs to the right, a landmark study showed that children’s self-management between ages 3-11 predicted key adult outcomes, such as physical health, substance dependence, personal finances, and criminal offenses. Childhood self-management also predicts life satisfaction and parenting skill.

Improved Academic Outcomes: Walter Mischel’s “Marshmallow Test” showed that ability to delay gratification at age 4 predicts academic and social competence as well as ability to cope with stress later in life. Ten years after the experiment, those who had delayed gratification were rated by their parents as more academically and socially competent, verbally fluent, rational, attentive, playful, and able to deal with frustration and stress. Several years later, the group that had delayed gratification at age 4 also had higher SAT scores than their peers who had not.

Sample questions we asked students in the SEL 2014 Pilot:

Please answer how often you did the following. During this marking period...

- I came to class prepared.
- I remembered and followed directions.
- I allowed others to speak without interruption.
- I worked independently with focus.

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Codes applied: 1101, 1203, 1204, 1208, 1210, 1303, 2204, 4204, 4205

Sub-domains: Attention Control, Working Memory and Planning Skills, Inhibitory Control, Emotional Regulation

Emotional Regulation: Sustains attention by focusing on task at hand

Working Memory and Planning Skills: Sets numerous tasks/goals and shows motivation to complete them

Domains: Cognitive Regulation, Emotion Processes,

Data-based Online Tools

Framework Profiles

“Look inside Frameworks”

Learn more about widely-used “nonacademic” frameworks and compare skills and features across them.

1



Explore Domain Focus

See how much each framework focuses on six common areas of SEL.

Three Visual Tools

“Compare Frameworks”

Use a set of interactive visual tools to identify similarities and differences across widely-used frameworks.

2



Discover Framework Connections

See where skills in one framework are related to skills in another.

Thesaurus

“Search for Skills”

Search a thesaurus of 200+ SEL and “nonacademic” terms to identify related skills across frameworks.

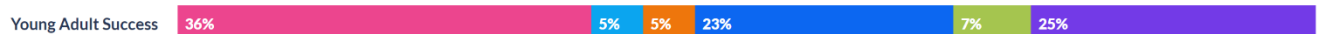
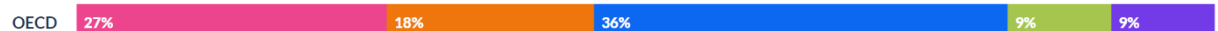
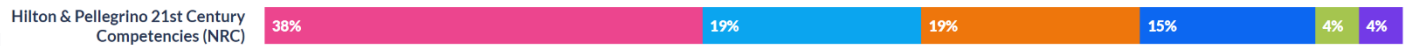
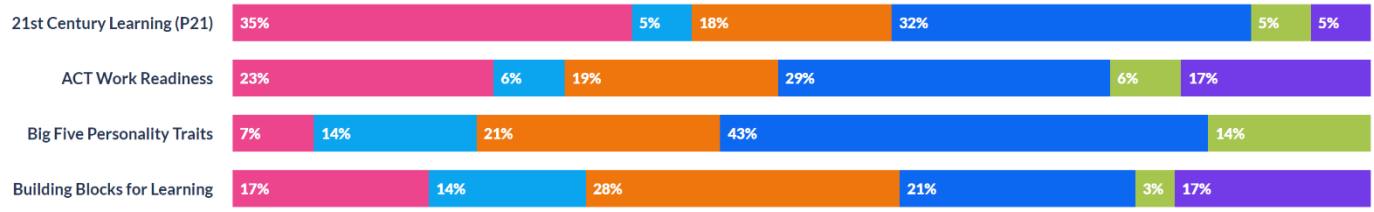
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Identify Related Skills

See where similar SEL skills appear across frameworks.

Comparing Domain Focus



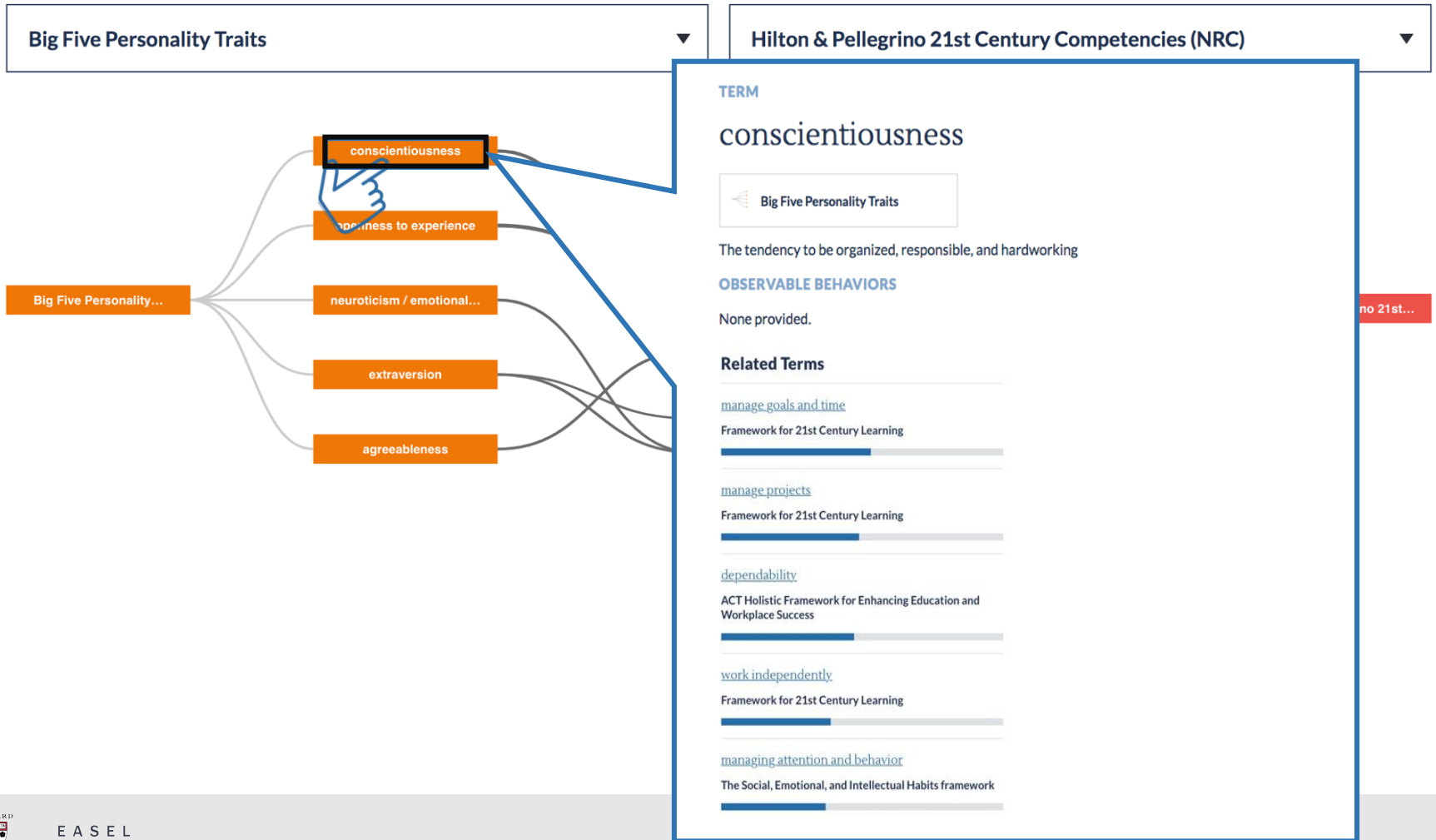
Similarity Index

The similarity index calculates **how closely two terms are related** based on the **number of overlapping codes** they received:

Each pair of terms in the database receives a **SIMILARITY INDEX SCORE:**

Identical	1.000
Similar	0.7001 – 0.9999
Moderately similar	0.3001 – 0.7000
Distant	0.0001 – 0.3000
No overlap	0.000

Comparing Frameworks & Terms



Thesaurus of Terms

Social Intelligence (KIPP)

Understanding the feelings of others and adapting actions accordingly.

Framework: KIPP Character Strengths

Social Intelligence is a construct in the [KIPP Character Strengths](#) framework. This framework is a cornerstone of KIPP, which operates over 200 schools across the United States.

The framework (see right) is comprised of seven character strengths. This has much overlap with the work done by [Character Lab](#), which comprises these seven strengths plus two additional strengths.

Related Constructs

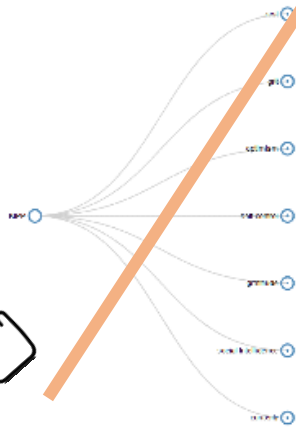
[Social/emotional intelligence \(Character Lab\)](#), [social awareness \(CASEL\)](#), [teamwork and collaboration \(NRC\)](#), [work effectively in diverse teams \(P21\)](#), [child expresses care and concern toward others \(OHS\)](#)

Measurements

[Character Growth Card](#)

Observable Behavior

Author Construct Type: character strength
Framework: Character Strengths
Organization: KIPP



Social Awareness (CASEL)

The ability to take the perspective of and empathize with others, including those from diverse backgrounds and cultures. The ability to understand social and ethical norms for behavior and to recognize family, school, and community resources and supports.

- Perspective-taking
- Empathy
- Appreciating diversity
- Respect for others

Framework: CASEL CORE SEL Competencies

Social Awareness is a construct in the [CASEL Core SEL Competencies](#) framework.

The framework (see right) comprises five competencies.

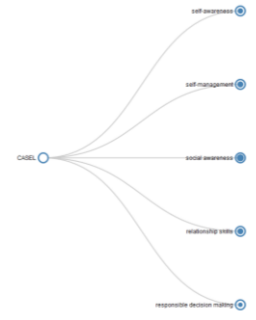
Related Constructs

[Social/emotional intelligence \(Character Lab\)](#), [Social intelligence \(KIPP\)](#), [teamwork and collaboration \(NRC\)](#), [work effectively in diverse teams \(P21\)](#), [child expresses care and concern toward others \(OHS\)](#)

Measurements

Observable Behavior

Author Construct Type: competency
Framework: CASEL Core SEL Competencies
Organization: CASEL



Future Work

→ Continue to Code Additional Frameworks

A more robust, comprehensive database of frameworks from which to draw information; make updates to frameworks as they change over time.

→ Link Programs

Users will be able to identify the evidence-based programs that align with specific frameworks and terms (SEL Analysis Project)

→ Link Strategies

Users will be able to see where and how stand-alone strategies align with frameworks and terms (Kernels Project)

→ Link Measures

Users will be able to see where and how measures align with frameworks, programs, and strategies (piloted with RAND)

SKILL: RESEARCH → INTERVENTION → ASSESSMENT → OUTCOMES

A walk through Explore SEL

<http://exploresel.gse.harvard.edu/>

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About the EASEL Lab

The Ecological Approaches to Social Emotional Learning (EASEL) Laboratory, led by **Stephanie M. Jones** of the Harvard Graduate School of Education, explores the effects of high-quality social-emotional interventions on the development and achievement of children, youth, teachers, parents, and communities. Our work takes place in applied settings (e.g., schools and communities), and we employ a combination of rigorous quantitative and qualitative methods to investigate how particular configurations of and transactions between individuals, their social groups, the settings in which they interact, and broader social contexts influence human development.

Learn more about our projects at easel.gse.harvard.edu.

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