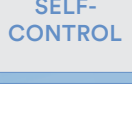
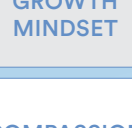


How IMPACTER Measures Human Skills

The Linguistic Architecture of Growth

IMPACTER's machine learning pipeline doesn't grade how well students speak. It measures the invisible architecture of growth: how learners organize time, link causes, and connect with others. By translating these linguistic traces into data, the platform makes human development itself measurable, giving educators and researchers a reliable way to measure what matters most.

	Process Detected	Representative Linguistic Features	Cognitive/Emotional Mechanism	Anchor Attribute	WHY IT MATTERS
QUAD 1 Drive to Know	Interrogative & Exploratory Reasoning	Question framing ("I wondered why ..."); Causal connectors ("because," "which made me realize"); Intrinsic motivation markers ("it was fascinating")	Active epistemic sense-making and intrinsic motivation to seek information beyond requirements.	CURIOSITY 	Students who demonstrate these features show decreased anxiety, stronger collaboration, and reduced stereotyping.
	Perspective Modeling	Pronoun/viewpoint shifts ("I could see why she ..."); Theory-of-mind clauses ("he thought that ..."); Empathic justification ("I tried to understand their side")	Cognitive empathy: representing others' mental states and integrating alternate perspectives.	PERSPECTIVE-TAKING 	
QUAD 2 Self-Management	Goal Framing & Future Orientation	Purpose verbs ("so I can ...," "my goal was ..."); Value statements ("it mattered because ..."); Abstract mission phrases ("to make a difference")	Motivational coherence: alignment of personal meaning, intention, and sustained direction.	PURPOSE 	Students who demonstrate these features persist toward long-term goals, regulate emotions effectively, and form stronger identity.
	Regulatory Monitoring	Control verbs ("I stopped myself," "decided not to ..."); Temporal self-interruption ("I was about to ... but ..."); Emotion-behavior pairs ("I felt angry so I took a break")	Executive self-regulation: managing impulses, emotions, and strategies to maintain goal focus.	SELF-CONTROL 	
QUAD 3 Decision-Making	Temporal Sequencing of Effort	Ordered event markers ("first ... then ... finally ..."); Adversity-persistence narratives ("failed → tried again → succeeded"); Endurance verbs ("kept going," "didn't give up")	Persistence schemas: sustained effort and adaptive persistence over time.	GRIT 	Students who demonstrate these features use strategic approaches to learning and demonstrate resilience when facing setbacks.
	Learning Progression Framing	Contrastive structures ("I used to ... but now I can ..."); Incremental change verbs ("improved," "got better each time"); Effort-attribution statements ("because I practiced")	Growth orientation: belief in improvability through effort and feedback.	GROWTH MINDSET 	
QUAD 4 Relationship Skills	Affective Empathy & Prosocial Reasoning	Emotion + action pairs ("I felt sorry for ... and wanted to help"); Joint-agency language ("we helped," "together"); Moral connectors ("because they needed support")	Compassionate concern: integration of empathy with responsibility to relieve others' distress.	COMPASSION 	Students who demonstrate these features experience less loneliness and demonstrate more prosocial behavior.
	Reciprocal Recognition & Appreciation	Benefit acknowledgment ("I appreciated when ..."); Reciprocity statements ("I thanked them," "wanted to give back"); Positive affect ("it made me feel valued")	Relational awareness: gratitude, prosocial reciprocity, and sense of belonging.	GRATITUDE 