The Importance of Non-Cognitive Skill Development:

Coaching PRIAT (persistence, resilience, initiative, agency, and tenacity)

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Cognitive Development

- Facts
- Definitions
- Processes
- Analysis
- Synthesis

Student Learning

Non-Cognitive Development

- Self Control
- Self Organization
- Planning
- Conscientiousness
- Interpersonal Skills
Non-Cognitive Factors: PRIAT

P – Perseverance: Doesn’t give up easily
R – Resilience: Ability to learn from failure
I – Initiative: Knowing what to do; taking first steps
A – Agency: Self-confidence, efficacy, control
T – Tenacity: Having *ganas*
Research Showing Importance of Non-Cognitive Factors on Learning

1. Pre-School Boosts Non-Cognitive But Not Cognitive Skills (Perry Experiment)

2. GED Students Less Likely to Complete College (Heckman)

3. Stress Prevents Learning, Soothing Encourages It - The Rat Study (Caldji et al.)

4. High School GPA better than ACT/SAT Scores in Predicting College Completion (Roberts)
Who will complete their STEM undergraduate degree?

**Female**
- 18 yr old
- Hispanic
- Middle class family
- English is first language
- HS GPA 3.8
- Both parents completed college
- Lives in dorm
- Parents paying for college

**Male**
- 17 yr old
- Hispanic
- Family lives at poverty level
- Spanish is first language
- No close relative is college grad
- Lives with and supports mother
- Scholarship/works part-time
- HS GPA 4.0
A tale of two freshmen
Freshman 1- Andres

• Extraordinary coaching and mentoring by K-12 teachers produced resilient, confident college student
• Bounced back from early failures and withstood racism within the college institution
• Ganas due to head of household status
• Knew that more effort = better grades (had “growth mindset”)
• Outcome?
  – Graduated with Electrical Engineering and Mathematics double major in 4 years
  – GPA 4.0 in college
Despite strong high school preparation and familial support for going to college:

- Was underconfident and suffered from stereotype threat within hyper-competitive environment
- Made poor decisions about developing relationships with peers or faculty
- Did not believe more effort would result in better grades, became hopeless (needed “growth mindset”)

Outcome?

- Withdrew from college her junior year
- Returned to finish senior year and completed a Chemistry degree (6 years total)
- Final college GPA 2.7
What Can I Do To Enhance Learning?

Faculty

Administration

Counselors
Interventions for Non-Cognitive Development in Students

- Faculty -

– At first sign of trouble, intervene personally and insist on one-on-one face time (find out goals, aspirations, interests—don’t focus only on deficits);

– Make the syllabus a course planner to help students look ahead as well as back (teach them to self-monitor their learning progress);

– Create peer communities through paired/grouped problem solving during class (model the STEM community of practice);
Intervention for Non-Cognitive Development in Students

- Administrators -

– Support adjunct time on campus with office hours, consulting with students;
– Provide time-shared office space to adjuncts;
– Support faculty development of non-cognitive skill coaching of students;
– Protect student services/counseling budget;
– Advocate adoption of retention strategies;
Intervention for Non-Cognitive Development in Students

- Advisors/Mentors -

Ask lots of questions!

- How can you get around obstacles this semester?
- How do you get work done? How do you organize your study time?
- How can you make up for early failures? How can you approach your professor and your work differently?
- What did you learn from your mistakes? What can you change?
Want to Learn More? - See the handout for further reading


Heckman, James; Moon, Seong Hyeok; Pinto, Rodrigo; Savelyev, Peter A; & Yavitz, Adam; (2010), “The Rate of Return to the HighScope Perry Preschool Program,” *Journal of Public Economics*, 94:114, Nos. 1 & 2.


Thank you for your attendance and attention!

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