THE ROLE OF NON-COGNITIVE SKILLS IN CAREER AND COLLEGE SUCCESS

Linda Knicely
September 18, 2013
Session Outcomes – Attendees Will:

- Learn about relevant research around noncognitive skill development
- Create connections between this research and the college completion agenda as well as to their own personal and professional practice
- Envision and discuss with others opportunities to develop noncognitive skills within their school districts
- Be motivated to commit to action!
CHAPTER 1
How To Fail
(and How Not To)
NEGLECT

ABUSE

TRAUMA

FAMILY DISFUNCTION
“The part of the brain most affected by early stress is the prefrontal cortex, which is critical in self-regulatory activities of all kinds, both emotional and cognitive. As a result, children who grow up in stressful environments generally find it harder to concentrate, harder to sit still, harder to rebound from disappointments, and harder to follow directions. And that has a direct effect on their performance in school.”
ACE score

CHRONIC DISEASE

HEART DISEASE

AND EVEN MORE HEALTH PROBLEMS

DRUG AND ALCOHOL ADDICTION
Stress…

Responsibilities…

Pressure…
**Working memory:** A particular executive-function skill that refers to the ability to keep a bunch of facts in your head at the same time.

**Inverse relationship:** An inverse or negative relationship is a mathematical relationship in which one variable, say $y$, decreases as another, say $x$, increases.
“We now know that early stress and adversity can literally get under a child’s skin, where it can cause damage that lasts a lifetime. But there is also some positive news in this research. It turns out that there is a particularly effective antidote to the ill effects of early stress, and it comes not from pharmaceutical companies or early-childhood educators but from parents.”
Share an example from your professional or personal experience that connects you to what you just learned.
CHAPTER 2
How to Build Character
**Metacognitive strategy:** An educational process that incorporates knowledge about one's abilities, the demands of given tasks, and potentially effective learning strategies; it involves self-regulation via planning, predicting, monitoring, regulating, evaluating, and revising strategies.

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Thinking about the way one thinks
“The students who persisted in college were not necessarily the ones who had excelled academically . . . . Instead, they seemed to be the ones who possessed certain other gifts, skills like optimism and resilience and social agility. They were the students who were able to recover from bad grades and resolve to do better next time; who could bounce back from unhappy breakups or fights with their parents; who could persuade professors to give them extra help after class; who could resist the urge to go out to the movies and instead stay home and study.”
CHARLES DICKENS

A Tale of Two Cities

150th Anniversary Edition

WITH AN INTRODUCTION BY FREDERICK BUSCH
Character Strengths and Virtues

A HANDBOOK AND CLASSIFICATION

Christopher Peterson
Martin E. P. Seligman
Grit
Zest
Self-Control
Optimism
Gratitude
Social Intelligence
Curiosity

Why should I “Chare” about Character?
• The Grit Scale

• The Harvard Education Report about “Grit”
If/then statement

“If I get distracted by TV after school, then I will wait to watch TV until after I finish my homework.”
Academic Progress

Growth mindset people

Fixed mindset people
Do you think the idea of assessing character could work in your school district? Why or why not?

Time's up!
CHAPTER 2
How to Build Character
Executive functions: Include becoming more aware of one’s thought processes, understanding where mistakes were made, and thinking flexibly about how to overcome those mistakes.
Chess is Life
“Two of the most important executive functions are cognitive flexibility and cognitive self-control. Cognitive flexibility is the ability to see alternative solutions to problems, to think outside the box, to negotiate unfamiliar situations. Cognitive self-control is the ability to inhibit an instinctive or habitual response and substitute a more effective, less obvious one.”
How can we teach students to learn from failure?

Time’s up!
CHAPTER 3
How to Think
Succeed
YOUR FUTURE IS CALLING
College Completion Agenda
“Standardized-test scores were predicted by scores on pure IQ tests and . . . GPA was predicted by scores on tests of self-control. Put [these] findings together with [additional research], and you reach a rather remarkable conclusion: whether or not a student is able to graduate from a decent American college doesn’t necessarily have all that much to do with how smart he or she is. It has to do, instead, with that same list of character strengths that produce high GPAs in middle school and high school.”
Crossing the Finish Line: Completing College at America's Public Universities
Hope

ONE WAY
1961: 24
2003: 14
2012: <13
Which of the following attributes do you think would be the easiest to develop within a school setting? The most difficult?

**Time's up!**

- Resourcefulness
- Ambition
- Integrity
- Professionalism
- Resilience
Ohio Afterschool Network

The Ohio Afterschool Network (OAN) supports children, youth, families and communities by advocating with a unified voice for sustainable investments in safe, healthy and nurturing afterschool learning experiences.
“The character strengths that matter so much to young people’s success are not innate; they don’t appear in us magically, as a result of good luck or good genes. And they are not simply a choice. They are rooted in brain chemistry, and they are molded, in measurable and predictable ways, by the environment in which children grow up.”
Soft skills

Non-cognitive skills

21st Century Skills

Social capital

Executive functioning
21st Century Skills

Cognitive

• (Non-routine) problem solving
• Critical thinking
• Systems thinking
• Study skills
• Adaptability
• Creativity
• Meta-cognitive skills
21st Century Skills
Non-Cognitive

**Interpersonal**
- Complex communication
- Emotional/social intelligence
- Teamwork/
- Collaboration
- Leadership
- Cultural sensitivity
- Tolerance for diversity

**Intrapersonal**
- Self-efficacy
- Self-concept
- Attributions
- Work Ethic
- Persistence
- Organization
- Time management
- Ethics & Integrity
- Life-long learning
Considering the various reform efforts already underway in your district, as well as the “hat(s)” that you personally wear, how could developing non-cognitive skills be incorporated into your practice?

Time’s up!
The role of noncognitive skills in academic success
Jan 18, 2012 ... The role of noncognitive skills ... noncognitive skills which affect education, employment, ... (College Board/Michigan State University)1,2 ... 1absenteeism, disruptiveness, inattentiveness, tardiness, and homework completion ...
www.usc.edu/programs/oerpp/docs/PayneandKyllonenETSslides.pdf

'Soft skills' could be key to college readiness | Deseret News
Dec 1, 2012 ... College completion rates are sinking in the United States, and the ... noncognitive skills into college-readiness efforts,” wrote Caralee J. Adams ...
www.deseretnews.com/article/865567788/Soft-skills-could-be-key-to-college-readiness.html?page=all

Education Week: 'Soft Skills' Pushed as Part of College Readiness
Nov 13, 2012 ... The freshman says the noncognitive skills he learned in a high ... Yet, experts say, many teenagers lack them, and that’s hurting college-completion rates. .... The Critical Role of Oral Language in Reading for Title I Students ...
www.edweek.org/ew/articles/2012/11/14/12softskills_ep.h32.html

Practices and Programs That Prepare Students for College Graduation and Curriculum, College Matching, Social and Non-Cognitive Skills, and ... SEED’s unique boarding school environment also played a role in the .... interpreting conflicting evidence, communicating conclusions and findings, completing ....

Getting Students College and Career Ready | LINCS Community
Jan 23, 2013 ... College and Career Standards - Postsecondary Completion ... It is important to consider the noncognitive skills integration into our classrooms ... My workshop also emphasizes the importance of advocating for adult literacy ...
community.lincs.ed.gov/discussion/getting-students-college-and-career-ready

The Role of Noncognitive Skills in Explaining Cognitive Test Scores
This paper examines whether noncognitive skills – measured both by personality traits and economic ..... interested in completing the experiment as soon as possible, the average duration of ..... education of both parents, and college major.

Returns to Skills and the College Premium - Department of ...
Apr 22, 2010 ... 4The latter policy could also increase college completion because the ... We build on Taber (2001) by analyzing the roles of cognitive and noncognitive skills, and cognitive and noncognitive skills affect income and the college ...
economics.sas.upenn.edu/~karahan/paper3.pdf

WHAT DOES THE 'WEB HAVE TO SAY ON THE TOPIC?
HOW ABOUT OTHER RESEARCHERS?

Education for Life and Work: Developing Transferable Knowledge and Skills in the 21st Century

Abstract: Business, political, and educational leaders are increasingly asking schools to integrate development of skills such as problem solving, critical thinking, and collaboration into the teaching and learning of academic subjects. These skills are often referred to as “21st century skills” or “deeper learning.” At the request of several foundations, the National Research Council appointed a committee of experts in education, psychology, and economics to more clearly define “deeper learning” and “21st century skills,” consider these skills’ importance for positive outcomes in education, work, and other areas of life, address how to teach them, and examine related issues. The committee’s findings and recommendations are detailed in its report Education for Life and Work: Developing Transferable Knowledge and Skills in the 21st Century.

Rigor Redefined: Even our “best” schools are failing to prepare students for 21st-century careers and citizenship.

(Tony Wagner is the Codirector of the Change Leadership Group at the Harvard Graduate School of Education)
Abstract: This book provides an overview of recent research on the relationship between noncognitive attributes (such as effort or self-regulated learning) and academic outcomes (such as grades or test scores). Noncognitive attributes are those academically and occupationally relevant skills and traits that are not specifically intellectual or analytical in nature. They include a range of personality and motivational habits and attitudes that facilitate functioning well in school. Noncognitive traits, skills, and characteristics include perseverance, motivation, self-control, and other aspects of conscientiousness (see Borghans et al., 2008). Although they develop throughout childhood, noncognitive attributes developed during adolescence have been shown to have a significant and lasting impact on success in life (e.g., Rauber, 2007). Poor noncognitive attribute and skill development may accumulate over time; poor skills and habits developed and internalized early on may lead to less desirable educational and economic outcomes in adulthood, compounding cognitive or academic problems (Farkas, 2003; Kerckhoff & Glennie, 1999). Noncognitive attributes and skills may play an important role in reversing or limiting delays or deficiencies in cognitive development and academic achievement, and they may complement direct efforts to improve academic learning. Using a sample of empirical studies covering seven major noncognitive attributes and skills, we provide a general introduction to the field and its challenges, including discussion of major concepts, methodologies, measurement tools, and findings. Because existing publications in this area tend to focus narrowly on specific noncognitive attributes or on particular issues in research (such as theoretical debates or measurement approaches), we hope this work can give both academic researchers and students a better awareness of the noncognitive as a cohesive area of investigation. Our focus is on the state of the research and approaches researchers employ to measure these attributes and skills. We pay special attention to the relationship between these and critical academic outcomes that regularly appear in the educational research literature.
ONE SUGGESTION . . .

http://www.whatkidscando.org/specialcollections/advice_for_parents/index2.html

Advice for Parents: Helping Your Child Succeed in School—and Life

TWO-PART WORKSHOP POWERPOINTS (presented here as videos)

We figure that a good starting place for many parents is a two-part workshop that features the multimedia presentations you'll find below. Each presentation includes relevant research, facts, short video clips of students talking about our topics, and interactive exercises. The first presentation, Part 1, covers homework, managing stress, and self-control. Part 2 covers motivation and challenge, keeping it. curiosity and resourcefulness, and self-confidence. We've tried to make the material as engaging as possible for parents.

Each workshop might last 90 minutes and be separated by 2 to 4 weeks. But this is not a formula—please present these materials in ways that match your circumstances.

Workshops, we know, need a presenter. We don't have a prescription for who would make a suitable presenter, but the individual or team should be in “synch” with our messages and framework and
Five frogs are sitting on a branch... four decide to jump off. How many are left?
QUESTIONS?
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- Create connections between this research and the college completion agenda as well as to their own personal and professional practice
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- Be motivated to commit to action!

Webinar link here
Ready…Set…GO!

Join us in November for:

Getting IN! As the logical next step after getting READY during the CCR strand of the September LLC workshop, the focus in November will be on the processes involved in Getting IN (to college or a career training program). We will address three integral steps – career/college exploration to ensure appropriate “fit”; the application steps themselves and mechanisms available to support and advocate for students in that process; and the knowledge needed to financially realize one’s career and college goals.