

Resources by Skill: Growth Mindset

The Importance of a Growth Mindset

Noncognitive factors in general, including a growth mindset, are essential for academic success. **Farrington et al. (2012)** performed a literature review of the impact of focusing educational efforts on non-cognitive factors instead of cognitive factors, and note the importance of attitudes about learning to academic and future success. Furthermore, there is evidence that academic mindsets are malleable and can be taught. The researchers suggest the following construct for various noncognitive factors that influence academic performance:

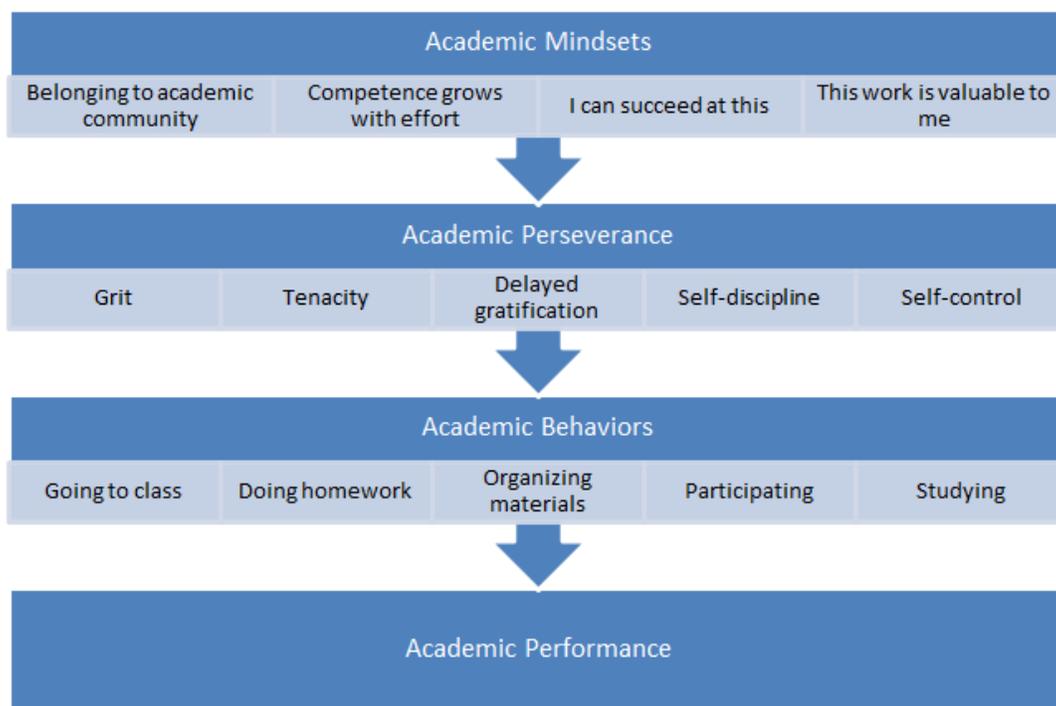


Figure 1: Farrington, et al.'s proposed process of turning academic mindsets into academic performance. Note that learning strategies, such as study skills and goal setting, also influence academic perseverance, behaviors, and performance, and that social skills, such as empathy and cooperation, can also impact academic behaviors. Additionally, context and environment can affect all of these factors.

The **Organization for Economic Cooperation and Development (2015)** studied OECD countries' implementation of SEL programs and interventions and their effectiveness at various indicators of social progress. In the US, children who participated in a low-cost program to change their mindset from fixed to growth-oriented scored better on the international PISA mathematics test.

Roeser et al. (2002) performed multiple analyses of academic motivation, including a growth mindset. One analysis found that adolescents who think that intelligence is fixed (fixed mindset) and who pursued academic goals in which concealing one's perceived ability relative to others was the aim (ego-

avoidance) were more likely to report symptoms of internalizing and externalizing distress. Adolescents' perceived efficacy, valuing of subject matter, and task goal orientation all negatively correlated with distress. In another analysis, "helpless" students who did not believe they could improve were less engaged and more distracted, and acted out and withdrew more in the classroom.

Other researchers have emphasized the importance of incorporating what we know about the growth mindset into research paradigms concerning social-emotional learning in general. For example, **Dornyei (2000)** argued for a process model of motivation, which would break motivation up into pre-actional, actional, and post-actional phases. The paper argues that it is one thing to be motivated to do something initially, and another thing to have the persistence to follow through. This is especially relevant in school-based contexts, where long-term activities and skill building usually take place. This model provides a useful research paradigm for using task-based assessments of academic motivation. The model implies the ability to develop systematic motivational strategies that the teacher can apply to generate and maintain motivation in learners, and the ability to formulate action control or self-motivating strategies that enable learners to take personal control of the conditions and experiences that shape their subjective involvement in learning.

Cultivating a Growth Mindset

Carol Dweck is the primary researcher who advocates for a growth mindset approach to learning. Some suggestions of hers for teaching a growth mindset include:

- Challenge students to learn and achieve over time
 - Set high expectations and standards
 - Ensure that students perceive expectations as challenging but attainable
- Scaffold cognitive tasks and instructions, as well as the motivational process
 - Treat tasks and student motivation as a progression
 - Support student autonomy and intrinsic motivation
- Promote students' feelings of belonging
- Praise students properly
 - Tell stories of hard work rather than talent
 - Congratulate students for their hard work rather than talent

A study of students who participated in school clubs, sports teams, or other OST recreational activities (**Fredricks and Eccles, 2008**) examined the effects of participation in eighth grade on immediate and later (eleventh grade) outcomes. Significant differences between participants and non-participants were found for: eighth grade grades, school value, resiliency, prosocial peers, and risky behaviors; and eleventh grade grades, school value, self-esteem, resiliency, and prosocial peers. These results led researchers to recommend encouraging organized activity involvement in middle school, for a diverse group of youth.

Works Cited

Dornyei, Z. (2000). Motivation in action: Towards a process-oriented conceptualisation of student motivation. *British Journal of Educational Psychology, 70*, 519-538.

Dweck, C.S. (2015). The Secret to Raising Smart Kids. *Scientific American*.

Dweck, C.S., Walton, G.M., & Cohen, G.L. (2014). Academic tenacity: Mindsets and skills that promote long-term learning. Bill and Melinda Gates Foundation.

Farrington, C.A., Roderick, M., Allensworth, E., Nagaoka, J., Keyes, T.S., Johnson, D.W., & Beechum, N.O. (2012). Teaching Adolescents to become learners: The role of noncognitive factors in shaping school performance, A critical literature review. Chicago, IL: University of Chicago Consortium on Chicago School Research.

Fredricks, J.A. & Eccles, J.S. (2008). Participation in extracurricular activities in the middle school years: Are there developmental benefits from African American and European American youth? *Journal of Youth and Adolescence, 37*, 1029-1043.

Organization for Economic Cooperation and Development. (2015). Skills for social progress: The power of social and emotional skills.

Roeser, R.W., Strobel, K.R., & Quihuis, G. (2002). Studying early adolescents' academic motivation, social-emotional functioning, and engagement in learning: Variable- and person-centered approaches. *Anxiety, Stress, and Coping, 15*, 345-368.