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Mindset and Motivation in Adolescence

by Kristen Elmore

If you asked an adolescent about their goals for the next year, a plausible list would be to do well at school, fit in with friends, and stay physically fit. Any of these goals may hit an unexpected roadblock such as a failing test grade, feeling excluded by a friend, or gaining weight over summer vacation. When adolescents encounter failures along the way to their goals, why do some people give up while others keep going? Research on "mindsets" offers one answer—youth may hold different beliefs about whether their abilities are fixed or can be improved with effort. A large body of research from Carol Dweck and colleagues has both documented these mindsets and linked them to how individuals respond to setbacks in the pursuit of academic, social, and health goals (e.g., Dweck, 2000; Molden & Dweck, 2006).

What are mindsets?

People use lay theories—a set of assumptions about the social world—to interpret their experiences. Mindsets, in turn, are a specific lay theory about the nature of human traits (Molden & Dweck, 2006). Mindsets are categorized into two distinct types:

- **Fixed Mindset:** Traits are fixed and stable. Also referred to as an entity theory of traits. Suggests that you have little control over your traits; you're stuck with what you've got.
- **Growth Mindset:** Traits are malleable. Also referred to as an incremental theory of traits. Suggests that you can control your traits and increase your ability.

These general mindsets have been found with relatively equal frequency across populations, but they often vary across domains such that an individual may hold a growth mindset about one trait, like intelligence, but a fixed mindset

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about another trait, like shyness (Dweck, Chiu, & Hong, 1995). Researchers have examined the existence and effects of beliefs about the malleability of traits across numerous domains.

What are the effects of mindsets?

Research on mindsets began with a focus on lay theories of intelligence, but this work has since been extended to beliefs about the malleability of many other traits such as morality, body weight, and athletic ability. Across studies and domains, more incremental beliefs about traits predict greater goal achievement (Burnette, O'Boyle, VanEpps, Pollack, & Finkel, 2013). For example, seventh-graders' mindsets predict their school performance two years later: those with a fixed mindset tend to do less well than those with a growth mindset (Blackwell, Trzesniewski, & Dweck, 2007).

How do mindsets shape people's thoughts and reactions to failure?

Fixed Mindset: Failure means that I lack the ability required to succeed. I should give up and try something that I have the ability to do.

Growth Mindset: Failure means that I am using the wrong strategy to succeed. I should keep putting in effort and try new approaches.

How do mindsets lead to these differences in achievement? Early studies measured whether students held fixed or growth mindsets and then observed their responses to failure, which shed light on how these mindsets impact achievement over time (e.g., Diener & Dweck, 1978; Dweck & Leggett, 1988). Students reporting a fixed mindset were more likely to demonstrate a helpless response to failure, interpreting failure as reflecting an unchangeable lack of ability. They were also more likely to display depressed affect. When allowed to choose their own activity, this group of students chose easier tasks to demonstrate competence and repair self-esteem. In contrast, students with a growth mindset interpreted failure as reflecting an ineffective strategy or approach, and these children were able to maintain positive affect, attempt new strategies, and sustain interest in difficult tasks that offered opportunities to learn. Notably, these mindset differences are most likely to matter when students are struggling or encountering failure (Blackwell, Trzesniewski, & Dweck, 2007; Paunesku et al., 2015).

Extensions of the concept of growth mindsets to social and health domains offer useful insights for adolescents' goals beyond academic success. Yeager and colleagues demonstrate that adolescents who believe that social adversity arises from fixed traits—such as being a bully or a loser—are more likely to respond to peer conflicts with aggression, and they also experience more stress and negative health outcomes over time compared to peers who see social traits as malleable (Yeager, Trzesniewski, Tirri, Nokelainen, & Dweck, 2011; Yeager et al., 2014). In the domain of health decision-making, beliefs that body weight is essentially fixed (Burnette, 2010) or that being a smoker is basically a fixed identity (Fitz, Kaufman, & Moore, 2015) impact health intentions and behaviors related to dieting and smoking.

Where do these mindsets come from?

Individual differences in beliefs about the nature of traits emerge as early as preschool (Smiley & Dweck, 1994) and are shaped over time by messages that children receive from a number of sources, including parents, teachers, and culture. The focus of parents' praise matters; young children who receive parental praise focused on their effort (rather than their ability) are more likely to have growth mindsets years later (Gunderson et al., 2013). Feedback from teachers, both praise and criticism, also affects children's mindsets depending upon whether the feedback focuses on

the person or the process. Research into different types of feedback demonstrates that children who receive person-focused praise (i.e., "You must be smart at these problems") adopt more fixed mindsets and display maladaptive responses to failure compared to children who receive process-focused praise (i.e., "You must have worked hard at these problems") (Mueller & Dweck, 1998; see also Cimpain, Arce, Markman, & Dweck, 2007). Finally, even culture may have subtle effects on the prevalence of these mindsets. Although both growth and fixed mindsets are found across cultures, western cultures such as the U.S. and Canada may encourage more fixed mindsets than do more interdependent East Asian cultures (Heine et al., 2001).

However, it is encouraging that these mindsets are also sensitive to influence from situational factors and interventions. Many experiments have shown that mindset can be manipulated using subtle messages or feedback that lead people to adopt one mindset or the other within the context of the study (e.g., Burnette, 2010; Dweck, Chiu, & Hong, 1995; Yeager et al., 2011). These studies illustrate that although mindsets vary across individuals at the trait-level, they are not unchangeable.

How can we encourage adolescents to have growth mindsets?

A number of interventions have been developed and evaluated that successfully teach young people to adopt a growth mindset. For example, growth mindset interventions have successfully improved students' achievement in response to challenges in their academic (Blackwell, Trzesniewski, & Dweck, 2007) and social lives (Yeager et al., 2014).

Notably, growth mindset interventions may be particularly useful for students who face negative stereotypes about their performance based on their race or gender (e.g., Good, Aronson, & Inzlicht, 2003) or who perceive that they are not expected to succeed (Davis, Burnette, Allison, & Stone, 2011). The success of mindset-based intervention has even been expanded through large-scale implementation across diverse high schools using computer-based materials, leading to improved academic achievement among struggling students (Paunesku et al., 2015).

Mindset Resources

Learn more from Dr. Carol Dweck herself:

http://mindsetonline.com/

The Project for Education Research that Scales (PERTS) at Stanford University offers an extensive selection of materials to support educators, parents, and mentors in teaching growth mindsets:

https://www.mindsetkit.org/

Mindset Works has an office in New York City and offers the Brainology Program, a mindset program designed for children and adolescents:

http://www.mindsetworks.com/

In addition to programmatic approaches to encouraging growth mindsets, the language that teachers and practitioners employ in their interactions with adolescents offers opportunities to encourage youths' incremental beliefs. Even in small day-to-day interactions, focusing feedback and praise on adolescents' effort and progress can be a powerful way to encourage youth to be resilient rather than helpless when they encounter challenges in pursuit of their goals.

Mindsets influence our goals, motivation, and achievement across many domains. Fortunately, they are not set in stone. Parents, teachers, and youth work professionals can all help children and adolescents see a setback as a learning opportunity rather than a sign that she or he is a failure. By helping youth develop growth mindsets, we can relieve their anxiety, set the stage for achievement, and help them enjoy the journey toward their goals. ★

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