Bounce Back In Any Adverse Situation: Adaptive Triad Of Epistemic Belief, Mindset, & Achievement Emotions

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Abstract

Growth mindsets are generally associated with adaptive epistemic beliefs that may be characterized by an emphasis on learning and personal competence, which leads to positive achievement emotions. Persons with growth mindsets would, therefore, be more confident and optimistic about their ability, will be more motivated to learn, develop better problem-solving skills and persist in problems to reach a solution. However, people with a fixed mindset would be less open to new ideas and information as they are more likely to rely on stereotypes, fail to recognize that people have different knowledge levels and believe in their ability to demonstrate personal competence. In this article, we introduce a group of concepts called adaptive epistemic beliefs, achievement emotions, and mindset as three interrelated constructs that are causally interrelated. Achievement emotions are triggered when people feel the need to improve their performance level to achieve success or work toward positive reactions toward challenges or positively react toward failure. Our findings have important implications for understanding how students cope with school-based stress and academic achievement. In conclusion, we propose the utility of the proposed tripartite distinction in predicting a student's academic achievement during stressful situations by accounting for a student's beliefs about his/her ability to learn and behavioral engagement. The relationship between achievement emotions and a growth mindset has not been well understood in previous studies despite academic performance being an important element contributing to the success and well-being of children with learning disabilities. To understand how these three constructs can be linked together, it is necessary to discuss each construct in more detail.

INTRODUCTION

In her 2006 book, Mindset: The New Psychology of Success, Carol Dweck introduced the concept of mindset. She defined it as "a skill set that is used to direct one's attention to specific things in the world" and this skill set affects how people think about themselves, others, and their environment . The fixed mindset suggests that a person either has the ability or doesn't have it (Dweck & Leggett, 1988). People with this mindset believe that talent is innate and cannot be changed. In contrast, the growth mindset suggests that people can increase their abilities through effort and hard work (Dweck & Leggett1988 b)). In this book, author Carol Dweck describes "a growth orientation" as the ability to deal with failure, stress and challenges in learning. She argues that the way one thinks about intelligence and learning can have a profound impact on how they respond to adversity. Moreover, she sets forth two types of mindsets: the fixed mindset and the growth mindset. A fixated person perceives their intellect and/or abilities as fixed by a certain talent or skill level, whereas an individual with a growth mindset believes that these can always be improved upon with effort and hard work.

Mindset refers to the way a person thinks about their abilities and potential. Epistemological mindsets represent the individual's "deep" knowledge regarding learning, understanding,

knowing, and knowledge. In this way, it can be seen as a theory that determines how a person views his attitudes toward knowledge and beliefs in the acquisition of various skills and even behavior. Different epistemological mindsets have different beliefs and attitudes toward success, education, and learning that then impact an individual's performance in educational institutions. A growth mindset creates a sense of confidence and willingness to take chances because one expects failures to be an essential component of learning. Optimism and perseverance are among the many benefits of having such a mindset. The opposite, fixed mindset, leads to people not learning from failure, but also believing themselves unable to change or progress in areas where they have not so far succeeded. They often become overly worried about being judged by others as being less intelligent (Snyder & Lopez, 2002).

Students with growth mindsets do not become despondent when faced with failure; instead, they think "what did I do wrong" and "how can I improve?" With a fixed mindset, however, students believe that intelligence is native and unalterable. They may become depressed when confronted by failure because they believe that it reflects their innate ability. A growth mindset leads to increased motivation, persistence and helps the person cope with the situation better. It can be helpful for the individual to engage in tasks that are more challenging and develop new skills. The opposite is true for a fixed mindset. The individual will probably not feel challenged by the task and might even quit after experiencing failure. Mindset can be defined as a belief about intelligence: it is either fixed – intelligence is an innate ability that cannot be changed – or it is malleable, which means that we can learn to become smarter (Dweck, 1999).

. Achievement goals that are accompanied by an achievement emotion often lead to greater motivation, harder work, better performance, and enhanced persistence despite the frustration. In the area of mindset, the concept that abilities are innate and unchangeable has been widely known as a fixed mindset.

A fixed mindset emphasizes the role of nature over nurture, believing that our abilities are contained in our genes. Scholars such as Dweck (1981) concluded that individuals with a fixed mindset tend to only guard their high-level cognitive skills when handling academic assignments. Individuals with a fixed mindset may have had an innate belief that they were smarter than others; therefore, they didn't find it necessary to make any effort with lower-level tasks since their performance was uncontrollable and predetermined by nature.

A growth mindset is more conducive to performing well. It focuses on the potential for growth and development, rather than on fixed ability, thus making learning and performing easy for students. This is because, in cases of failure, a student with a growth mind is capable of identifying his mistakes and offering solutions to improve his performance rather than giving up altogether .or giving less effort in subsequent tasks. For example, if you're good at mathematics but cannot solve a particular problem, it may be due to your approach or method of solving it.

A growth mindset will ensure that you keep trying different methods until you can master that skill by implementing what you have learned over time. Beliefs about intelligence and whether it is fixed or malleable have been linked to many outcomes, including reading comprehension and academic persistence. Thus, a student with a growth mindset views failure as feedback to increase effort and persistence (Dweck, 2006 b).

Achievement Emotions, Mindset & Adaptability

The belief that one's performance is guided by ability, and not effort, is a fixed mind set. If a student believes that his or her performance is inevitable and uncontrollable, it is predicted that he or she feels helpless and experience anxiety in the classroom (Lou and Noels, 2020).When students are in an anxious state, they tend to feel more negative about their academic outcome: the more anxious they feel, the lower their achievement emotions will be. Adaptive epistemic beliefs can be strengthened through praise and encouragement. However, it is imperative that the feedback provided is based on the effort spent and not solely on performance.

This review article builds on these findings and argues that a learning-related appraisal development mindset can buffer against the negative effects of boredom, anxiety and disinterest that might be associated with an adverse study situation. As an example, we focus on students' experiences with one particular classroom situation, namely, when they fail a test or do not perform and expected. As we will argue, failing a test is a situation where adaptive regulation can be important for coping with the negative consequences of failure (e.g., feeling anxious or bored) and recovering from it (e.g., feeling motivated). Learning is a journey that is influenced by both external and personal factors. This study has identified personal characteristics related to performance and persistence, such as beliefs about intelligence, emotions, control beliefs, motivation and mindset to be key components that influence learning success. By gaining a better understanding of the relationship between these elements, remarkable learning changes can be achieved.

According to Hofer (2010), three components contribute to the regulation of learning-related emotions: negative reinforcement (e.g., reducing feelings of anxiety in threatening situations by employing strategies/strategies); positive reinforcement (e.g., increasing enjoyment from learning by employing strategies/strategies); and affective transformation (e.g., reinterpreting failure as challenge thus increasing motivation for achievement; Pekrun 2005).

Students with a fixed mindset think that intelligence is stable or fixed and they cannot change it. Therefore, they tend to avoid the failure of proving themselves as smart people. In contrast, students with a growth mindset believe that intelligence can be increased if they put effort into learning (Ng et al., 2012). The students who have a fixed belief that at one time they cannot change what they know usually tend to avoid failure. However, those who believe that intelligence can improve through effort and learning are more likely to enjoy being challenged in new situations, which could lead them to better academic performance. Research on achievement emotions and growth mindset highlights the complex relationship between

student appraisals and emotions across the learning processes. To understand how music students' appraisals influence learning outcomes and emotions, future research should consider both cognitive appraisal (growth mindset) and affective appraisal (emotions).

Emotions affect learning in various ways. For example, research has shown that emotion can influence students' beliefs about their abilities and performance (Parker & Maton, 2013). This study presents a series of mediating models to aid further understand how emotions affect achievement in music. Emotional reactions were significantly related to attributions of success or failure and motivation to persist. The current findings have significant implications for teachers and students as they highlight the role emotions play in achieving favorable attitudes toward learning music, especially when they are incorporated into lesson planning by educators.

According to the self-efficacy theory, a person's belief that he/she can perform a task successfully is in part due to control beliefs (Bandura, 1986). The degree of perceived control over an outcome will affect one's thoughts, emotions and actions. Therefore, if one has the belief that they can effectively control their future endeavors, they are more likely to be successful in those endeavors.

The stronger the person's perception of being able to control his/her learning process, the more likely he/she will be to enjoy it and thus show higher levels of achievement. Students who acknowledge the importance of the effort to achieve success are more receptive to challenges, which facilitate their acquisition of knowledge and skills (Dweck, 2006).

In the context of achieving success, students' emotions are related to motivational orientation (Dweck & Leggett, 1988; Dweck & Elliott, 1983). Students with a mastery-oriented mindset are likely to experience positive emotions such as joy and interest (competence-related growth emotions), whereas those with an incremental mindset are more likely to experience negative emotions such as shame and distress (threat emotions) (Dweck, 2018). Epistemic belief

indicates that people believe they can learn new or challenging concepts and ask questions so they can learn more. This mindset helps students handle setbacks by focusing on effort rather than ability and does not allow them to obsess about failure.

Achievement emotions include happiness for successful learning experiences, joy for learning something new and interesting, interest for just learning without having to struggle with it and concerns such as anxiety when there is too much pressure to perform well or when struggling with tasks that were easier in the past (Schunk & Hanson, 2010). School students, who must face all types of adversities daily, might get frustrated despite difficulties or crises in their studies and/or non-school life (Kamens & Ziegler, 1985; Dweck et al., 1987). To cope with these adversities, they must resort to various cognitive skills that may help them overcome the crisis.

. Positive associations between task competence and engaging in challenging tasks foster the experience of positive sensations like joy, interest, and hope. Such affective conflicts promote the emergence of worry, inhibition, pain avoidance, and frustration during learning. Negative affective states have been highly correlated with a decrease in intrinsic motivation (Deci et al., 2000), outcome expectancies for mastery (Pekrun et al., 2009), rate of performance (Larsen et al., 2004), perceptions of competence (Woolworth et al., 2008), satisfaction with one's progress in achieving goals. In the context of achievement emotions, a fixed mindset leads to unrealizable goals and lower or negative achievement emotions for high-risk learning activities (Dweck, 2007).

Epistemic Belief, Mindset, & Adaptability

Epistemic beliefs are about knowledge and the cognitive aspects of learning. Instead of asking "How can I learn?" epistemic beliefs ask "What will the outcome look like after I have learned something?" Achievement emotions are related to global evaluations of achievement situations. Finally, mindset refers to a pervasive orientation toward meaningful activities (Dweck and Leggett, 1988).

The capacity to improve academic performance and bounce back in any adverse situation through metacognition is a key variable in the learning process and in students' ability to persistently question initial attitudes and beliefs toward science (Claessens et al., 2008; Mahoney & Zimmerman, 2010). Butler et al. (2012) argue that this capacity is largely acquired by employing metacognitive processes of thinking about thinking ("meta-cognition"). The cognitive and affective-emotional dimensions of students' adaptive behavior relate to useful skills: the ability to actively construct new knowledge based on existing scientific knowledge is a key variable in the learning process as well as in students' ability to persistently question initial attitudes and beliefs toward science (Claessens et al., 2008; Mahoney & Zimmerman, 2010)

Research has shown that grit plays a vital role in the maintenance of effort and interest despite the failure of progress in pursuing goals, as well as integrating conscience into conscientiousness. Grit is a trait that covers the perseverance in pursuing goals and endurance despite failure. The ability to persevere despite setbacks is at least as important as intelligence and other physical and mental skills. Grit is a unique combination of passion and perseverance that enables an individual to pursue long-term goals. This quality, which is considered positive because it increases the probability of success and development (Kuhn & Honebry, 2010), can be divided into two major components: passion for long-term goals and the ability to maintain effort despite failure (Duckworth et al., 2007).

Resilience, on the other hand, is considered a vaccine against the adverse effects of negative events and reduces the incidence of burnout. Grit and adaptability are important for an individual to achieve their goals. However, studies (Dweck, 2017) have shown that a growth mindset is not the decisive factor for individuals to develop grit and adaptability. According to Vallerand (2010),Passion is an important motivational factor for people to be able to acquire the required skills and knowledge, and through experience and practice, develop a sense of expertise. All human skills depend on the ability to be able to adapt. As each person is unique, the type of

ability must fit the individual's needs and to approach each task. These individual differences can contribute to varying learning styles, personalities, preferences, and interests (Sigmundsson et al., 2020).

CONCLUSION

The ability to bounce back from setbacks is one of the most important characteristics that successful individuals need. Epistemic beliefs influence or shape human behavior in the sense that they can change self-image and motivation. Each one of us possesses his very own epistemic belief system, which comprises four subcategories: (1) knowledge about one's capabilities such as intelligence, expertise and skills; (2) knowledge one's values, rights and duties; (3) knowledge of what people expect us to know or believe; and (4) knowledge of what other people expect themselves to know or believe. The last three categories are interdependent on each other. Future research may need to investigate the relationship between epistemic beliefs, cognitive appraisal and emotional responses over time. Also, it would be interesting to see how adaptive behaviors differ across different situations, such as personal/social goals and when in relationships with others. Adapting to new scientific concepts and information challenge students' initial conceptions of the natural world, that is, their naive theories. Consequently, teachers can foster students' ability to adapt their conceptions or theories by providing new conceptualizations and subsequent challenges to these conceptualizations, so that scientific knowledge can become accessible. Recognizing three major dimensions of conceptual change (the cognitive, the emotional, and the motivational aspects) provides a map for teachers to this adaptation process and helps them align education practices with the cognitive-motivational functioning of students.

We live in a society and a culture that values hard work, good grades, and academic success and achievements. Some individuals may be able to connect their level of grit with levels of epistemic belief. This can help explain experiences with success and happiness. Individuals who have a sense of purpose and enjoy challenges seem to feel more engaged in their day-to-day lives and are hopeful about the future. These individuals can adjust their perspective, cope with setbacks and celebrate their successes toward their long-term goals

Hence, being happy and positive often helps us overcome obstacles in the journey toward reaching goals, whereas those without a growth mindset cannot handle struggles and fail at achieving goals, even if they desire so much to reach them. Adaptability, a construct encompassing students' adaptability and malleability to their environment, predicts a range of student academic and nonacademic outcomes across their life span. Adaptability stands to play an important role in educational settings, yet very little is known about how adaptability affects the growth mindset and achievement emotions. Here, we extend existing research by reviewing the unique contributions of adaptability to a growth mindset (approach, mastery-related self-beliefs) and achievement emotions (positive affect and anxiety related to school performance).

Additionally, we found that adaptability contributes uniquely to a growth mindset, above and beyond resilience and perseverance. Student academic emotions and mindsets are the emotional aspect of students' achievement. These emotions and mindsets influence learning success. They motivate students to seek out learning opportunities. Therefore, emotions related to achievement may stem from feelings of excitement or enjoyment about what students are doing in school. The ability to experience and express a range of positive emotions, including joy, interest, pride, awe, inspiration, gratitude, and love, is important for developing an adaptive personality.

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