

STUDENTS' GROWTH MINDSET: POTENTIAL ASSET IN FOSTERING EDUCATIONAL EQUITY.

Abstract :

Mindset theory organizes capacity beliefs into two broad groups - a fixed mindset and a growth mindset. A fixed mindset, originally called an entity theory of intelligence, describes the belief that one's intelligence is not under one's control. The diverse sets of socioemotional characteristics and cognitive skills students entered formal school with determine how fast and how well students will learn. The capacity of schools to manage student heterogeneity will influence the provision of equal opportunities and the capacity to promote educational equity. A growth mindset allows students to see challenges and failures as separate from their actual competency or personality, therefore students with a growth mindset tend to benefit from mistakes and feedback, seek help when they need it, and learn from failure.

Keywords : Mindset theory, modern economies, Educational achievement, economic role

Introduction :

In modern economies, people's livelihoods are based in large part on skills acquired through education. The benefits of education extend not just to higher earnings in the labour market and more secure employment, but also include wider advantages such as better health (Lleras-Muney 2005), higher life satisfaction (Powdthavee, Lekfuangfu & Wooden 2015), reduced criminal behaviour (Lochner 2020), and greater civic participation (Lochner 2011). The essential economic role of education implies that unequal education can be a driver of unequal outcomes between different groups in society. Educational achievement and attainment is highly unequal across and within many nations of the world (Hout, 2012). Large and importunate socioeconomic disparities in academic achievement were reported in all 72 countries examined by international assessment in 2015 (OECD, 2018).

The diverse sets of socioemotional characteristics and cognitive skills students entered formal school with determine how fast and how well students will learn. The capacity of schools to manage student heterogeneity will influence the provision of equal opportunities and the capacity to promote educational equity. Many existing or proposed interventions of policymakers and educators fail because they do not account for a learner's contextual realities, such as structural and systemic barriers (poverty and marginalization). So, educational outcomes remain unequal within and across nations. There are different and contrasting concepts of educational equity, how educational equity should be defined has been a subject of thoughtful debates for years (Jencks, 1988; Levinton, Geron & Brighthouse, 2022; Schouten, 2018; Temkin, 2016). All the school of thoughts agreed that educational equity is a valuable goal, but could not reach an agreement on how it should be defined.

There are different concepts of educational equity. There is 'equality of outcome' concept. This concept is premised on the assertion that equity entails students of different backgrounds achieving equal outcomes such as academic performance (Levinton, Geron & Brighthouse, 2022; Schouten, 2018). This school of thought argued that educational outcomes help students to access life goods such as income, social status and health (Schouten, 2018). This argument takes root from the manner in which social inequalities in education has been addressed. Social economic status achievement gaps emphasize difference in academic outcomes between students from different backgrounds. This school of thought is countered by another school of thought that believes that ensuring equality of opportunities should be a suitable goal

(Levinton, Geron & Brighthouse, 2022). To define educational equity as equality of opportunity makes it more complex since equality of opportunity itself is a concept with different meaning (Schouten, 2018). Schouten (2018) warned that if equality of opportunity is the provision with equal inputs or resources, then the equality of inputs conception will only reinforce unequal opportunities that already existed. Sokolowski and Ansari (2018) in agreement with Schouten (2018) asserted that different children require different inputs to ensure educational equity.

Another school of thought argued that educational equity should take into cognisance input and output (Schouten, 2018; Temkin, 2016; Sokolowski & Ansari 2018). For this school of thought, treating individuals unequally by providing more resources to those who are at risk of falling short of achieving adequate outcomes is morally right and acceptable. It follows that input should be provided on need basis to ensure that all students reach a minimum level of educational outcomes. And whatever inequality that exists after the minimum level has been reached is no longer a problem (Levinton, Geron & Brighthouse, 2022; Satz, 2007).

Over the past several decades, psychological researchers have attended to students' fixed mindsets (the belief that intellectual abilities are fixed) as one factor related to educational inequality (Dweck & Yeager, 2019; Yeager & Dweck, 2012). Fixed mindset beliefs can come from cultural stereotypes about which groups have high academic potential (Steele & Aronson, 1995), and can in turn sustain inequalities by leading minoritized students to believe that they cannot succeed even with great effort. One possible way to promote more equitable outcomes, then, could be to reduce fixed mindset beliefs by encouraging students to adopt a growth mindset. Growth mindset is the belief that students can meaningfully develop their intellectual abilities, under the right conditions (e.g. effort, effective strategies, and support from others) (Dweck & Yeager, 2019; Yeager & Dweck, 2012). When students endorse (or are encouraged to adopt) more of a growth mindset, they have been found to be more likely to engage in learning oriented behaviors that lead to improved educational outcomes (Dweck & Yeager, 2019; Yeager & Dweck, 2012). This is true among students from structurally disadvantaged groups (i.e., those stereotyped by majority groups or excluded from access to high-quality schooling) and students with a history of poorer academic performance (Blackwell, Trzesniewski & Dweck, 2007; Good, Aronson & Inzlicht, 2003; Yeager et al, 2022; Yeager et al, 2019; Yeager et al, 2016). Researches indicate that growth mindset effects are heterogeneous, varying meaningfully across students and academic contexts (Yeager et al, 2019; Burnette et al, 2022; Burnette, Boyle, VanEpps, Pollack; & Finkel, 2013). Researchers have shown that intervention effects are strongest for structurally disadvantage students and low-performing students. It follows that growth mindset interventions has/have have potential for addressing inequalities (Hecht, Yeager, Dweck, Murphy, 2021; Yeager & Dweck, 2020). Also intervention effects are strongest for context that support and reinforce the intervention message (Hecht, Yeager, Dweck, Murphy, 2021; Yeager & Dweck, 2020). Porter et al (2021) asserted that teachers could be a high-leverage target for interventions by helping them to design carefully crafted and thoroughly tested trainings that help them to initiate academic contexts that buttress and bolster student growth mindset. Teachers are the primary authority figures in the classroom (e.g. they usually set and execute grading schemes), and therefore their practices have a potent impact on the classroom culture (Hecht, Yeager, Dweck, Murphy, 2021; Murphy, Fryberg, Brady, Canning & Hecht, 2021, Hecht, Dweck, Murphy, Kroeper & Yeager, 2023; Kroeper, Fried, & Murphy, 2022, Kroeper, Muenks, Canning & Murphy, 2022; Sun, 2018). The classroom culture is defined as the shared system of beliefs, goals, and norms that define what it means to be a learner in that classroom (Canning, Muenks, Green & Murphy, 2019; Murphy, Fryberg, Brady, Canning & Hecht, 2021; Canning, Ozier, Williams, AlRasheed & Murphy, 2022; Leslie, Cimpian, Meyer, & Freeland, 2015, Kroeber, Kluckhohn & Culture,

1952; Robinson, 2023). Because research has found that a teacher's mindset culture is associated with the magnitude of the group disparities in achievement in their classrooms (Canning, Muenks, Green & Murphy, 2019), it is important for growth mindset research ~~is~~ to develop and evaluate programs that help teachers improve their mindset cultures. Accomplishing this goal will require researchers to address several major conceptual and empirical challenges.

Theory of Mindset

It is ~~very~~ important to ask and answer the question, 'why do children develop different learning goals? Dweck in conjunction with ~~her~~his associates recognized that our beliefs and our perceived capacities have a significant impact on our ability to navigate, and even benefit, from difficulties or failures we might experience (Yeager & Dweck, 2020). Different theories about one's abilities orient individuals to different goals, which in turn relate to different patterns of behaviour. Two self-theories emerged from this research that mapped onto achievement goals; entity theorists were associated with a performance goal orientation, and incremental theorists were related to mastery goals (Dweck & Leggett, 1988). Integration of this thinking was initially named Implicit Theories of Intelligence (ITOI) but recognizing that this theory can be applied to any aspect of the self, ITOI is now commonly referred to as Mindset Theory (Dweck, 2006).

Mindset theory organizes capacity beliefs into two broad groups - a fixed mindset and a growth mindset. A fixed mindset, originally called an entity theory of intelligence, describes the belief that one's intelligence is not under one's control (Dweck & Leggett, 1988). A fixed mindset commonly exhibits itself as the belief that abilities are stable and unchanging, and individuals with a fixed mindset tend to believe that a person has a set amount of potential for a certain task. A person with a fixed mindset believes that he/she can't change his/her intelligence. Children with a fixed mindset are prone to the helpless response pattern because they tend to view challenges as insurmountable tasks, which they interpret as indicative of low ability (Dweck & Leggett, 1988). In contrast, those with a growth mindset, originally called an incremental theory of intelligence, believe that intelligence is malleable and can be cultivated and developed with effort and experience, despite differences in aptitude, interest, or personality (Dweck, 1998). A growth mindset has been linked to higher academic achievement, taking more challenging courses, and college retention (Yeager et al., 2019). A person with a growth mindset believes he/she can change his/her intelligence. Children with a growth mindset are more likely to have a mastery-oriented pattern, which is more adaptive to learning, because they maintain positive affect toward the task and may even increase strategy use (Dweck & Leggett, 1988). Students who hold a growth mindset have been found to endorse stronger learning goals and make fewer helpless attributions (Blackwell et al., 2007). It is important to note that mindsets are domain specific; for example, someone could have a growth mindset about their math skills, but a fixed mindset about their basketball skills (Dweck, 2006).

Mindsets are often discussed as something one *has*; however, in practice, mindsets are situation dependent (Dweck, 2017), and all individuals have both growth and fixed mindsets at different times. There are certain events, circumstances, or people who influence our mindsets; for example, a situation where one feels judged, or where mistakes are not allowed, may trigger a fixed mindset (Dweck, 2017). Thus, mindset is highly influenced by environment and therefore provides a potential avenue for psychological professions to promote a growth mindset throughout the developmental years. As children age, a rise in social comparison, identity development, increasing levels of self-evaluation, and environmental structures, such as grades, may influence student's mindsets to become more fixed (Dweck, 1999). Associations

between mindsets and academic achievement have been found to be strongest during the early teen years (Costa & Faria, 2018). Particularly given the vulnerabilities associated with early adolescence, including high level of self-focus and fear of embarrassment, adolescents with a fixed mindset may reduce their academic efforts in an attempt to protect their egos (Dweck, 2006). Thus, early groundwork to facilitate increased influence of a growth mindset during this critical developmental period may motivate students, particularly those who are more vulnerable, to continue to invest in their goals (Yeager et al., 2019).

Mechanisms of Mindsets

Handling failure

A growth mindset allows students to see challenges and failures as separate from their actual competency or personality, therefore students with a growth mindset tend to benefit from mistakes and feedback, seek help when they need it, and learn from failure (Dweck, 2017). On the other hand, those with a fixed mindset struggle to see opportunity in failure because they are afraid of showing inadequacy (Dweck, 2017). For individuals with fixed mindsets, failure is believed to reflect who they are as a person, and so individuals with a fixed mindset are generally more vulnerable to helplessness when they fail because they do not believe their abilities can improve. Individuals with fixed mindsets may react to failure with more negative affect and fewer constructive strategies than those with a growth mindset (Zhao & Dweck, 1994). Individuals with a fixed mindset are also primarily outcomes-focused. In a study using EEG technology where individuals completed a task and then were given feedback, those with a fixed mindset exhibited the strongest attentional response when they were told whether they were right or wrong, not when they were offered strategies for improvement (Mangels et al., 2006).

Effort-based strategies

Having a growth mindset about intelligence in middle school can predict higher grades, which can be attributed to positive beliefs about the value of persistence, and a willingness to respond to challenges with increased effort and helpful strategies (Blackwell et al., 2007; Sarrasin et al., 2018). Blackwell et al. (2007) examined the impact of beliefs regarding intelligence. They found students with a growth mindset experienced improved math performance over 2 years of junior high school compared to students who held fixed mindset. These growth mindset students demonstrated more effort-based strategies in response to failure, which consequently boosted their math achievement.

Bolstering expectations

Expectancy beliefs (i.e., beliefs about expectancy for success) are another key component of a growth mindset. Especially in groups of students who typically hold low expectations for themselves, such as low-income students and females in Science, Technology, Engineering, and Mathematics (STEM) courses, a growth mindset can bolster expectations, and in doing so create the motivational context that helps these students achieve academic success. For example, Degol et al. (2018) found that student's growth mindsets predicted a higher value of math to the student, and task values mediated the pathway from growth mindset to higher STEM career aspirations. Notably, females and males with fixed mindsets had comparable math grades; however, females with a growth mindset had higher grades than males with a growth mindset. This difference was due to females having higher expectancy beliefs than males, which suggests that expectancy beliefs about math abilities are an important factor in math performance for female students (Degol et al., 2018). Similar to students who face gender

stereotypes, low-income students may be less likely to have positive expectations for success given their life experiences. A growth mindset could lessen the impact of socio-economic status on academic achievement. A study by Claro et al. (2016) found that, although high school students from lower-income families were less likely to hold a growth mindset than wealthy students, those lower-income students who did have a growth mindset showed achievement in language and math scores comparable to high-income peers with a fixed mindset, suggesting that a growth mindset may act as a buffer between academic achievement and poverty (Claro et al., 2016). The influence of mindset is most associated with achievement among those who are facing challenges, which is relevant for school psychologists who often work with these students. In order to best help these students, it is important for psychologists to not only understand the psychological and behavioural influences of mindsets, but also how to use mindset theory as a form of intervention.

Growth mindset and Human Cognitive Architecture

Understanding the human cognitive architecture is very important in fostering educational equity. There is a compilation of large [researchesresearch studies](#) over the year in learning science on how people learn, of importance is how complex knowledge is acquired beyond the sheer memorization of facts. The reports of the [researchesresearch studies](#) posited that learning is a highly individual and active process, which happens through the interaction of individuals with their social environment (Bransford, Brown & Cocking, 2000; Darling-Hammond, Flook, Cook-Harvey, Barron & Osher, 2020; Dumont, Istance, & Benavides, 2010). Learners integrate their prior knowledge with the content to make sense of content and use it to [buildingbuild](#) a coherent and organized mental representation of that content (Stern, 2017). As such they are not passive recipients of information. The differences in individual students learning potential [areis as](#) a result of differences in domain-specific prior knowledge, which individuals acquire via previous formal and informal learning opportunities and general cognitive abilities (Sokolowski & Ansari, 2018; Stern, 2017). Students' prior knowledge is the most important determinant of academic performance (Simonsmeier, Flaig, Deiglmayr, Schalk & Schneider, 2022), since prior knowledge in one domain is the foundation for acquiring new and more complex knowledge in the same domain. So, differences in students' learning potential are dynamic, it changes over time (Tetzlaff, Schmiedek & Brod, 2021). [ResearchesResearch studies](#) in psychology asserted that taking [ingen](#) cognitive characteristics of students continuously into consideration during instruction will lead to effective instruction.

If a student believes that his or her intellectual abilities can be developed (growth mindset), such a student [s tends](#) to seek out demanding prospects that will build his or her mastery. Such a student will persist on the task when the learning involves mistakes [s](#) or challenges in the short-time. Also, a student that believes that his or her intellectual ability is fixed will not persevere when [the task beecome-becomes](#) challenging, but avoid the prospect and worry [yed](#) that failure would reveal his or her lack of competence. So, students with [a](#) growth mindset attribute failure to factors they can control, such as strategies and effort. The more of a fixed mindset students see failure as lack of potential to succeed. In the mind of students with growth mindset, effort is a tool to promote their growth while [students with a](#) fixed mind set believe that the need for effort reveals a fixed lack of ability (Dweck & Yeager, 2019; Yeager & Dweck, 2020). A lot of [researchesresearch studies](#) indicated that students' growth mindset beliefs positively determine academic outcomes (Dweck & Yeager, 2019; Yeager & Dweck, 2020; Yeager et al, 2022; Yeager et al, 2019; Burnette et al, 2022; Burnette, Boyle, VanEpps, Pollack & Finkel, 2013). The beliefs about the meaning of effort, systems of goal and attribution emanated from growth [mMindset](#) beliefs (Dweck & Yeager, 2019; Hecht, Yeager, Dweck & Murphy, 2021;

Molden & Dweck, 2006). Growth mindset belief is simple and powerful, it can be a fruitful target for interventions.

Effect of Growth Mindset on Self-Regulatory and Socioemotional Needs

Learning involves motivational and social processes, not just cognitive activity (Mertens, Herberz, Hahnel & Brosch, 2000; Bouton, 2000; Bailey, Duncan, Odgers & Yu, 2017). It is ~~very~~ important to ~~always~~ take students' different needs into account in an integrative manner during classroom instruction. Attention should be constantly given to students' self-regulatory and social needs during classroom instruction, because they are always changing. ~~Researches~~ ~~Research~~ studies have shown that students with lower levels of prior knowledge and cognitive abilities have little control of self-regulating their own learning process. As a result of this, ~~they~~ may require increased instructional support and guidance. It is very important for teachers to help students acquire self-regulatory skills because all students need explicit instruction in ~~self-regulation~~ ~~self-regulation~~ strategy (Fullilove & Treisman, 1990). ~~Also~~ ~~Else~~, ~~they~~ ~~re~~ should ~~be~~ explicitly designing educational technologies which gradually develop self-regulatory skills (Kazemi & Stipek, 2001). There is strong evidence that socioemotional needs are fulfilled via high-quality social interactions. Learning is a profound social activity in which the learners need a sense of belonging and emotional safety ~~in order~~ ~~to~~ cognitively engage in learning (Bailey, Duncan, Odgers & Yu, 2017). Importantly for students from less-advantaged background, success in ~~school~~ ~~academie~~ requires that teachers build robust supportive relationships with their students (Stipek, Givvin, Salmon & MacGyvers, 2001).

What teachers overtly or covertly say and do to create a growth versus fixed mindset culture is ~~more~~ ~~very~~ important than what they privately believe about students abilities when it comes to inequalities (Hecht, Yeager, Dweck, & Murphy, 2021; Murphy, Fryberg, Brady, Canning & Hecht, 2021; Hecht, Dweck, Murphy, Kroeper & Yeager, 2023; Kroeper, Fried & Murphy, 2022; Kroeper, Muenks, Canning & Murphy, 2022; Sun, 2018). Teachers that are of more of ~~a~~ growth mindset will allow students to revise and resubmit their work and explain that their standard is rooted in ~~a~~ ~~belie~~ ~~ve~~ that all students can learn the task. The students can pick up on the prompt (Murphy, Steele & Gross, 2007; Murphy & Taylor, 2012) and recognize that their teacher endorses ~~a~~ growth mindset. This notion will have ~~an~~ effect on their psychological security or helplessness within the classroom. Students who perceived that their teacher supported ~~ed~~ more of ~~a~~ growth mindset reported a greater sense of belonging in the teacher's course when compared to a fixed mindset (Muenks et al, 2020). For a group that ~~is~~ ~~are~~ ~~experiencing~~ ~~a~~ ~~negatively~~ stereotype in terms of ability or intelligence, this may be true, since they may fear that these stereotypes may inform their fixed mindset teacher's assumption about which students are capable (Spencer, Logel & Davies, 2016; Steele, 1997). Concerns about being negatively evaluated and confirming negative stereotypes may be dispelled because the teacher's growth mindset implies that all students can learn and improve. Inequality can be affected by the classroom mindset culture; it could lead to student achievement disparities (Canning, Muenks, Green, Murphy, 2019). Also, growth mindset classroom cultures can also tackle inequalities by providing psychological affordances for students' own growth mindset beliefs (Hecht, Yeager, Dweck, & Murphy, 2021; Walton & Yeager, 2020). Students' mindset belief can prompt learning-orientation behaviours that can make ~~easy~~ positive academic outcomes ~~more~~ ~~easy~~, making it a potential asset in learning environment (Dweck & Yeager, 2019; Molden & Dweck, 2006; Robins and Pals, 2002). In a fixed mindset classroom culture, going against or weakening the beliefs may be of advantage, because they may less likely guide the students' behaviour within that context and promote learning. When growth mindset beliefs are enhanced and bolstered by the environment, students can benefit more from these beliefs.

Students may gain more from learning the growth mindset through intervention activity, when the classroom or school environment is unswerving with the growth mindset message (Yeager et al, 2022; Yeager et al, 2019).

Considering the Broader Context

The context in which teaching and learning takes place also contribute to educational inequity. Students' experiences can vary within and across schools (Nitkin, Ready & Bowers, 2022). In many countries, for example in Nigeria, most children attend schools closer to their homes which may mostly result in ~~to~~ between-school social and academic stratification. In other countries of the world tracking is the power driving the large differences between schools, including differences in their socioeconomic composition. Consequently, students from high- and low socioeconomic backgrounds often attend schools that differ significantly in the quality of education they provide. Rural or semi urban schools serving high concentrations of economically disadvantaged students not only cater to larger numbers of children with academic and behavioural problems, they also have little resources and attract less qualified teachers than schools serving students from high socioeconomic backgrounds (Goldhaber, Quince & Theobald, 2018; Reardon & Owens, 2014). All this makes it more difficult to provide high-quality learning. In spite of ~~an~~ increase in school enrolments in the past decades in low-income countries, especially Nigeria, the majority of students still do not possess basic competencies in reading and mathematics (Gruijters & Behrman, 2020). Many schools in low-income countries, especially in rural areas, are confronted with a lack of physical infrastructure (e.g. electricity, enough classrooms, access to reliable internet) and educational resources (e.g. textbooks, computers), and are often challenged by underqualified and inexperienced teachers, high rates of teacher absenteeism, student-teacher-ratios as high as 100:1 and high levels of student poverty and malnutrition(Zuaikernan, 2016; Gruijters & Behrman, 2020; Alhassan & Abosi, 2014).

Mindset Interventions

The main aim of Mindset interventions is to educate students about their brain and its capacity for growth and development, with the sole aim of fostering a growth mindset and ultimately influencing positive outcomes, such as academic achievement (Yeager & Dweck, 2020). Different methods are used to deliver mindset interventions to students in schools, videos, workshops, or a written explanation that highlights the ability of the brain to change and grow are used in schools. For example, teaching students about neuroplasticity and the potential for growth has been found to influence their beliefs, which in turn has an overall positive effect on motivation and achievement (Sarrasin et al., 2018). In order to promote a growth mindset in students, mindset interventions often use communication strategy such as “the brain is like a muscle – it gets stronger (and smarter) when you exercise it” (Yeager & Dweck, 2020, p. 1277).

Research Evidence

The benefits of mindset interventions are self evident~~tee~~ and are measurable (Yeager & Dweck, 2020). In accordance with Sarrasin et al. (2018), ~~in~~, ~~in~~ a meta-analysis of studies which neuroplasticity was taught to induce a growth mindset in a variety of participants, researchers found that targeting students' beliefs about the malleability of their abilities by way of teaching about neuroplasticity had positive impacts on motivation, achievement, and brain activity. The impacts were most evidence in math achievement for at-risk youth (Sarrasin et al., 2018). In an intervention study conducted by Blackwell et al., (2007), seventh-grade students who were taught about growth mindsets showed enhanced motivation in math class, based on teacher reports, and, consequently, these students maintained math performance over a 2-year period,

in contrast to a control group who demonstrated a decline in math performance. Similarly, Good et al. (2003) reported that when low income seventh grade students were mentored by college students ~~who embraced and admonished the~~ view that intelligence was malleable, they earned significantly higher reading and math scores than students in the control condition. ~~Also~~ Also, a decreased gender-gap for math performance; females who learned about the malleability of intelligence earned significantly higher math standardized test scores than females in the control condition (Good et al., 2003).

The duration of Mindset interventions does not have any effect on its benefits. The evidence from a large-scale study of ninth-grade students in the USA (the National Study for Learning Mindsets) (Yeager et al., 2019), showed that mindset interventions do not need to be long or particularly intensive to have benefits. Yeager et al (2019) found that an online growth mindset intervention that was less than an hour in length led to improved grades for lower-achieving students and increased the rate at which students chose to stay in a harder math class. Likewise, Burnette et al. (2018) reported a 45-minute online mindset intervention that increased growth mindsets of low-income, 10th grade female students immediately following the intervention and at 4-month follow-up. Moreover, student's motivation, learning efficacy, and grades were reported affected by growth mindset intervention indirectly (Burnette et al., 2018). All these ~~researches~~ research studies exemplify the evidence that mindset interventions can be beneficial for learning and academic success.

Intervention Considerations

School psychologists can encourage the use of mindset interventions to bolester student learning and potential, because mindset interventions offer a cost-effective and time-efficient tool that can be implemented in schools (Yeager & Walton, 2011). To optimize the benefits of mindset interventions and proper implementation, certain ingredients are very essential. In mindset interventions growth should be described alone with no reference to fixed mindset for effectiveness (Yeager et al., 2016). Intervention should be autonomy-supportive, not didactic in nature and the intervention messages feel incorporated into the learning environment (Yeager & Dweck, 2020). The reason is that mindset theory was originally called *implicit* theories because the underlying belief is not explicitly activated or necessarily in conscious awareness. Some examples of stealthy interventions include incorporating mindset information into written courses (Blackwell et al., 2007), mentorship experiences (Good et al., 2003) or assignments (Yeager et al., 2019). When implementing mindset interventions, school psychologists are advised to be cautious that students do not receive the wrong messaging that their abilities can develop easily or infinitely, because such message could lead to distrust or disappointment in students. So, it is important for growth mindset interventions to encourage participants to consider theirs, and others, developmental potentials, but do not make any suggestions as to the magnitude or ease of that change (Yeager & Dweck, 2020). Lastly, the role of the environment is crucial in fostering a growth mindset. Yeager et al. (2019) asserted that it was the combined importance of school environment and belief change that influenced sustained benefits of a mindset intervention. Yeager et al., (2019) concluded that mindset interventions that deliver messages about growth without embedding the same message in the school and classroom environment will be unlikely to see positive results (Yeager et al., 2019).

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