

Unconscious Bias, Stereotype Threat & Growth Mindset

Case Study

Prepared for 

ARISE

*Anchorage Realizing Indigenous
Student Excellence*

Prepared by


**McDowell
GROUP**



September 2016

Case Study: Unconscious Bias, Stereotype Threat & Growth Mindset

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September 2016

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This document supports the Anchorage Realizing Indigenous Student Excellence (ARISE) partnership's School Climate work by delving deeper into some of the nuanced mechanisms that bolster and detract from positive school climates for Anchorage's Alaska Native youth. Case studies described in the report explore three constructs that impact the way all human beings think: (1) unconscious bias, (2) stereotype threat, and (3) growth mindset.

The case studies focus on the implications of these constructs for students. Each case study includes an overview of the construct, how it impacts students in educational settings, and interventions found to support students. Following the three case studies is a section that highlights applied resources for students, parents, and teachers. Finally, the report discusses how the constructs relate to each other and suggests possible future research.

Limitations

Research for the case studies identified only limited information on unconscious bias, stereotype threat, or mindset that is specific to Alaska Native students. The majority of studies of racial/ethnic gaps compare the experiences of black and white students together. Researchers often extrapolate those findings to the experiences of other racial/ethnic groups, but the contexts may not be entirely parallel.

In *A Review and Analysis of Research on Native American¹ Students*, researchers Demmert, Grissmer, and Towner attribute the lack of emphasis in research on Alaska Native and/or American Indian (AN/AI) students partly to the small size of that student population compared to black, Hispanic, or disadvantaged white populations (2006). Further, black and Hispanic student populations are often oversampled, whereas AN/AI populations typically are not, and the small sample size limits analysis (Demmert et al., 2006). In addition, AN/AI students are more clustered geographically than other racial/ethnic groups. Combining these clusters into larger samples introduces variability that can limit the types of statistical analysis the data will support (Demmert, 2006). Demmert et al. conclude that most research on Native American people has been small-scale, non-experimental, non-longitudinal, and methodologically problematic (Demmert et al., 2006).

These findings highlight the importance of conducting and publishing high-quality, meaningful studies to support the literature on Alaska Native students (see next steps).

¹ Unless the resource cited uses different terms (as in this example), the preferred terms 'Alaska Native people,' 'Alaska Native students,' or 'Alaska Native and/or American Indian (AN/AI)' are used.

Case Study: Unconscious Bias

What is unconscious bias?

Unconscious biases (also referred to as implicit or hidden bias) are attitudes or stereotypes that affect our understanding, actions, and decisions in ways that we are not consciously aware of (Staats, Capatosto, Wright, & Jackson, 2016). The biases are triggered involuntarily by characteristics we ascribe to others—based on factors such as ethnicity, gender, disability, and age—that have been influenced by our individual background, cultural environment, and personal experiences (Staats, 2016).

Unconscious biases can be positive or negative, and everyone is susceptible to them. Their influence has been documented in a range of professions including education, healthcare, law enforcement, and the judicial system. In their review of the 2016 *State of the Science: Implicit Bias*, Staats et al. found that unconscious biases are “distressingly pervasive,” and they can affect our behavior even when we intend to treat others equally, respectfully, and fairly (2016). But, the path from unconscious bias to discriminatory behavior is not inevitable; unconscious bias can be changed (Dasgupta, 2004). Awareness of potential bias, motivation and opportunity to control bias, and consciously held beliefs can affect whether and how biases affect behavior (Dasgupta, 2004).

Where do unconscious biases come from?

There is evidence that unconscious bias towards the in-group and the dominant group is present in early childhood and remains stable over time. This suggests that unconscious bias develops early in life (Dunham, Baron, & Banaji, 2008). Researchers theorize that unconscious biases emerge from daily experiences and that they add up over time. Biases are created and reinforced through reading, TV, conversation, daily interactions, news coverage, role models, etc.

According to Staats et al., unconscious biases come from direct and indirect messaging we receive about different groups of people (2016). “When we are constantly exposed to certain identity groups paired with certain characteristics, we can begin to automatically and unconsciously associate the identity with the characteristics, whether or not that association aligns with reality” (Staats et al., 2016). These characteristics could be visible (the clothes a person wears or skin color), observable behavior (how a person walks or gestures during a conversation), verbal (a person’s word choice, accent, or dialect), or known characteristics (where a person lives or the profession of a student’s parents).

How does unconscious bias work?

Mental processing happens within one of two systems: conscious or unconscious. The unconscious system handles reflexive actions, such as stopping the car at a red light or driving when the light changes to green or breathing (Staats, 2016). A person’s unconscious response is automatic and fast. Conscious processing, by comparison, is slow and deliberate, for example filling out a tax form or taking a test (Staats, 2016). The vast majority of our mental processing happens in the first system, outside our awareness. This is where unconscious biases are formed and influence.

Some conditions make it more likely for unconscious bias to be activated, such as distraction, time pressure, and ambiguity (Bertrand et al., 2005). In these situations, biases are a form of mental shortcut for the brain. When they accurately reflect reality, they make us more efficient. If we see a tiger loose on a downtown street, feeling stress is appropriate, and being slow and deliberate may not be our best option. Being guided by unconscious responses in more ambiguous situations, however, can lead to undesirable results.

Why does unconscious bias matter in education?

Many, if not all, of the conditions that can activate unconscious bias are present in schools and classrooms. These include time constraints, information overload, fatigue, distraction, etc. Not all unconscious bias leads to explicitly biased decisions, behaviors, or practices in school, but the complex dynamics of the education system—from pre-K through higher education—create many opportunities for unconscious bias to emerge and negatively impact students. This is particularly true when biases go unexamined and unrecognized (Carter et al., 2014; Staats et al., 2016).

Focus of Research

Although it is widely accepted that unconscious bias operates in classrooms and schools and likely contributes significantly to racial/ethnic disparities in education, research on unconscious bias in education contexts—what it looks like, how it emerges, how it impacts students—is somewhat limited. Research on unconscious bias is primarily addressed in social psychology literature or applied settings like the workforce or healthcare. An established literature describes how unconscious bias leads to racial disparities in discipline, and there is a growing literature on unconscious bias in teachers training to enter the workforce, and higher education settings. In the preschool-secondary settings, studies mainly address unconscious bias in specific contexts such as discipline, teacher expectations, special education referrals, and interpretations of student behavior. No summary exploration of unconscious bias in education could be found.

Another limitation of the research on unconscious bias in education contexts, including this report, is that it focuses mainly on the impact of administrator and teacher unconscious biases on students in a classroom or within a school. It is important to note that unconscious biases held by students, parents, and other school staff may also negatively impact students and school climate.

Negative Impacts

Research identifies several ways in which unconscious bias can negatively impact students in education settings (Staats et al., 2016; Staats & Patton, 2013). Unconscious bias in teachers and administrators can lead to:

- More negative interpretations of the behavior of students of color.
- Faster escalation of disciplinary consequences for students of color.
- More severe disciplinary consequences for minor infractions of students of color.
- Lower responsiveness or academic support for female students and students of color.
- Lower expectations of intelligence and academic prospects for students of color, English language learners (ELL), and female students in some contexts.
- Underestimates of ability for students of color and overestimates for white students.

- Higher referrals for special education and lower referrals for gifted education for students of color.
- Lower student self-expectations for achievement or performance.
- Self-fulfilling prophecies for student performance.

Some research indicates that unconscious bias may have a bigger impact in classroom settings than explicit (or conscious) bias. A study of teachers in the Netherlands found that implicit biases are stronger predictors of both expectations and achievement gaps than explicit biases (Van den Bergh, Denessen, Hornstra, Voeten, & Holland, 2010). The same study found that implicit biases that fell along ethnic lines were statistically related to achievement differences (Van den Bergh et al., 2010). This suggests that explicit biases may have a weaker effect on student performance than hidden or unconscious bias.

Positive Impacts

When unconscious bias is expressed through educator expectations, it can influence student performance positively as well as negatively. In 1965, Rosenthal and Jacobson conducted an experiment in multiple elementary classrooms in which researchers told teachers that several (randomly selected) students in their classrooms would likely be “late bloomers” and show remarkable gains during the year. Over the course of the year, the study found that, particularly for younger students, teacher expectations that a student would be a late bloomer led to real and significant gains in academic outcomes for the randomly selected students. This finding has been replicated and is known as the ‘Pygmalion Effect’ (Rosenthal & Jacobson, 1968).

Rosenthal proposed a four-factor theory to explain how teacher expectations influence student achievement (Rosenthal, 1994). The four factors are:

1. Climate or affect: teachers appear to create a warmer socio-emotional climate for the students for whom they have high expectations. This warmth is at least partially communicated through nonverbal cues.
2. Input or effort: teachers appear to teach more material and more challenging material to “special” students.
3. Output: teachers appear to give “special” students greater opportunities for participation or responding. These opportunities are afforded both verbally and non-verbally.
4. Feedback: teachers appear to give more informative feedback to “special” students through verbal and non-verbal cues (Rosenthal, 1994).

What can be done about unconscious bias?

Research shows that unconscious bias is malleable. The following examples describe experimental findings with respect to reducing unconscious bias. Resources that can aid in this process are discussed in the applied resource section of this report.

Experimental Findings

In an extensive review of 985 reports on the reduction of prejudice, Paluk and Green lament a lack of evidence to guide practitioners on the most effective ways to reduce prejudice (2009). Although many interventions show evidence of reducing prejudice in specific contexts, no clear mechanism to extend such findings to other environments has been identified, and the literature as a whole does not provide a reliable explanation of

whether, when and why interventions work (Paluk & Green, 2009). Moreover, entire genres of interventions—such as diversity training, anti-bias or multicultural educational programs, and sensitivity training in certain professions—have never been evaluated (Paluk & Green, 2009).

Nevertheless, some intervention strategies that have been studied suggest promising avenues for prejudice reduction. Analyses of cooperative learning (lessons in which students teach and learn from one another) have shown consistently positive results (Paluk & Green, 2009). Media (i.e. documentary viewing) and reading interventions that teach students about difference and expose students to accurate portrayals, including interventions coupled with discussion, have also shown promising results.

A comparative investigation of 17 experimental interventions to reduce unconscious racial bias found mixed results (Lai et al., 2014). The interventions employed a minimum of one of the following six approaches: engaging with others' perspectives, exposure to counterstereotypical exemplars, appeals to egalitarian values, evaluative conditioning, inducing emotion, and teaching intentional strategies to overcome bias (Lai et al., 2014). Seven interventions showed evidence of reducing unconscious racial bias, while the remaining interventions were judged ineffective (Lai et al., 2014). Interventions featuring counterstereotypical exemplars, intentional strategies to overcome bias, and evaluative conditioning approaches were consistently more effective than interventions that featured perspective taking, appeals to egalitarian values, or inducing emotion (Lai et al., 2014). The three most effective interventions combined multiple approaches to reduce unconscious racial bias (Lai et al., 2014). The most effective intervention required the participant to imagine him/her self as part of a story involving a life-threatening situation, exposed the participant to counterstereotypical exemplars (white villain and black hero), and provided intentional strategies for overcoming bias (Lai et al., 2014).

Devine, Forscher, Austin, and Cox conducted an experimental intervention to reduce unconscious bias in an education context (2012). They found a twelve-week, habit-breaking, multiple-approach intervention can reduce unconscious bias in undergraduate students over time (Devine et al., 2012). The intervention consisted of training to reduce unconscious bias by increasing awareness of personal bias, concern about its effects, and learning strategies to reduce bias. The experiment measured changes in unconscious bias with the Black-White Implicit Association Test (IAT) at the beginning, mid-point, and conclusion of the study. Participants first took the IAT to become aware of their unconscious biases. After the test, researchers provided students with additional education that described unconscious bias as a learned trait. Students also received training on five strategies to reduce implicit bias:

- *Stereotype replacement* (actively replacing a biased response with an unbiased response)
- *Counter-stereotypic imaging* (visualizing examples of prominent individuals who disprove the stereotype)
- *Individuation* (replacing a generic understanding of a person based on group membership with specific, individual information)
- *Perspective taking* (adopting the perspective of a stereotyped group member)
- *Increasing opportunities for contact* (actively seeking experiences that provide positive examples of the stereotyped group)

Participants in the training showed decreasing unconscious bias with each measurement of bias; moreover, these results persisted at 4 weeks and 8 weeks after the conclusion of the intervention (Devine et al., 2012). At

the conclusion of the study, intervention participants also displayed increased personal awareness of bias and concern about discrimination.

Considerations for Intervention

Research to date shows that interventions require careful design because not all have proved effective. With the exception of collaborative learning, reading, and media-based interventions, little guidance exists for how to apply research findings in varying contexts.

Interventions that address bias and race must be conducted especially carefully. The topic triggers strong emotional and cognitive reactions that can undermine shared goals. Carter et al. warn, “Conducted clumsily, conversations about race can increase resistance to facing and addressing the problems that plague us” (2014). Of particular sensitivity is the question of whether unconscious bias is synonymous with racism. Teaching Tolerance—an organization dedicated to reducing prejudice, improving intergroup relations, and supporting equity in schools—addresses this point as follows:

While the brain isn’t wired to be racist, it uses biases as unconscious defensive shortcuts. As human beings, we are not naturally racist. But, because of how our brains are wired, we are naturally “groupist.” The brain has a strong need for relatedness. This wiring for “groupism” usually leads to the dominant culture (the in-group) in a race-based society to create “out-groups” based on race, gender, language and sexual orientation... This leads to implicit bias ... that shape(s) our behavior toward someone perceived as inferior or as a threatening outsider. This may seem racist, but it’s actually unconscious programming versus explicit discrimination. Implicit bias is our brain’s natural safety system gone haywire (Hammond, 2015).

This view is not universal, however. There are many opinions on the topic: personal, professional, and academic. A more detailed analysis of unconscious bias and race is beyond the scope of this report. (Teaching Tolerance is described in more detail in the resources section.)

Case Study: Stereotype Threat

What is stereotype threat?

Stereotype threat is experienced when a person is afraid or anxious they may be viewed through the lens of a negative stereotype or that they may confirm a negative stereotype (Steele, 1999, 1997; Steele & Aronson, 1995). The person need not believe the stereotype is true or even be consciously aware of the stereotype. The internal experience of stereotype threat has external consequences on performance, and it is situation-specific. Steele writes “[s]tereotype threat can be thought of as a subtype of the threat posed by negative reputations in general” (1997). Anyone can be susceptible to stereotype threat if s/he is a member of a group about whom a negative stereotype exists and s/he identifies with that group.

Stereotype threat was first identified when Steele and Aronson explored the achievement gap between college-ready white and black students. Their study found that black students experienced additional, invisible strain when taking a difficult test that white students did not experience, because of the threat of confirming the stereotype that black students are less intelligent (Steele & Aronson, 1995). The added burden of confirming a negative stereotype depressed the performance of black students. When the threat of confirming the stereotype was removed in the experiment, black students performed as well as white students (Steele & Aronson, 1995). These findings have been replicated for women taking difficult math exams, white men playing sports, and in many other contexts. When members of a group about whom a negative stereotype exists enter the domain of the stereotype (school, sports, exams, etc.), group members can fear being reduced to that stereotype, and that fear affects their performance (Steele, 1997).

How does stereotype threat work?

Stereotype threat requires four ingredients to affect a person’s performance:

1. A negative stereotype about a group’s performance exists.
2. The person is aware of the stereotype.
3. The person identifies with the group whose performance the negative stereotype predicts.
4. The person cares about his or her performance.

Importantly, researchers found that a person need not believe the stereotype or even be consciously aware of its’ activation. The person need only identify with the group and care about his or her performance. The threat and consequences of confirming the stereotype alone were enough to reduce student performance (Steele, 1997). Students who care about the skill or subject matter being tested are most susceptible, presumably because the consequences of failure are higher. Stereotype threat then “loads the testing situation with an extra degree of self-threat” (Steele & Aronson, 1995).

Stereotype activation need not be overt. Merely filling out the demographic section on a standardized test has been linked with underperformance through stereotype threat (Danaher & Crandall, 2008). When students answer demographic questions at the end of a test, rather than in the beginning, performance is not affected.

Fear of being reduced to a negative stereotype can interfere with performance in a variety of ways (Steele & Aronson, 1995):

- Causing arousal that reduces a person's awareness of task-relevant cues.
- Diverting attention to task-irrelevant worries.
- Increasing self-consciousness.
- Creating overcautiousness.
- Causing a withdrawal of effort (to avoid confirming the stereotype).

Stereotype threat has been linked with behaviors that impair test performance, resulting for example, in answering fewer questions and spending more time on individual questions. According to Steele and Aronson, "Stereotype threat causes an inefficiency of processing....Stereotype-threatened participants spent more time doing fewer things more inaccurately—probably as a result of alternating their attention between trying to answer the items and trying to assess the self-significance of their frustration" (1995).

Stereotype threat operates during stressful or frustrating situations, for example taking a challenging test or delivering a demanding presentation, because challenge, itself, calls the stereotype to mind as a possible explanation for any difficulty encountered. For black students in test-taking situations, researchers found "[i]t is frustration that makes the stereotype—as an allegation of inability—relevant to their performance and thus raises the possibility that they have an inability linked to their race" (Steele & Aronson, 1995). The challenge itself enhances the power of the stereotype.

Certain situations are more likely to increase vulnerability to stereotype threat (Stroessner, Good, and Webster, 2016), for example situations that:

- Emphasize a stereotyped group identity.
- Reinforce a stereotype, obviously or subtly.
- An individual believes will evaluate his or her ability in a stereotypic domain.
- Find a person as the single representative of the stereotyped group.

One-time success, in spite of a stereotype, or even a pattern of success, cannot overcome the power of stereotype threat. According to Steele, "The effort to overcome stereotype threat by disproving the stereotype—for example, by outperforming it in the case of academic work—can be daunting. Because these stereotypes are widely disseminated throughout society, exemption from them earned in one setting does not generalize to a new setting where either one's reputation is not known or where it has to be renegotiated against a new challenge" (1997). As a result, a person must repeatedly and endlessly contend with the stereotype.

Besides underperformance in a specific situation, experiencing stereotype threat can also lead to long-term consequences such as diminished motivation, opting out of opportunities, and reduced achievement in the area (or domain) subject to stereotype threat.

Who does stereotype threat affect?

Stereotype threat can impair any individual who is a member of a group about whom there is a negative stereotype. Research has found evidence of stereotype threat in black students in school settings, white men in

sports, women in negotiation, women in math, homosexual men in providing childcare etc. (Stroessner et al., 2016).

Why does stereotype threat matter in education?

For those affected, stereotype threat leads to chronic underperformance in educational settings. It is a well-documented phenomenon that significantly impacts women and people of color, especially in situations when future opportunity is at stake, such as in standardized test taking. Over time, resulting patterns of underperformance not only reinforce the societal stereotype, but more importantly can detract from the potential, motivation, and long-term achievement of large numbers of students.

Finally, students subject to stereotype threat can find themselves handicapped in areas beyond those associated with the original underperformance due to reinforced patterns of behavior. These broader impacts result from self-sabotaging strategies (like reduced studying time), a reduced sense of belonging in the subject-area or domain, lowered perceived value of the subject area, and opting out of career paths or academic study (Stroessner et al., 2016). Stereotype threat can cause individuals to disassociate from the domain where they experience the threat (Steele, 1997). For example, a young woman who experiences stereotype threat in a math class may opt out of a math career path in order to reduce her experience of stereotype threat.

High-performing and invested students are particularly vulnerable to stereotype threat, because the consequences of confirming the stereotype are greater. The experience of stereotype threat leads to general mistrust in cross-racial interactions, common in schools where the majority of educators and administrators are white (Yeager et al., 2014b). This mistrust can have multiple effects (Yeager et al., 2014b), for example:

- Increase the likelihood of miscommunication between teachers and students, weakening the relationship.
- Heighten the experience of stereotype threat, such that students worry they will be judged by a stereotype.
- Result in students' view of critical feedback from an educator as resulting from bias, leading to dismissal of the feedback instead of acceptance.

What can be done about stereotype threat?

A significant body of research suggests that interventions can mitigate some of the situations that activate stereotype threat and/or reduce the underperformance that results from experiencing stereotype threat. Most studies focus on stereotype threat experienced by black students, female students, and undergraduate students. Applied resources are discussed in the resource section of this report.

Experimental Findings

Good, Aronson, and Inzlicht studied whether an intervention to reduce the effects of stereotype threat during the important transition to junior high could improve performance on standardized reading tests for students of color and on standardized math tests for female students (2003). Participating students were in the 7th grade and attended school in a rural area where 70 percent of the student body was eligible for free or reduced-price

lunch and the majority of the student body was Hispanic or black. The intervention involved teaching students that academic difficulties are a normal part of learning, rather than an experience unique to their racial/gender group, and that intelligence is malleable.

Students in the intervention group also were assigned mentors shortly after the beginning of the school year who reinforced the same messages. The researchers found that female students in the intervention group scored higher in math than those in the control group, while male students showed marginally significant improvements. In the reading tests, students in the intervention group scored higher than the control group, regardless of gender. Studies of college students obtained similar results (Aronson, Fried, & Good, 2002).

In an intervention to reduce the racial achievement gap, researchers found helping students reflect on personal values that reinforce their self-worth boosted the grades of students of color (Cohen, Garcia, Apfel, & Master, 2006). Participants were 7th grade students, mostly from middle or lower-middle class families, attending a suburban middle school with a population equally split between black and white students. The intervention required students to complete an in-class writing assignment about an important value they held. For the assignment, students selected their most important value from a list and wrote about why it was important to them.

Black students who participated in the affirmation intervention earned a higher grade in the course than those in the control group (Cohen et al., 2006). There was no difference for white students (Cohen et al., 2006). These findings were reviewed two years later, and the GPAs of black students who participated in the intervention averaged 0.24 points higher than students who did not receive the intervention (Cohen, Garcia, Purdie-Vaughns, Apfel, & Brzustoski, 2009). These findings were even more striking for black students identified as low-achieving students at the start of the original study; their GPAs increased by 0.41 points on average (Cohen et al., 2009).

Researchers also found that exposing students to survey results from upperclassman can reduce the impact of stereotype threat on black freshman college students over the course of a semester and have lasting impact throughout college (Cohen & Garcia, 2008). The intervention consisted of reviewing survey results that showed all students experience feelings of uncertainty or belonging at college regardless of race or ethnicity and that the feelings go away with time. The survey implied to the freshman students that difficulties they may encounter are common and not unique to racial groups. While the intervention had no consistent effect on white students, black students' GPAs increased the following semester, and their academic success continued during later years at college.

These results were replicated in a study that also included a reflective writing exercise and video-taped speech by students to exploit the so-called 'saying is believing' effect (Walton & Cohen, 2011). According to the researchers, the "intervention provided students with a narrative that framed social adversity in school as shared and short-lived. This message encouraged students to attribute adversity not to fixed deficits unique to themselves or their ethnic group but to common and transient aspects of the college-adjustment process" (Walton & Cohen, 2011). The intervention tripled the percentage of black students earning post-intervention GPAs in the top 25% of their class and reduced the percentage of black students performing in the bottom 25% of their class (Walton & Cohen, 2011). Researchers suggest that the intervention planted a seed that changed social perception and that this change accompanied students and affected their academic performance long after the experiment. (Walton & Cohen, 2011). Because participants were unaware of the intervention, the

researchers suggest that the effectiveness of the intervention does not require conscious awareness (Walton & Cohen, 2011).

Yeager et al. found that two interventions, designed to reduce mistrust across the racial divide between teachers and students, resulted in an increase in academically-beneficial behaviors, higher student grades, and a reduction in the observed achievement gap (2013b). When teachers delivered critical feedback using a wise feedback strategy—in which teachers couple an emphasis on high standards for the student with the expressed belief that the student can meet those standards—it increased the proportion of seventh grade students who turned in essay revisions and improved the quality of those revisions (Yeager et al., 2014b). The results were strongest for black students, in particular those with a higher mistrust of the school environment (Yeager et al., 2014b).

In a variation of the intervention, students were trained to attribute critical feedback from their teachers as evidence that the teacher had high standards and belief in their potential. The result was that the GPAs of black students increased and the pre-intervention classroom achievement gap was reduced (Yeager et al., 2014b). The findings of this study highlight the need to couple critical feedback with two messages: (1) high standards and (2) high expectations for student success.

Based on research, Steele and colleagues created a programmatic intervention for incoming undergraduate students at the University of Michigan aimed at the underachievement and low retention rates of black students (Steele, 1997). Each year, 250 freshman participants were recruited from the incoming class in ethnic proportions similar to the university campus population but with an oversampling of 20% of black students and 20% of non-black minority students (Steele, 1997). Design features of the 10-week program included:

- The program was presented as a transition program aimed to help students maximize the opportunities of university life and designed to help students meet their high potential, as recognized by the university (It was intentionally *not* presented as a remediation program).
- All participating students lived together in the same dorm.
- Students participated in a “challenge” workshop, a rigorous course in calculus, chemistry, physics, or writing.
- Participants attended small weekly discussion groups on adjustment-relevant social and personal issues.

First semester grades showed that underperformance of black students, vis-à-vis white students, was almost completely eliminated (Steele, 1997). Moreover, follow-up study revealed that the higher performance persisted through sophomore year. After four years, only one student had dropped out (Steele, 1997). The results are particularly striking when compared to the results of black students who participated in a large, minority student remediation program. Black students in the remediation program performed worse than other students at almost every level of prior academic preparation and, by junior year, 25% of students failed to register (Steele, 1997). White participants in the remediation program saw no significant change in performance, compared to white students who did not participate.

A study conducted by Blackwell, Trzesniewski, and Dweck, found teaching students the concepts behind a growth mindset—the notions that intelligence is expandable and can grow stronger when used like a muscle—

resulted in higher academic performance and increased motivation in the classroom (2007). This study is discussed in more detail in the Growth Mindset case study, which follows.

The above studies explore a variety of interventions found to be effective in reducing the impact of stereotype threat and thereby improving performance, motivation, sense of belonging, and/or academic behaviors. The interventions use a variety of strategies including²:

- Emphasizing that academic difficulties are normal and not unique to a racial group.
- Inviting students to reflect on values important to them in and out of school.
- Communicating that social adversity in school is a common experience, short-lived, and not unique to a racial group.
- Coaching educators to provide wise feedback.
- Creating a program that incorporates multiple strategies.
- Teaching about a growth mindset.³

Considerations for Intervention

Stereotype threat interventions do not impact everyone who participates in the intervention. This means interventions must be carefully designed, including absolute clarity about who is intended to benefit, in order to ensure that the intervention does not either omit students from benefit or cause detrimental effects for other students.

Interventions can not only fail to improve performance, they can backfire and actually reinforce stereotypes (Steele, 1997). Further, some research suggest that stereotype threat interventions work best when they are subtle and operate outside of conscious awareness. Walton and Cohen caution that, "More overt interventions risk sending the stigmatizing message that the beneficiaries are seen as in need of help," thereby reinforcing the stereotype whose impact the intervention was designed to reduce (2011).

² Steele's 1997 paper provides a thorough summary of wise intervention strategies.

³ Growth mindset is defined and discussed in detail in the following case study.

Case Study: Growth Mindset

What is a growth mindset?

People with a growth mindset believe a person's intelligence and other qualities can be developed and grown over time. In the academic literature, mindsets are also called implicit theories of intelligence (Yeager & Dweck, 2012). With a growth mindset, effort matters. In contrast, people with a fixed mindset believe that a person's intelligence and qualities are fixed and endowed at birth. With a fixed mindset, talent matters (Dweck, 2006). A person's mindset leads to predictable values and behaviors. Table 1 compares and contrasts the goals, effort, response to challenge, and effect of transition on the grades of individuals with either a fixed or growth mindset.

Table 1. Academic Mindsets and Associated Behaviors

	Fixed Mindset	Growth Mindset
Goals	Look smart	Learn
Perspective on effort	Sign of lack of intelligence	Necessary for learning
Response to challenge	Tendency to give up	Work harder and smarter
Changes in grades during times of adversity or transition	Decrease or remain low	Increase

Source: Adapted from Table 1 in Yeager & Dweck, 2012.

Academic Mindsets

In their review of non-cognitive factors that shape the academic performance of adolescents, Farrington et al. provide a corollary to Dweck's mindset theory and suggest four academic mindsets that support student academic performance (Farrington, Roderick, Allensworth, Nagaoka, Keyes, Johnson, & Beechum, 2012). The researchers define academic mindsets as "beliefs, attitudes, or ways of perceiving oneself in relation to learning and intellectual work that support academic performance" (Farrington et al., 2012). Farrington et al. identify the following four mindsets:

1. I belong in this academic community.
2. My ability and competence grow with my effort.
3. I can succeed at this.
4. This work has value for me.

The second mindset, above, is a statement of growth mindset, whereas the other academic mindsets provide insight into other components of school climate that are supportive of academic performance.

Where do mindsets come from?

Mindsets are learned over time. All people hold implicit theories about the malleability of intelligence and traits (Yeager & Dweck, 2012). The mindsets we develop are influenced by the messages we receive from the people around us (parents, teachers, coaches, mentors, elders etc.), our socio-cultural context, and even by the type of praise/feedback we receive. A long history of research shows that mindsets, rather than being predetermined characteristics, are a function of our interactions and are changeable (Farrington, Roderick, Allensworth, Nagaoka, Keyes, Johnson, & Beechum, 2012).

How do mindsets work?

Mindsets about intelligence seem to create different psychological worlds for individuals (Yeager & Dweck, 2012). When a person has a fixed mindset, his or her psychological world is largely about measuring ability and *everything* (challenges, tasks, effort, setbacks) is seen as a measure of ability (Yeager & Dweck, 2012). According to Dweck, “Believing that your qualities are carved in stone—the fixed mindset—creates an urgency to prove yourself over and over” (2006). When a person has a growth mindset, the world is about learning and growing and *everything* (challenges, tasks, efforts, setbacks) is an opportunity to learn and grow (Yeager & Dweck, 2012).

Why does a growth mindset matter in education?

Growth mindsets matter in school because they influence student behaviors, goals, and outcomes. As these impacts accumulate over time, a growth mindset can support the development of positive academic habits, resilience during periods of academic challenge, greater enjoyment of learning, and a student’s long-term trajectory. Because students are particularly vulnerable across school transitions, growth mindset interventions may help prevent predictable declines in grades and attitudes seen at transition points from year to year or between schools (Farrington et al., 2012). Research indicates that interventions based on mindset could also have important implications for efforts dedicated to closing racial/ethnic achievement gaps (Farrington et al., 2012).

Mindsets cause differences in student behavior and outcomes by shaping several aspects of students’ academic participation including:

- Student goals (whether they are eager to learn or whether they care more about looking smart)
- Student beliefs about effort (whether effort is required to grow or whether effort signals a lack of talent)
- Student attributions for setbacks (whether a setback is viewed as a need to work harder and find new strategies or whether it means the student is “dumb”)
- Student learning strategies (whether students work harder or whether they give up, cheat, or become defensive)

In education contexts, it is important to note that the mindsets of parents, teachers, and administrators also matter. Parents and teachers approach children, in particular children who are struggling, differently based on their own mindset. If a teacher holds a fixed mindset regarding intelligence, he or she is likely to have lower expectations of what a struggling student can accomplish. The teacher’s low expectations can lead to low student confidence and resilience (Yeager & Dweck, 2012). A teacher who believes that intelligence is a fixed attribute is more likely to offer a struggling student comfort (such as “It’s okay not to be good at math”) and also to provide the student with less homework (Rattan, Good, & Dweck, 2012). The student in turn, is more likely to lower his/her expectations of improvement and performance (Rattan et al., 2012). In contrast, a teacher who believes that intelligence can be grown is more likely to provide feedback necessary for the student to improve, and the student, in turn, is more likely to have higher expectations for improvement and better performance (Rattan et al., 2012).

The type of praise students receive from adults affects their mindset. When parents and teachers praise successful students for their *ability*, students are more likely to prioritize performance over learning, show less

persistence when encountering challenging problems, experience less enjoyment of the task, have decreased motivation, and display lower overall performance. They are more likely to see performance as a proxy for intelligence (Mueller & Dweck, 1998). In contrast, when students receive praise based on *effort*, students are more likely to seek out challenging tasks that offer an opportunity to learn (rather than easier tasks that ensure success), show more persistence, experience enjoyment of the task, show increased motivation, and view effort as key to intelligence (Mueller & Dweck, 1998).

The mindset of teachers and administrators towards both intelligence and other traits also influences the classroom context and school culture. A review of the literature on adolescent learning found that classroom conditions have powerful influences on students' feelings of belonging, self-efficacy, valuation of school work and either reinforce or undermine a growth mindset (Farrington et al., 2012). Classrooms have a strong effect, in particular, on students of color through the mechanism of stereotype threat (Farrington et al., 2012). In a review of the literature, Farrington et al. found many different classroom conditions impact academic mindset including (2012):

- Level of challenge
- Teacher expectations of success
- Student choice and autonomy
- Clarity and relevance of learning goals
- Availability of supports for learning
- Grading structures and policies
- Types of academic tasks
- Type, frequency and usefulness of feedback
- Classroom norms of behavior, trust and safety

The same review found that specific instructional practices support positive mindsets, such as transparent grading policies; clear learning goals; regular, constructive, feedback; and an emphasis on classroom cooperation (Farrington et al., 2012).

What can be done about mindset?

A large body of research suggests that people can learn growth mindsets and that interventions teaching a growth mindset are linked with a series of positive outcomes including improved academic performance, increased student resilience in the face of academic or social challenge, greater motivation, decreased stress, and fewer instances of illness. Many such interventions are quite brief, yet have long-lasting results. The following examples highlight experimental findings linked to teaching growth mindset.

Experimental Findings

Blackwell, Trzesniewski, and Dweck found teaching students the concepts behind a growth mindset—the notions that intelligence is expandable and grows stronger when used, like a muscle—resulted in higher academic performance and increased motivation in the classroom (2007). Their study followed 7th graders in a large urban school district, almost all students of color and mostly from socioeconomically disadvantaged settings who had standardized math scores in the lower half of the national distribution. Selected students

participated in eight 25-minute sessions involving reading, activities, and discussions related to intelligence and its growth potential. Researchers found that students who began the intervention with a fixed mindset were more likely to endorse a growth mindset following the intervention, and students in the intervention groups had higher rates of growth mindset than the control group (Blackwell et al., 2007). Teachers were significantly more likely to report increased motivation for students who received the intervention than for students who did not (Blackwell et al., 2007). The student group as a whole experienced a decline in math grades during the experiment, but students who received the growth mindset intervention ultimately reversed that decline (Blackwell et al., 2007).

A study based on Blackwell et al.'s intervention was conducted in a community college setting for students enrolled in remedial math classes (Paunesku, Yeager, Romero, & Walton 2012⁴ as discussed in Yeager & Dweck, 2012). The intervention involved a similar class, this time tailored for adult students, as well as a reading and writing exercise. At the end of the semester, several months after the intervention, researchers found participating in the growth mindset training cut the course dropout rate in half (Paunesku et al., 2012 in Yeager & Dweck, 2012). Moreover, of the students who remained in the developmental math course, students who participated in the growth mindset intervention received higher grades and were less likely to fail (Paunesku et al., 2012 in Yeager & Dweck, 2012). Similar findings have been made for college undergraduate students, as discussed in the Stereotype Threat case study.

In 1998, Mueller and Dweck conducted a series of experiments to understand how the praise fifth grade students received from teachers or adults influenced the students' mindsets and behavior. Some students received intelligence praise (reinforcing a fixed mindset) while completing a series of challenging logic puzzles, while other students received effort praise (reinforcing a growth mindset) while completing the same puzzles. All students then completed a set of difficult puzzles on which all students performed poorly. Next, students were given a series of puzzles of the same difficulty as the first set. The effect of praise on student performance and attitude was dramatic. Students who received intelligence praise solved 30% fewer problems than they did the first time and asked to do easier problems going forward. In contrast, students who received effort praise performed better and sought more challenging problems in the future (Mueller & Dweck, 1998). Although not an intervention per se, these results indicate a possible avenue for intervention, namely coaching teachers on how to provide feedback and praise that reinforces a growth mindset. Results from a feedback intervention related to stereotype threat are discussed in the previous case study.

In a study of California high school students, researchers found that a fixed mindset about personality (believing personality traits are unchangeable) predicted more negative responses to social adversity and increased stress, decreased health, and lower grades at the conclusion of the school year (Yeager, Johnson, Spitzer, Trzesniewski, Powers, & Dweck, 2014). When researchers implemented a brief intervention to teach that personality traits are malleable—a teacher taught a lesson on brain changes during learning followed by a reading and writing exercise—students displayed less negative responses to an immediate experience of social adversity (Yeager et

⁴ The findings of Paunesku et al. are reported in Yeager & Dweck as unpublished manuscript. A published manuscript could not be located.

al., 2014a). The intervention significantly improved the grades of students who began the school year with a fixed mindset towards personality traits (Yeager et al., 2014a).

Considerations for Intervention

Although many psychological interventions have been linked with promoting growth mindset and positive academic mindsets, how such interventions best translate into strategies that can be used in classrooms or schools is less well understood (Farrington et al., 2012). Interventions, experimental contexts, and student groups are quite different across studies, which makes discerning which practices are best for which schools or classrooms difficult (Farrington et al., 2012). Many interventions are also selective, impacting some students more than others. This suggests interventions need to be tailored to the psycho-social needs of particular groups of students in order to be effective (Farrington et al., 2012). Many of the interventions have been done in small settings, and how to scale them to larger school or district-wide levels is not obvious. There is also evidence that mindset interventions do not work when students become aware of their ultimate purpose (Farrington et al., 2012).

Some themes are evident across the body of research. Successful growth mindset interventions appear to work because of two processes: (1) the interventions precisely target the student's experience in school from the student's perspective and (2) the interventions are delivered in a way that allows students to quickly internalize the messages of the intervention (Yeager & Walton, 2011). Customization to a particular context is important, but as Yeager and Dweck point out, "All customization is not guaranteed to be effective, however. There is potential to lose sight of the core message and focus instead on scaling up the superficially related but psychologically 'inert' portions of the intervention" (Yeager & Dweck, 2012). For example, it is important to remember that a message about how the brain grows and changes is not enough, rather it must be coupled with information that the qualities within a person's brain can be developed, as being well as tailored to the particular context (Yeager & Dweck, 2012). When considering any intervention, researchers recommend employing both a local expert in the student context and an expert in the theory behind the interventions. In particular to scale an experimental intervention effectively, Yeager and Dweck say, "collaborative partnerships between researchers, practitioners, and students may be necessary to engineer interventions (2012).

Another important consideration for the effectiveness of interventions is timing, their placement both during the academic year and during a student's academic career.

Lastly, although the above experimental findings are promising—brief interventions can have lasting positive effects on students, in particular for low performing students—researchers caution that any intervention designed to create large scale change is not enough on its own:

Social-psychological interventions complement—and do not replace—traditional educational reforms. They do not teach students academic content or skills, restructure schools, or improve teacher training. Instead, they allow students to take better advantage of learning opportunities that are present in schools and tap into existing recursive processes to generate long-lasting effects (Yeager & Walton, 2011).

Applied Resources

Included in this section are summaries of applied resources relevant to reducing the incidence and impact of unconscious bias, mitigating and decreasing the impact of stereotype threat, and building growth mindsets. The majority of the resources described below apply to more than one construct. This cross-over is illustrated in Table 2. This list is intended only as a launch point for ARISE's School Climate work, rather than a list of recommended programs.

Table 2. Summary of Applied Resources and their Relationship to Unconscious Bias, Stereotype Threat, and Growth Mindset

Applied Resource	Unconscious Bias	Stereotype Threat	Growth Mindset
AMAZE	✓	✓	
Anti-Defamation League	✓	✓	
Beyond Proficiency: A Focus on Growth		✓	✓
Facebook's Unconscious Bias	✓		
Identity Safe Classrooms	✓	✓	
Mindset Works SchoolKit		✓	✓
Project for Education Research that Scales (PERTS)		✓	✓
Project Implicit	✓		
Teaching Tolerance	✓	✓	

AMAZE

AMAZE is a non-profit organization that works to create safe, respectful communities for children by providing programming to challenge bias and bullying. AMAZE materials are made for early childhood programs, home childcare programs, elementary schools, after-school programs, and teacher training programs. Following is a list of programs offered. Additional information can be found at <http://www.amazeworks.org/>.

- AMAZE Elementary is a literacy-based program that explores diversity through children's books, discussion questions, and classroom activities focused on diversity themes.
- AMAZE classroom dynamics with teachers and professional learning communities to provide resources specific to particular classrooms that support connectedness.
- AMAZE early childhood is an anti-bias program for preschool and kindergarten students that uses books, classroom/playground activities, and questions to help children explore difference.
- AMAZE persona dolls are handmade dolls to support teaching of SEL, conflict resolution, and supporting diversity.

Anti-Defamation League

The Anti-Defamation League (ADL) is a religious organization and civil and human rights agency, originally founded "to stop the defamation of the Jewish people and to secure justice and fair treatment to all." ADL publishes civil rights information, provides educational resources, lobby for legislation, and engages in advocacy. ADL has regional offices around the country. The Pacific Northwest Regional Office, located in Seattle,

represents Alaska, Idaho, Montana, Oregon, and Washington. Additional information can be found at <http://www.adl.org/>.

Anti-Bias Curriculum

ADL's Anti-Bias curriculum contains a variety of materials for teachers and families including:

- A collection of K-12 lesson plans addresses *Current Events in Classrooms* (timely news topics) and *Curriculum Connections* (multi-grade curriculum units addressing past and present events).
- Monthly educator resource essays on bullying, current events, and social/emotional development in children.
- An online bibliography of anti-bias and multicultural literature, organized by topic, for young children and young adults.
- An education podcast of interviews with experts and authors.
- Anti-bias resources including classroom tips and strategies for teachers; discussion and activity guides for educators; current event discussion guides for caregivers and parents to engage their children; and historical information.

Additional information can be found at <http://www.adl.org/education-outreach/curriculum-resources/>.

Anti-Bias Workshops and Programs

ADL offers several training programs for pre-K through 12th grade school communities that focus on supporting an inclusive culture and positive school climate including:

- Anti-bias professional development programs for teachers and administrators.
- Early childhood programs for educators, caregivers, and family members of children from 3-5.
- Peer education programs to support middle and high school students working to create inclusive school climates and confront bias.
- Other specialized programs such as A World of Difference and A Classroom of Difference.

Additional information is available at http://www.adl.org/education-outreach/anti-bias-education/c/a-classroom-of-difference.html#.V9nm_ykrJD9 or through the Pacific Northwest Regional Office.

A Community of Difference

A Community of Difference is a program designed to help social services workers, volunteers, civic leaders, and the staff of community organizations understand their own biases, develop a common understanding of diversity, and develop action plans. A Community of Difference has a specialized program for law enforcement. Additional information is available at <http://www.adl.org/education-outreach/anti-bias-education/c/a-community-of-difference-1.html#.V9nfQPkrJD8> or through the Pacific Northwest Regional Office.

Beyond Proficiency: A Focus on Growth

Beyond Proficiency is a UAA blended, professional learning course for Anchorage School District (ASD) teachers. The training provides training to strengthen instructional practices through a focus on growth mindset. The

course is structured around three content areas: overview of the construct of growth mindset, educator growth mindset, and student growth mindset. The course content was developed by the Professional Learning Department of ASD with support from the Collaborative for Academic, Social, and Emotional Learning (CASEL). Although it is not available this year, during the 2015-2016 school year, 200 ASD teachers took the course. Additional information is available from the ASD Professional Learning Department.

Facebook's Managing Unconscious Bias Training

Facebook's Managing Unconscious Bias training was originally developed as an internal training course to help employees recognize bias and provide tools to manage bias in the workplace. In July of 2015, Facebook made the presentation portions of the curriculum, action steps for individuals, and references available to the public. More information is available at <https://managingbias.fb.com>.

Identity Safe Classrooms

A companion website to the book, *Identity Safe Classrooms*, by Dorothy M. Steele and Becki Cohn-Vargas, provides activity sheets that contain exercises to help educators put the ideas in the book into practice and develop identity safe classrooms. Additional information can be found at <http://identitysafeclassrooms.org/>.

Mindset Works SchoolKit

Mindset Works is a company that provides growth mindset training for educators and students. SchoolKit is a web-based multimedia intervention that includes Brainology (a blended learning program designed to teach students in grades 5-9 the neuroscience behind growth mindset and study skills) and MindsetMaker (an interactive, growth mindset based professional development program for teachers to develop a classroom growth mindset culture). A version of Brainology is also available for home use. The training materials are available for purchase by an educator for classroom use or by a school for annual use. Additional information can be found at <https://www.mindsetworks.com>.

Project for Education Research that Scales (PERTS)

PERTS is a research group designed to translate research ideas into practices. PERTS applies research through partnerships and development of tools. Several PERTS projects are grounded in research on growth mindset including a course for parents, courses for educators, growth mindset-based partnerships, and assessments. Several resources are discussed below. Additional information on PERTS can be found at <https://www.perts.net/>.

Mindset Kit

This online resource provides tools for parents and educators to learn about growth mindset and to apply growth mindset ideas in the classroom. Information can be found at <https://www.mindsetkit.org/>.

ClassDoJo

ClassDoJo is an online, app-based program, based on growth mindset research, that connects students, teachers, and parents to build positive classroom community culture. The app is available free for teachers. Information can be found at <https://www.classdojo.com/>.

Khan Academy

In partnership with Khan Academy, PERTS created online growth mindset-based lesson plans for students to learn many subjects with the help of teachers or parents. Information on Kahn academy can be found at <https://www.khanacademy.org/>.

Equal Opportunity Schools

Equal Opportunity Schools works to identify low-income students and students of color, who qualify for advanced courses but often are not enrolled, and move them into advanced courses in order to increase student engagement and reduce high school and college achievement gaps. This program is based on growth mindset research. The program is used in 63 school districts, in 11 states. Currently, no school districts in Alaska participate. Information on the program can be found at <http://eoschools.org/>.

Project Implicit

Project implicit is a non-profit organization and international research collaboration developed to educate the public about unconscious (or implicit bias) and collect data. Project Implicit also provides consulting, education, and training services. The Implicit Association Test (IAT) is available for public, free use on the Project Implicit website. Anyone can take the IAT. Versions of the test include IAT designed to measure a person's bias in towards race, sexuality, Native Americans, age, disability, skin-tone, and many others. Information on Project Implicit is available at <https://implicit.harvard.edu/implicit/index.jsp>. Versions of the IAT are available at <https://implicit.harvard.edu/implicit/takeatest.html>.

Teaching Tolerance

Teaching Tolerance, founded by the Southern Poverty Law Center, is dedicated to reducing prejudice, improving intergroup relations, and supporting equitable school experiences for children. In addition to blog posts, film kits, webinars, and a magazine, the organization provides free educational materials to teacher and other education practitioners. Teaching Tolerance also provides professional development support for teachers in the areas of school climate, inclusive classroom strategies, and self-reflective materials. More information can be found at <http://www.tolerance.org/>.

Anti-Bias Framework

Designed to support teachers developing curriculum or administrators working to make schools more equitable and safe, the Anti-Bias Framework (ABF) is a set of twenty anchor standards and age-appropriate learning outcomes divided into four areas: identity, diversity, justice, and action. The ABF is leveled for every grade K-12. It provides school-based scenarios that show what anti-bias behaviors and attitudes might look like in a classroom. The ABF was developed to support the Perspectives for a Diverse America K-12 curriculum. The framework can be found at <http://www.tolerance.org/anti-bias-framework>.

Perspectives for a Diverse America Curriculum

The Perspectives for a Diverse America is a literacy-based, anti-bias curriculum that is leveled for K-12 grades and designed for use in a variety of subject areas, primarily in the humanities. Perspectives is designed to help students learn about themselves and others; teachers differentiate; and principals improve school climate. The center of the curriculum is a Cultural Text Anthology that groups informational, literature, visual, and multi-media resources by grade level and anti-bias theme (such as race and ethnicity, gender, class, LGBT etc.). The materials are organized in customizable, online modules. Teachers select an essential question, pick a relevant text from the anthology, plan performance tasks, and plan instructional strategies. The curriculum is ground in Understand by Design (UBD) practices. Professional development support is also provided through the curriculum. More information can be found at <http://teachperspectives.org/>.

Critical Practices for Anti-Bias Education

This Critical Practices for Anti-Bias Education is a publication by Teaching Tolerance that offers practical strategies for creating instructional spaces that accomplish academic and social-emotional goals and implement culturally-responsive pedagogy. The guide has four sections: Instruction, Classroom Culture, Family and Community Engagement, and Teacher Leadership. Additional information is available at: <http://www.tolerance.org/critical-practices>.

Responding to Hate and Bias at School

This Teaching Tolerance guide is written for administrators, counselors, and teachers to prepare for a crisis, manage during a crisis, and build after a crisis occurs at school. The appendices include forms and worksheets to support the guide. Additional Information can be found at <http://www.tolerance.org/publication/responding-hate-and-bias-school>.

Speak Up at School: How to Respond to Everyday Prejudice, Bias and Stereotypes

Teaching Tolerance published Speak Up at School as a practical guide for teachers who want to develop the skills to speak up in moments when prejudice, bias, or stereotype comes up in school. The guide also helps teachers who want to teach students learn to speak up. The guide is divided into two sections: In Advance and In the Moment. The guide provides additional resources such as role-playing scenarios for practicing skills with students, suggestions for policy and action, classroom lessons, and additional content sources. The guide can be found at <http://www.tolerance.org/publication/speak-school>.

Mix it Up at Lunch Day

Mix it up is a national campaign launched by Teaching Tolerance to encourage students to identify, question, and cross social boundaries. The Teaching Tolerance provides materials and steps for instituting Mix it Up day at a school. More information is available at <http://www.tolerance.org/mix-it-up/what-is-mix>.

General

Unconscious bias, stereotype threat, and mindset overlap and relate.

Unconscious bias arises from and can perpetuate societal stereotypes. The presence of societal stereotypes and unconscious bias can trigger the experience of stereotype threat. Behaviors resulting from stereotype threat can reinforce stereotypes and unconscious bias. Fixed mindset reinforces stereotypes and bias, while growth mindset can buffer students from the impact of stereotype threat and the intervening effects of unconscious bias.

There are also important differences. In the context of education, growth mindset and unconscious bias matter as they present in students, teachers, administrators, parents and school staff; on the other hand, stereotype matters as it shows up in students. Nevertheless, all members of the school community can participate in promoting an environment that works against unconscious bias, actively buffers students from the impacts of stereotype threat, and cultivates a culture of growth mindset.

Evidence of these concepts applied to a community context is limited.

The theories described in this report are still relatively new. As a result, applied examples may not exist yet, in particular those at the community level. Nevertheless, the theories suggest possible directions community level interventions and applications could take. For example, a variety of tactics might be effective in combating unconscious bias in Anchorage, including providing counter-stereotypical exemplars, training people to recognize bias, and encouraging community members to take the Implicit Association Test (IAT).

Indicators

Unconscious Bias

In a review of thirty-six experimental studies in the social psychological literature on unconscious bias, researchers used the following four attitude/belief measures: supraliminal (conscious) evaluative priming, the IAT, subliminal priming, and Stereotypic Explanatory Bias (SEB). One of the most popular measures of unconscious bias is the Implicit Association Test (IAT) (Staats et al., 2016).

The measures of unconscious bias listed above are most often administered individually in experimental contexts. It is unlikely experimental measures of unconscious bias will work well for a community initiative. Moreover, measuring individual biases within the community, especially at the school level, could compromise the relationship-building goal of ARISE.

For the purposes of ARISE, measuring signals of unconscious bias such as racialized disciplinary practices (rates of suspensions, expulsions, and detentions), special education referrals, or gifted program entrance and enrollment practices at the district and school level in addition to tracking measures of school climate, may be the most practical method for assessing unconscious bias. ARISE could consider tracking unconscious bias

intervention by measuring the incidences of unconscious bias training or the number of district staff and students who participate annually in unconscious bias training.

Stereotype Threat

Incidences of stereotype threat are most often measured using subtle measures of unconscious awareness that would likely be difficult to implement in a non-experimental setting. The impacts of stereotype threat are most often measured via grades and standardized test scores. At the community level, the best measures are signals of stereotype threat, such as the presence of an achievement gap in test scores or grades coupled with school climate indicators of belonging and trust. Tracking those indicators is more practical than attempting to measure individual student experiences of stereotype threat. In addition to the difficulty of measuring this experience, heightening student awareness of the experience of stereotype threat or stereotypes in school could have the reverse effect of making students feel greater mistrust and priming students to experience stereotype threat more often.

Growth Mindset

A simple survey exists to measure whether people have growth or fixed mindsets in a particular domain. Questions related to mindset also could be inserted into tests administered to teachers and students in order to track the prevalence of each mindset over time. That data may make it possible to extrapolate more broadly about whether a school culture is growth-mindset oriented. Studies of growth mindset typically measure the impact of a mindset via grades and/or motivation. It may be possible to track these outcomes as well.

Potential Next Steps

Opportunities for additional research include the following:

Supporting the development of literature on AN/AI students by publishing findings of ARISE in peer-reviewed journals.

This report, along with many others, highlights the dearth of literature that addresses Alaska Native students. Moreover, applied studies of interventions related to all three constructs discussed above are limited and do not provide guidance on how to best support Alaska Native students. As part of any intervention to support school climates, ARISE might consider contributing to the larger literature by completing a rigorous evaluation and submitting results to peer-reviewed journals. Rigorous evaluation beginning at the design stage could also enhance the results and minimize the risks of an intervention.

Consider exploration of the impact of unconscious bias in students and parents.

Unconscious biases emerge early in life, and they are stable through adulthood. Bias in students is linked to bullying, and incidents of student discrimination are indicators of poor school climate and connectedness. The unconscious biases of parents can reinforce bias in their own children (either towards others or towards a group in which the family identifies). Unconscious bias may also influence the interactions parents have with educators, administrators, other parents, as well as with other students in the school. Additional research to better

understand how unconscious bias in students and parents affects the school experience could be useful for ARISE.

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