

Amplify

# Social-Psychological Interventions: A Research Brief

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## Introduction

We live in unprecedented times. Due to the coronavirus pandemic, schools closed across the nation, and our education system had to quickly adapt to meet the needs of families and students through remote learning. The result was many hours of missed instruction, especially for those from disadvantaged communities. Combined with trauma due to current events, this led many experts to predict that students may be returning to school academically behind, with a widening of existing achievement gaps (Kuhfeld & Tarawasa, 2020).

While the effects of COVID-19 have disproportionately affected disadvantaged groups more than others, students from all backgrounds have experienced a reduction in educational resources and an increase in economic and home instability. Therefore, we might expect that many of our learners will return to the classroom this fall under-prepared for the work expected of them. In addition to a lack of typical academic instruction, many students missed out on the important social and emotional components of school during the pandemic. Additionally, these students have been simultaneously coping with the social and emotional effects of the pandemic on the safety, health, and economic security of their communities.

We as an educational community are faced with the challenge of supporting students who are likely academically behind and experiencing unusual amounts of stress or even trauma. It is more important than ever to make sure we promote student learning and find ways to recover these losses, especially for disadvantaged students. Just as importantly, we must help students reconnect with their school community and productively re-engage with their learning.

It may seem tempting to begin the year by submitting students to batteries of diagnostic assessments in order to expose learning losses and devise individualized remediation plans. The complex emotional state of returning students this Fall, however, suggests that such an approach might in fact deepen student disengagement.

If students are stressed or disengaged while taking diagnostic assessments, the results might not be reliable. Students might be given the wrong tasks—tasks that are either beneath them, which could annoy and isolate them, or tasks that are too challenging which could lead to frustration. And if students are further isolated by participating in individualized instruction, their lack of connection to the school community might be deepened.

Also, typical diagnostic approaches fail to address differences in returning students' experiences during the COVID-19 crisis, which in advantageous cases could include their families having flexible work arrangements, stable incomes, access to summer enrichment activities, and stable housing, but where in disadvantageous situations could include fewer learning opportunities due to access, unstable living arrangements, parental job loss, neglect due to lack of child care, abuse, and worsened nutrition due to the unavailability of school meals. Under the latter circumstances, instead of measuring and remediating learning deficits directly, which would promote learning but not remove the barriers to learning, it may be important to first address the psychological and social forces that lead to the learning gaps to begin with. Once the issues are addressed, if any deficits remain, it

may then make sense to return to diagnostic testing, the results of which would be more reliable, and to individualized instruction, which would be easier for students to participate in with appropriate self-regulation and a positive mindset.

We need a different approach. We need a way to start off the year with a powerful reconnection to our classroom communities that will launch our students towards academic success and support their unique emotional and psychological needs.

## Social-psychological classroom interventions

A robust tradition of research has identified brief classroom activities that address students' thoughts, feelings, and beliefs as they relate to school. These short, intensive activities, called social-psychological interventions, cost nothing and are relatively simple to implement. They are backed by years of research showing that students who participate have many positive benefits, compared with students who do not participate in them, including long-term increases in academic achievement and overall wellbeing (see Yeager & Walton, 2011). Historically, they have been designed to reduce the achievement gap for disadvantaged students. They target specific "levers" for change, identified by extensive research on student behavior, motivation, mindset, and learning.

Many of these interventions work by affecting students' vulnerability to stereotype threat, or the way in which doubts and anxieties related to stereotypes about a group one belongs to can impact academic performance. For example, females can be negatively affected by the stereotype that "women can't do math," especially if they are reminded of their gender prior to taking a math test (Spencer, Steele, & Quinn, 1999). Similarly, Black students can be negatively affected by harmful stereotypes about their intelligence when taking tests of intellectual ability (Steele & Aronson, 1995). Social psychological interventions can provide a buffer against stereotype threat, reducing achievement gaps for marginalized groups of students (e.g., Aronson, Fried & Good, 2002; Good, Aronson, & Inzlicht, 2003, Cohen et al., 2009).

One such intervention involves the affirmation of personal values as a vehicle for reminding students of positive aspects of themselves. This reduces the impact of negative events or information, reducing stress, and ultimately increasing a student's ability to function when faced with difficult situations such as stereotype threat (Creswell et. al, 2005; Shermann & Cohen, 2006; Sherman & Hartson, 2011). In value affirmation exercises, students write about ways in which they act out their core values in daily life. Researchers have found that when students reflect on and articulate their values, there are long-term benefits to their growth and learning (Cohen, Garcia, Apfel, & Master, 2006).

## How do social-psychological interventions work?

It may seem unlikely that short and simple tasks can improve student performance, when it takes months of targeted instruction to recover learning losses. However, the psychological forces that lead to these changes are real and powerful. Furthermore, repeating the exercises over the course of the school year may create momentum that maintains those gains over time.

Social psychological exercises work by disrupting traditional breakdowns in student motivation to positively impact both short- and long-term achievement, reducing achievement gaps for marginalized groups. These exercises work on what are called recursive cycles or “downward spirals”, whereby a negative belief about oneself might affect academic performance, which would then reinforce the negative belief, causing even poorer performance, and so on. Researchers have found that a well-timed social psychological exercise can stop or reverse these cycles, leading to long term positive impacts (Figure 1).

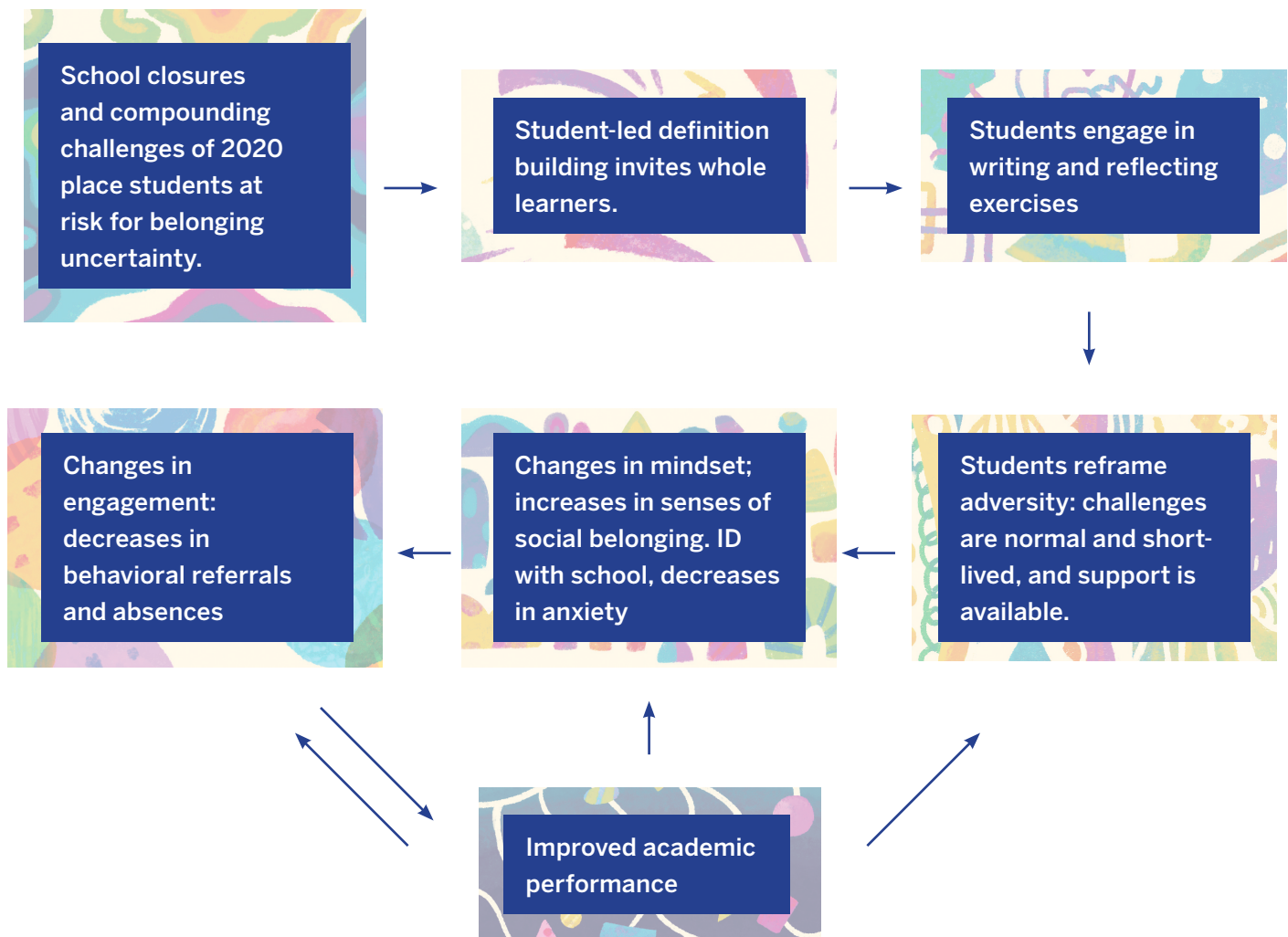


Figure 1

Amplify Theory of Change is adapted from Proceedings of the National Academy of Sciences (Borman 2019). This figure depicts the recursive psychological, behavioral processes and reinforcing effects that the Starting Points intervention is intended to set in motion to promote a sustained positive effect on academic and well-being outcomes.

One study looked at a values affirmation intervention with seventh-grade students, where students reflected on important personal values in structured writing assignments (Cohen et. al, 2009). Researchers predicted that this activity would lead to improved academic performance for the Black students in their study who would be susceptible to stereotype threat in the classroom. The results of the study confirmed that these students felt less psychological threat and stress after the intervention, but—more importantly—that the positive academic and psychological outcomes lasted for two years, leading to a decrease in students identified as “at-risk” as well as reducing the number of students who needed remediation. Through surveys, the researchers found that students who participated in the activity were able to separate individual incidences of poor academic performance from their beliefs that they fit in and could succeed in school over time. In contrast, those who did not participate were more likely to let a poor performance influence their beliefs about their adequacy in school. In this way, the values-affirmation intervention was able to reverse what might have been a downward spiral towards low self-worth and poor academic performance, instead creating long-term positive change.

## Implementation

These exercises are most effective when delivered in a thoughtful and timely fashion, and not linked in any way to academic performance (Yeager & Walton, 2011). Importantly, they must feel authentic in order to genuinely change how students think about themselves, their classroom, and their performance.

Because these interventions ask for a shift in the way students understand themselves and their environment, research finds that these exercises require educators to go beyond delivering direct instruction. Rather, research-backed interventions often use carefully designed delivery mechanisms that differentiate them from typical school exercises. For example, many of these exercises take advantage of the “saying-is-believing” effect by having students write letters to younger students or participate in similar writing activities (e.g., Cohen et. al, 2009; Sherman et al, 2013; Walton & Cohen, 2011). Students struggle with internalizing ideas if they aren’t asked to deeply process or explain them. Ultimately, the goal is for students to fully participate in the activity in order for them to generate the concepts central to the intervention on their own.

It is important for students not to feel as if they are being forced to think in a prescribed academic fashion, nor stigmatized as a group that needs help. Social psychological interventions never tell students that they are in “an intervention” for improving academic performance nor do they explicitly state ““you should see that you are a valued important member of this school.” Students instead are led to believe that they are responding to surveys, mentoring younger students, or participating in an in-class writing assignment (e.g., Wilson & Linwille, 1982; Walton & Cohen, 2011; Cohen et al., 2009). Lengthier exercises or activities where students feel targeted can actually have negative effects by increasing stereotype threat; students might think “I am somebody who they think will fail and needs all of this help to succeed.”

These considerations extend to the qualities of the feedback that teachers are advised to provide their students in the context of social-psychological activities. As noted, there must be no hint of academic judgment, such as the red-lining of students' written responses. More positively, teachers may use the opportunity to establish channels for 1-1 communication with their students by acknowledging and empathizing with the content of their responses. For example, in a values affirmation exercise, a teacher might carry out the activity herself, and then point out to the student ways in which their values and experiences make contact. When teachers and students explicitly identify similarities between them, stronger relationships are formed, and academic performance may improve (Gehlbach, Brinkworth et al, 2016).

Finally, research also suggests that these types of activities are most effective when implemented at the beginning of a recursive cycle, before a negative spiral can occur. Timely interventions occur at the start of a school year or at a particularly important academic gateway, such as before a high-stakes exam or during middle school orientation (Yeager & Walton, 2011). Researchers have found that the earlier a value-affirmation exercise occurred in a school year, the more it improved student's grades (Cook, Purdie-Vaughns, Garcia, & Cohen, 2011).

## Summary

As we return to school this year, it is more important than ever to address the psychological and social forces that lead to negative academic experiences and learning gaps. As we continue to teach using tried and true methods of instruction and assessment, we must also expand our toolboxes and consider other ways that we can best address the needs of our diverse learners. Fortunately, interventions that can help with these issues are often short, easy to implement, and effective.



## Bibliography

- Beilock SL, Rydell RJ, McConnell AR. Stereotype threat and working memory: mechanisms, alleviation, and spillover. *J Exp Psychol Gen.* 2007 May; 136(2):256-76.
- Beilock S. L. Math performance in stressful situations. *Current Directions in Psychological Science.* 2008;17(5):339-343.
- Borman G. D., Grigg J., Hanselman P. An effort to close achievement gaps at scale through self-affirmation. *Educational Evaluation and Policy Analysis.* 2016;38:21-42.
- Borman, G. D., Rozek, C. S., Pyne, J., & Hanselman, P. Reappraising academic and social adversity improves middle school students' academic achievement, behavior, and well-being. *Proceedings of the National Academy of Sciences.* 2019;116(33):16286-16291. doi:10.1073/pnas.1820317116
- Bower, & Thomas, P. L. (2013). *De-testing and de-grading schools: Authentic alternatives to accountability and standardization.* New York: Peter Lang.
- Cohen GL, Garcia J, Apfel N, Master A. Reducing the racial achievement gap: a social-psychological intervention. *Science.* 2006;313(5791):1307-1310. doi:10.1126/science.1128317
- Cohen GL, Garcia J, Purdie-Vaughns V, Apfel N, Brzustoski P. Recursive processes in self-affirmation: intervening to close the minority achievement gap. *Science.* 2009;324(5925):400-403. doi:10.1126/science.1170769
- Cook, J. E., Purdie-Vaughns, V., Garcia, J., & Cohen, G. L. (2012). Chronic threat and contingent belonging: Protective benefits of values affirmation on identity development. *Journal of Personality and Social Psychology,* 102(3), 479-496
- Creswell JD, Welch WT, Taylor SE, Sherman DK, Gruenewald TL, Mann T Affirmation of personal values buffers neuroendocrine and psychological stress responses. *Psychol Sci.* 2005 Nov; 16(11):846-51.
- Dee, T. S. (2015). Social identity and achievement gaps: Evidence from an affirmation intervention. *Journal of Research on Educational Effectiveness,*8(2), 149-168.
- Fogliati V. J., Bussey K. Stereotype threat reduces motivation to improve: Effects of stereotype threat feedback on women's intentions to improve mathematical ability. *Psychology of Women Quarterly.* 2013;37(3):310-324.
- Forbes CE, Schmader T, Allen JJ. The role of devaluing and discounting in performance monitoring: a neurophysiological study of minorities under threat. *Soc Cogn Affect Neurosci.* 2008 Sep; 3(3):253-61
- Gehlbach, H., Brinkworth, M. E., King, A. M., Hsu, L. M., McIntyre, J., Rogers, T., *Creating Birds of Similar Feathers: Leveraging Similarity to Improve Teacher-Student Relationships and Academic Achievement.* *Journal of Educational Psychology.* 2016, Vol. 108, No. 3, 342-352

- Goyer, J. P., Cohen, G. L., Cook, J. E., Master, A., Apfel, N., Lee, W., Henderson, A. G., Reeves, S. L., Okonofua, J. A., & Walton, G. M. (2019, March 28). Targeted Identity-Safety Interventions Cause Lasting Reductions in Discipline Citations Among Negatively Stereotyped Boys. *Journal of Personality and Social Psychology*. Advance online publication.
- Hanselman P, Rozek CS, Grigg J, Borman GD. New Evidence on Self-Affirmation Effects and Theorized Sources of Heterogeneity from Large-Scale Replications. *J Educ Psychol*. 2017 Apr; 109(3):405-424.
- Harackiewicz JM, Canning EA, Tibbetts Y, Giffen CJ, Blair SS, Rouse DI, Hyde JS Closing the Social Class Achievement Gap for First-Generation Students in Undergraduate Biology. *J Educ Psychol*. 2014 May 1; 106(2):375-389.
- Harackiewicz JM, Canning EA, Tibbetts Y, Priniski SJ, Hyde JS Closing achievement gaps with a utility-value intervention: Disentangling race and social class. *J Pers Soc Psychol*. 2016 Nov; 111(5):745-765.
- Kost-Smith L. E., Pollock S. J., Finkelstein N. D., Cohen G. L., Ito T. A., Miyake A. Replicating a self-affirmation intervention to address gender differences: Successes and challenges. 2011 Physics education research conference. 2012;1413:pp. 231–234.
- Kuhfeld, Megan, James Soland, Beth Tarasawa, Angela Johnson, Erik Ruzek, and Jing Liu. (2020). Projecting the potential impacts of COVID-19 school closures on academic achievement. (EdWorkingPaper: 20-226). Retrieved from Annenberg Institute at Brown University
- McQueen, A., & Klein, W. M. P. (2006). Experimental manipulations of self-affirmation: A systemic review. *Self and Identity*,5, 289–354.
- Miyake, A., Kost-Smoth, L. E., Finkelstein, N. D., Pollock, S. J., Cohen, G. L., & Ito, A. (2010). Reducing the gender achievement gap in college science: A classroom study of values affirmation. *Science*, 330, 1234-1237.
- Neuville E., Croizet J. Can salience of gender identity impair math performance among 7–8 year old girls? The moderating role of task difficulty. *European Journal of Psychology of Education*. 2007;22(3):307–316.
- Paunesku D, Walton GM, Romero C, Smith EN, Yeager DS, Dweck CS. Mind-set interventions are a scalable treatment for academic underachievement. *Psychol Sci*. 2015;26(6):784-793. doi:10.1177/0956797615571017
- Rapa, L.J., Diemer, M.A. & Roseth, C.J. Can a values-affirmation intervention bolster academic achievement and raise critical consciousness? Results from a small-scale field experiment. *Soc Psychol Educ* 23, 537–557 (2020).
- Schmader T, Johns M. Converging evidence that stereotype threat reduces working memory capacity. *J Pers Soc Psychol*. 2003 Sep; 85(3):440-52.
- Shnabel, N., Purdie-Vaughns, V., Cook, J. E., Garcia, J., & Cohen, G. L. (2013). Demystifying values-affirmation interventions: Writing about social belonging is a key to buffering against identity threat. *Personality and Social Psychology Bulletin*,39(5), 663–676.



- Shapiro, J. R., & Neuberg, S. L. (2007). From stereotype threat to stereotype threats: Implications of a multi-threat framework for causes, moderators, mediators, consequences, and interventions. *Personality and Social Psychology Review*, 11(2), 107–130.
- Sherman, D. K., & Cohen, G. L. (2006). The psychology of self-defense: Self-affirmation theory. *Advances in Experimental Social Psychology*, 38, 183–242.
- Sherman DK, Hartson KA, Binning KR, et al. Deflecting the trajectory and changing the narrative: how self-affirmation affects academic performance and motivation under identity threat. *J Pers Soc Psychol*. 2013;104(4):591-618. doi:10.1037/a0031495
- Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. *Advances in Experimental Social Psychology*, 21, 261–302.
- Steele CM, Aronson J. Stereotype threat and the intellectual test performance of African Americans. *J Pers Soc Psychol*. 1995;69(5):797-811. doi:10.1037//0022-3514.69.5.797
- Stone, J., Lynch, C. I., Sjomeling, M., & Darley, J. M. (1999). Stereotype threat effects on Black and White athletic performance. *Journal of Personality and Social Psychology*, 77(6), 1213–1227. <https://doi.org/10.1037/0022-3514.77.6.1213>
- Thoman DB, Smith JL, Brown ER, Chase J, Lee JY Beyond Performance: A Motivational Experiences Model of Stereotype Threat. *Educ Psychol Rev*. 2013 Jun 1; 25(2):211-243.
- Walton G., Logel C., Peach J. M., Spencer S. J., Zanna M. P. Two brief interventions to mitigate a “chilly climate” transform women’s experience, relationships, and achievement in engineering. *Journal of Educational Psychology*. 2014;107(2):468–485. [Google Scholar] [Ref list]
- Yeager, D. S., Henderson, M. D., Paunesku, D., Walton, G. M., D’Mello, S., Spitzer, B. J., & Duckworth, A. L. (2014). Boring but important: A self-transcendent purpose for learning fosters academic self-regulation. *Journal of Personality and Social Psychology*, 107(4), 559–580. <https://doi.org/10.1037/a0037637>
- Yeager, David S. and Walton, Gregory M. 2011. Social-Psychological Interventions in Education: They’re Not Magic. *Review of Educational Research*, v. 81, n. 2, pp. 267–301.
- Yeager, D. S., Purdie-Vaughns, V., Garcia, J., Apfel, N., Brzustoski, P., Master, A., . . . Cohen, G. L. Breaking the cycle of mistrust: Wise interventions to provide critical feedback across the racial divide. *Journal of Experimental Psychology: General*, 2014;143(2), 804-824. doi:10.1037/a0033906