TEACHER STRATEGIES TO ENHANCE CLASSROOM PERFORMANCE OF AFRICAN AMERICAN STUDENTS: A SOCIAL PSYCHOLOGICAL APPROACH

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EXECUTIVE SUMMARY

This report introduces educators to promising developments in social psychological research that have direct application to the challenge of improving the motivation and achievement of underperforming students in classroom settings with a particular focus on African American students. The intent of the publication is to create awareness among educators, particularly teachers, of the importance of understanding social psychological processes that may contribute to underachievement, processes that are triggered by the highly evaluative nature of the classroom setting. In addition, we hope that the strategies described will be ones that teachers will try out in their classrooms.

A number of recent, “gold standard”, experimental studies in social psychology have tested the effectiveness of interventions that teachers can apply in efforts to reduce the achievement gap. While doing so requires careful attention to theory and purpose, the interventions, when applied appropriately, can yield large effects. For example, a recent experimental study conducted by one of the primary authors of this report and published in a peer-reviewed journal, Science Magazine, described a psychological intervention to reduce African American students’ level of threat in the highly evaluative world of the classroom (Cohen, Garcia, Apfel, & Master, 2006). They found that the intervention, a series of structured in-class writing assignments designed to reaffirm African American students’ sense of personal adequacy, reduced the achievement gap. African American students in the treatment group earned significantly higher fall-term grades in the course than did African American students in the control group. The researchers concluded that the racial achievement gap in the classroom can be narrowed by the use of timely and targeted social psychological interventions.

The techniques described in this report should not be seen as “foolproof” or “silver bullet” practices but rather as hypotheses that have been tested in rigorous, but small, research studies with promising results. For the most part, the interventions benefit African American and non-minority students alike, though African American students tend to benefit more. The strategies described in the report are:

1. Reinforce for students the idea that intelligence is expandable and like a muscle, grows stronger when worked.
2. Teach students that their difficulties in school are often part of a normal “learning curve” or adjustment process, rather than something unique to them or their racial group.
3. Help students to reflect on other values domains in their lives, not only in school but also beyond, that are sources of self-worth for them.
4. Make it clear that critical feedback reflects high standards and a belief in the student’s potential to reach those standards.
TEACHER STRATEGIES TO ENHANCE CLASSROOM PERFORMANCE OF AFRICAN AMERICAN STUDENTS: A SOCIAL PSYCHOLOGICAL APPROACH

OVERVIEW

The intent of this report is to provide information on experimental studies in social psychology of interest to teachers and teacher leaders concerned with their African American students’ motivation and performance in the classroom. This report underscores the importance of understanding social psychological processes that can be triggered by the highly evaluative nature of the classroom setting. More specifically, it discusses the rationale and research behind four strategies hypothesized to alleviate the “psychological threat” the classroom may hold for some African American students, even without any intent of such on the part of the teacher. That is, a student’s awareness of the potential of a negative group stereotype can interfere with their performance and learning by creating a sense of “psychological threat”.

In reporting on the experiments conducted, we do not suggest that these represent an exhaustive list of interventions to consider, nor that they are “silver bullets” for reducing the achievement gap at the classroom level. Rather, if applied to the classroom, such strategies might reduce the level of psychological threat some African American students feel in the classroom setting, and thus, improve their learning and performance. It is important to note that the strategies do not require a great deal of training or money, but they do require thought and care on the part of teachers in terms of how to apply them in their particular classroom situations.

The central question we try to answer for teachers then is:

What are promising lines of social psychological intervention research that have relevance to teachers’ efforts to increase motivation and to improve academic outcomes of underperforming students, particularly those who are African American students?

The report is organized around the following sections:

- Rationale for the Focus of this Report
- Background on the Racial Achievement Gap, the Role of Psychological Threat in the Gap, and Key Ideas for Reducing Psychological Threat in Classrooms
- Four Strategies for the Classroom: Intervention Studies with Significant Impacts on Achievement
- Implications for Classrooms
- Conclusion
Box 1
Defining the Approach

Background on Social Psychology and the Value of Experiments

*Social psychology* is a field of psychology that examines how people’s perceptions, feelings, beliefs, and behaviors are influenced by the real or implied presence of other people. Some social psychologists study strategies for helping students respond adaptively to the *evaluative nature of classrooms*. In other words, almost everything one does as a student can be evaluated. In asking a question, it might be a “dumb” question; if participating in class, it might show misunderstanding; in doing homework, getting stuck might call up comparisons with others who got it right; studying for tests and then not doing well might lead to feelings of incompetence at school. And so on. Thus, like work environments, school environments can be chronically stressful, particularly in light of the current press for high test scores. African American students, because of the possibility of cultural stereotypes about their abilities, are perhaps most at-risk to experience doubts about their academic competence, but any student can feel *psychologically threatened* by doubts about their abilities, their worth in the eyes of others, or about their belonging—and these doubts are frequently sufficient to impair performance, motivation, and learning. This report reviews research-based strategies for reducing such psychological threat in the classroom setting.

All of the classroom-level interventions described in this document are based on *randomized controlled experiments* conducted by social psychologists. Experiments are frequently said to be the “gold standard” of the sciences, the highest standard of evidence available, primarily because they allow researchers to determine if causal relationships exist between variables (for example a classroom intervention and improved student achievement). As in medical research, in such experiments, research participants are randomly assigned to one or more groups or conditions that differ in a critical way that is hypothesized to have a positive impact. At the simplest level, there would be a “treatment” group and a “control” group where the treatment group of students or classrooms gets the intervention and the “control” group does not. So the experiences of the two groups of students are the same except for this one intervention experience. If this one difference matters—if, say, the students learn more or perform better on a test—then we know that the difference in performance on the outcome measures was caused by the one critical difference manipulated between the two groups – the “treatment” (or intervention introduced). More on the approach to the development of this report can be found in Appendix A (Methodology).

**RATIONALE FOR THE FOCUS OF THIS REPORT**

The mission of SERVE Center is to serve educational needs, using applied research to bring the latest and best research and proven practices into school improvement efforts. The SERVE Center works primarily in the southeastern states, for whom reducing the achievement gap continues to be a major concern. In fact, the data indicate an educational crisis in the South, especially with regard to African American males (KewalRamani, Gilbertson, Fox & Provasnik, 2007; Wald & Losen, 2005). A report by the Southern Regional Education Board (SREB) on
SAT and ACT scores concluded that between 1998 and 2002, none of the SREB states narrowed the achievement gap between Black\(^1\) and White students. The achievement gap between Black and White males even widened. Among the 16 SREB member states, only 45 percent of Black males graduated from high school in 2003 compared to 61 percent of Black females, 65 percent of White males, and 67 percent of White females (SREB, 2003).

Tables 1-3 summarize high school graduation rates, NAEP proficiencies, and adequate yearly progress (AYP) status by subgroups for the six southeastern states. The need for information on how to reduce this disparity is reflected by the number of state committees and departments focused specifically on closing the achievement gap. (For example, The North Carolina Raising Achievement and Closing Gaps Commission was initiated in 2000 and continues its charge to address the achievement of all students by learning the source of issues that inhibit academic progress and The Mississippi State Department of Education has held Closing the Achievement Gap Conferences since 2003.)

### Table 1
2006 Graduation Rates (%)

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Alabama</th>
<th>Florida</th>
<th>Georgia</th>
<th>Mississippi</th>
<th>North Carolina</th>
<th>South Carolina</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Students</td>
<td>60</td>
<td>61</td>
<td>56</td>
<td>59</td>
<td>69</td>
<td>54</td>
</tr>
<tr>
<td>White</td>
<td>62</td>
<td>66</td>
<td>60</td>
<td>61</td>
<td>75</td>
<td>-</td>
</tr>
<tr>
<td>African American</td>
<td>47</td>
<td>49</td>
<td>41</td>
<td>50</td>
<td>54</td>
<td>-</td>
</tr>
<tr>
<td>Latino</td>
<td>-</td>
<td>46</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: Insufficient data to calculate graduation rates.


### Table 2
2007 National Assessment on Educational Progress (NAEP) Data (% At or Above Proficient)

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Alabama</th>
<th>Florida</th>
<th>Georgia</th>
<th>Mississippi</th>
<th>North Carolina</th>
<th>South Carolina</th>
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</thead>
<tbody>
<tr>
<td>All Students</td>
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<td>34</td>
<td>28</td>
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<td>29</td>
<td>26</td>
</tr>
<tr>
<td>White</td>
<td>39</td>
<td>44</td>
<td>40</td>
<td>31</td>
<td>39</td>
<td>35</td>
</tr>
<tr>
<td>Black</td>
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<td>16</td>
<td>14</td>
<td>8</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Latino</td>
<td>17</td>
<td>28</td>
<td>21</td>
<td>-</td>
<td>18</td>
<td>17</td>
</tr>
<tr>
<td>Special Education</td>
<td>11</td>
<td>12</td>
<td>17</td>
<td>10</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>English Language Learner (ELL)</td>
<td>15</td>
<td>12</td>
<td>4</td>
<td>-</td>
<td>8</td>
<td>19</td>
</tr>
<tr>
<td>Low Income</td>
<td>15</td>
<td>22</td>
<td>15</td>
<td>12</td>
<td>16</td>
<td>14</td>
</tr>
</tbody>
</table>

### Table 3
GRADE 4 MATH

\(^1\) This report uses the term African American except when specifically referring to findings from studies that use different terminology.
### Demographic

<table>
<thead>
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<th>Demographic</th>
<th>Alabama</th>
<th>Florida</th>
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<td>40</td>
<td>32</td>
<td>21</td>
<td>41</td>
<td>36</td>
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<tr>
<td>White</td>
<td>36</td>
<td>54</td>
<td>46</td>
<td>34</td>
<td>56</td>
<td>50</td>
</tr>
<tr>
<td>Black</td>
<td>10</td>
<td>15</td>
<td>13</td>
<td>9</td>
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<td>14</td>
</tr>
<tr>
<td>Latino</td>
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<td>33</td>
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<td>-</td>
<td>28</td>
<td>21</td>
</tr>
<tr>
<td>Special Education</td>
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<td>18</td>
<td>14</td>
<td>22</td>
<td>16</td>
</tr>
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<td>English Language Learner (ELL)</td>
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<td>16</td>
<td>5</td>
<td>-</td>
<td>18</td>
<td>28</td>
</tr>
<tr>
<td>Low Income</td>
<td>13</td>
<td>25</td>
<td>16</td>
<td>13</td>
<td>24</td>
<td>20</td>
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### Grade 8 Reading

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<th>Mississippi</th>
<th>North Carolina</th>
<th>South Carolina</th>
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<tbody>
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<td>28</td>
<td>26</td>
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<tr>
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<td>29</td>
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<td>35</td>
</tr>
<tr>
<td>Black</td>
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<td>13</td>
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<td>7</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Latino</td>
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<td>23</td>
<td>17</td>
<td>-</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>Special Education</td>
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<td>7</td>
<td>6</td>
<td>2</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
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<td>7</td>
<td>-</td>
<td>-</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>Low Income</td>
<td>11</td>
<td>17</td>
<td>14</td>
<td>10</td>
<td>14</td>
<td>11</td>
</tr>
</tbody>
</table>

### Grade 8 Math

<table>
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<th>Georgia</th>
<th>Mississippi</th>
<th>North Carolina</th>
<th>South Carolina</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Students</td>
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<td>27</td>
<td>25</td>
<td>14</td>
<td>34</td>
<td>32</td>
</tr>
<tr>
<td>White</td>
<td>27</td>
<td>37</td>
<td>37</td>
<td>24</td>
<td>46</td>
<td>44</td>
</tr>
<tr>
<td>Black</td>
<td>4</td>
<td>11</td>
<td>11</td>
<td>4</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>Latino</td>
<td>3</td>
<td>21</td>
<td>16</td>
<td>-</td>
<td>23</td>
<td>23</td>
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<tr>
<td>Special Education</td>
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<td>6</td>
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<td>14</td>
<td>7</td>
</tr>
<tr>
<td>English Language Learner (ELL)</td>
<td>-</td>
<td>6</td>
<td>1</td>
<td>-</td>
<td>12</td>
<td>-</td>
</tr>
<tr>
<td>Low Income</td>
<td>6</td>
<td>16</td>
<td>12</td>
<td>7</td>
<td>17</td>
<td>18</td>
</tr>
</tbody>
</table>

Note: Missing data is due to limited number of students in subgroup

### Table 3
2006-2007 Adequate Yearly Progress (AYP) Results

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Alabama</th>
<th>Florida</th>
<th>Georgia</th>
<th>Mississippi</th>
<th>North Carolina</th>
<th>South Carolina</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Students</td>
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<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>White</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Black</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Latino</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Special Education</td>
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<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>English Language Learner (ELL)</td>
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<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Low Income</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Note: North Carolina results are from 2005-2006
Source: State departments of education websites
The achievement gap as reflected in the tables has been explored as it relates to a variety of possible causal factors, some societal (for example poverty, history of the region) and some school-related (for example inequitable resources). One cannot underestimate the impact of factors such as socioeconomic status (SES), family structure, discrimination, early childhood experiences, school funding patterns, lack of opportunities for college, and other environmental factors on school performance and on racial gaps in academic performance (Brooks-Gunn & Furstenberg, 1986; Ferguson, 1998; Gordon, 1999; Gordon & Lemons, 1997; Harber, 1998; Hart & Risley, 1995; Mahoney & Cairns, 1997; Noguera, 2003; Walberg, 1984). Moreover, federal and state policies and programs are central to efforts to reduce the racial achievement gap. Studies have documented inequities in teacher quality between higher SES schools and lower SES schools. That is, measures of teacher quality have been found to correlate with the socioeconomic status of students in schools (Nye, Konstantopoulos, & Hedges, 2004) and there are a number of federal and state initiatives underway to try to address this inequality.

This report recognizes that this large complex set of factors, while important, largely exists beyond the teacher’s influence. We focus at the classroom level and ask: What does social psychological research have to offer teachers in the way of strategies they can experiment with now? We recognize that there are several layers for teachers to think about in their self-assessment of what they might do in reducing the achievement gap in their classroom, if one exists. For example, they might ask where they are in terms of creating an effective learning environment for all students that addresses factors hypothesized as important for student motivation. For example, does the learning environment satisfy students’ needs for competence, some autonomy, and positive relationships with other people? (See Deci & Ryan, 1985; Skinner & Belmont, 1993).

Additionally teachers might explore the significant body of research that has confirmed the impact of teachers’ expectations on student learning (Brophy, 1983; Brophy & Good, 1974; Cooper, 1983; Cooper, Findley, & Good, 1982; Cooper & Tom, 1984; Dusek, 1985; Dusek & Joseph, 1983; Good, 1987; Jussim & Harber, 2005; and Weinstein, Madison, & Kuklinski, 1995) and look for ways their teaching behaviors may be unintentionally signaling low expectations or lack of support for African American students. Collecting data from students on their perceptions of the classroom learning environment can be useful as a starting point.

But teachers may need to consider an additional factor. Research suggests that some African American students underperform because the meaning and significance of race in America poses an extra psychological threat in the classroom. This threat takes the form of a concern that they or others could confirm a negative stereotype about the intellectual ability of their racial group in the minds of others. A student’s own awareness of his or her group’s negative reputation— independent of how he or she is actually seen or treated—turns out to be sufficient to interfere with performance and learning by creating a sense of psychological threat—a wariness that people may use stereotypes to make their judgments. Teachers can do a great deal to reduce this perceived threat, which is relevant for many students, not just African Americans, because classrooms are an inherently evaluative situation for all students.
BACKGROUND ON THE RACIAL ACHIEVEMENT GAP, THE ROLE OF PSYCHOLOGICAL THREAT IN THE GAP, AND KEY IDEAS FOR REDUCING PSYCHOLOGICAL THREAT IN CLASSROOMS

At every level of family income and school preparation, African Americans and Latino Americans on average earn relatively lower grade point averages (GPAs) and standardized test scores (Bowen & Bok, 1998; Hacker, 1995; Jencks & Phillips, 1998; Steele, 1997). In a society where economic opportunity depends heavily on scholastic success, even a partial narrowing of the achievement gap would lead to a positive change in the lives of many academically at-risk children.

A root cause of the racial achievement gap that has received much attention in the past decade is the psychological situation of being a member of a racial or ethnic minority student in school. For African American and Latino students, a psychological threat can operate quite subtly, but can have profound effects on cognitive functioning and achievement. This threat takes the form of a concern that they could confirm a negative stereotype about the intellectual ability of their racial or ethnic group in the minds of others (Steele, Spencer, & Aronson, 2002; see also Aronson, 2002; Aronson & Steele, 2005; Cohen & Garcia, 2005; Cohen, Steele, & Ross, 1999; Walton & Cohen, 2007). For example, an African American student may worry about performing poorly on a test or asking a “dumb” question in class, and in so doing lend credence to the negative stereotype about his or her racial group. Female students may have similar concerns in math and science courses, where their gender group is negatively stereotyped (Davies & Spencer, 2005). This concern, called stereotype threat, can undermine performance through increases in stress, self-consciousness, and mental load (Beilock, Jellison, McConnell, & Carr, 2006; Schmader & Johns, 2003).

Research on stereotype threat began with laboratory studies trying to understand why African American students seemed to be performing below their potential. At least two important ideas arose from this research. The first is that, although a classroom or test-taking situation may seem objectively the same for all students, some students, because of their group, may experience it in a very different way. White students in a normal classroom find themselves in a situation where their academic skills are tested. By contrast, African American and Latino students have, in addition, the extra burden of knowing that their performance could be used to reinforce a negative stereotype of their ethnic group’s intellectual ability. This concern can occur regardless of the actual level of prejudice in the classroom. A teacher may treat all students exactly alike, assign the same work, praise or criticize all students in precisely the same manner, and so on. Yet the meaning of these behaviors can be altered when viewed through the lens of the stereotype.

For example, Steele and Aronson (1995) demonstrated that African American students in an elite university suffered stereotype threat simply as a result of taking an intellectually evaluative test. When a standardized test was presented to students as “diagnostic of intellectual ability” and African Americans therefore had to worry that performing poorly could confirm the stereotype about their race’s intelligence, African American students performed much worse than when the exact same test was presented as “not diagnostic of your ability.” This difference in describing the test had no effect on the way the White students in the experiment performed. When
intellectual abilities are measured, racial stereotypes seem to enter the minds of those students to whom the stereotypes apply—even without any explicit mention to race or the stereotype.

Another important idea from social psychological research is the notion that students’ academic performance in classrooms, because of processes such as stereotype threat, can be more variable than people customarily think (Aronson & Steele, 2005). Moreover, the observable level of a student’s performance is likely to be an inaccurate indicator of his or her actual ability level. For example, studies show that women’s math test performance can be made to rise and fall with surprising ease. Ask women to generate a short list of qualities shared by men and women and their anxiety drops and their test performance rises (Rosenthal & Crisp, 2006). Remind them they are students at a selective liberal arts college, and thus turn their attention away from their gender, and the male-female gap on a spatial abilities test shrinks (McGlone & Aronson, 2006). Have them take a test in the presence of men and their performance declines (Inzlicht & Ben-Zeev, 2000). Present the woman administering the test as an expert mathematician and the male-female gap again shrinks (Marx & Roman, 2002). Such studies underscore the degree to which human performance is shaped by environmental and psychological forces—not simply how smart a student is or how hard he or she studies. The research on stereotype threat has spawned hundreds of research studies, culminating in interventions that close achievement gaps in schools.

A final important idea is that stereotypes can impede African American students’ trust of teachers, and this can reduce the positive impact of instructional feedback. An African American pupil, a female science student, or a White male athlete may reasonably wonder if criticism from an instructor reflects an intent to help or reflects bias against his or her group (Crocker, Voelkl, & Major, 1991). In one study, African American and White college students received critical feedback on an essay they had written, ostensibly from a White professor (Cohen, et al., 1999). As the essay was accompanied by their photograph, students were aware that their race was known by the professor. Even though students received virtually identical feedback, pointing out weaknesses and suggesting strategies for improvement, African American students rated the professor as more biased than did White students and proved less motivated to revise their essay.

FOUR STRATEGIES FOR THE CLASSROOM: INTERVENTION STUDIES WITH SIGNIFICANT IMPACTS ON ACHIEVEMENT

In the field of social psychology there exist rigorously tested interventions to reduce stereotype threat. (See Appendix B for a detailed methodological summary of highlighted experimental studies for each strategy.) This section summarizes four empirically validated strategies for teachers to consider. The four strategies are:

1. Reinforce for students the idea that intelligence is expandable and like a muscle, grows stronger when worked.

2. Teach students that their difficulties in school are often part of a normal “learning curve” or adjustment process, rather than something unique to them or their racial group.
3. Help students to reflect on other values domains in their lives, not only in school but also beyond, that are sources of self-worth for them.

4. Make it clear that critical feedback reflects high standards and a belief in the student’s potential to reach those standards.

These four strategies and the supporting research are explained in greater detail below.

I. Reinforce for students the idea that intelligence is expandable and like a muscle, grows stronger when worked.

The first strategy is to reinforce in students the idea that intelligence is not fixed, but that it can be developed as one learns. Like a muscle, its power increases with use and thus, “intelligence can be taught” (Whimbey, 1975; Dweck, 1999). Aronson and his colleagues conducted two field experiments, one with elite university students and one with students in a lower-income minority middle school. In both experiments, groups of students were either taught or not taught to view intelligence as expandable (Aronson, Fried, & Good, 2002; Good, Aronson, & Inzlicht, 2003). For instance, in the first study, the college students watched a science video showing how neural networks in the brain expand in the learning process. As part of the intervention, they wrote inspirational letters to pen pals—ostensibly younger disadvantaged children in need of encouragement—in which they conveyed the notion that intelligence can expand through effort and practice. Compared with their peers in a control group (which learned about Howard Gardner’s notion of “multiple intelligences”) intervention-treated African American students and White students earned a higher semester Grade Point Average (see FIGURE 1). In the second study, middle school children responded to a similar intervention that was provided as a series of workshops and that stressed the expandability of intelligence. Children receiving this intervention scored significantly higher on the year-end statewide reading test, and the male-female gap on the math test narrowed significantly due to an increase in girls’ scores. A more recent study, combining this intervention with a study skills workshop, showed similarly positive results with inner city middle school students (Blackwell, Trzesniewski & Dweck, 2007).
2. Teach students that their difficulties in school are often part of a normal “learning curve” or adjustment process, rather than something unique to them or their racial group.

With this second strategy, students are taught to attribute academic struggles to factors irrelevant to race, a stereotype, or a personal lack of ability or belonging (see Wilson, Damiani, & Shelton, 2002). Instead they are encouraged to attribute adversity in learning or doing academic work to the rigor of the curriculum and challenges faced by everyone. This message, however, must be conveyed to students in a plausible, powerful, and realistic manner. For instance, in one of the experimental conditions in the Good, et al., 2003 study, students were exposed to senior student role models who stressed the normality of experiencing difficulties whenever moving from one level of schooling to the next. In order to internalize this learning, the middle school students then created a web-based public service advertisement for other students built around this theme of getting increasingly better grades as they learned the ropes of middle school. Compared to students in a control group (whose learning and public service advertisements focused on the dangers of using drugs and thus, was unrelated to academic work) the students receiving the “experimental treatment” earned higher statewide test scores.

In another experiment, freshmen at an elite university were asked, at the end of the difficult first year of college, to review the results of a survey of senior students (Walton & Cohen, 2007). The results conveyed, first, that almost all students regardless of race felt uncertain of their belonging in the first year of college and, second, that these uncertainties lessened with time. In this way, students were led to view doubts about belonging as common to all rather than unique to them, and as transitory rather than permanent in nature. For instance, one quote from the survey stated,

After winter break, I realized that all my really good friends were at home and I didn’t have friends like that at school. But I got involved in extra-curriculars, and met people who had common interests and unique perspectives. I also got to know people in class who became close friends...But this took time and before I found my niche here, there were times when I felt quite lonely.
Again, impact and credibility are critical to this approach. Students were led to internalize the message in the survey by giving a speech in front of a video camera, apparently for viewing by incoming freshmen, describing how their own experiences were consistent with these survey results. While the intervention had no consistent effect on White students, in the following semester intervention-treated African American students earned a higher college GPA, an effect that follow-up data indicate persisted into students’ junior year.

3. Help students to reflect on other values domains in their lives, not only in school but also beyond, that are sources of self-worth for them.

This strategy lessens psychological threat by using values affirmation, also known as self-affirmation. Self-affirmation is a process in which people reinforce their sense of personal worth by reflecting on other sources of meaning in their lives (Steele, 1988). People are better able to tolerate psychological threat in one domain (such as school) if they can shore up their self-worth in another (such as family). Laboratory research shows that self-affirmation processes can reduce stress (Creswell et al., 2005).

In two field experiments, seventh grade students completed an in-class affirmation exercise early in the school year, a stressful time, by writing about a personally important value, such as religion or relationships with friends (Cohen, Garcia, Apfel, & Master, 2006). The writing exercises involved a series of structured writing assignments administered in class prior to tests, designed to focus students on their value and its importance in their lives. The exercises had students integrate the value into their lives in the context of structured writing exercises. These exercises were tailored to the school and at times to individual students by focusing on values students had singled out as important on previous writing exercises. Students’ writing touched on diverse issues of deep and enduring personal significance. For instance, one student wrote, “My friends and family are most important to me when I have a difficult situation that needs to be talked about. My friends give me companionship and courage. My family gives me love and understanding.”

African Americans completing these structured, integrative affirmation exercises earned a higher course grade than did students in a control condition (who completed neutral writing exercises, such as reflecting on a less important value). Controlling for prior grades, the intervention was associated with a roughly 40 percent reduction in the racial achievement gap in grades in the course. Follow-up data indicate that the treatment’s effect on overall GPA persisted for at least two years. Figure 3 displays an especially telling result. The intervention reduced the percentage of African American students earning a D or below in the first term of the course from 20 percent, a rate consistent with historical norms, to 9 percent. The latter rate was no different from the rate observed for White students (see FIGURE 2). Given the costs of low-performing students in terms of teacher time and school resources, this result is noteworthy.
As an aside, the benefits of the affirmation proved largest for African American boys, who tend to underperform relative to African American girls.

4. **Make it clear that critical feedback reflects high standards and a belief in the student’s potential to reach those standards.**

In providing critical feedback on students’ assignments, teachers can be explicit. That is, research suggests it is helpful to make it clear to students that high standards, and a belief in students’ potential are the motivation for the criticism. The message, in short, conveys that the teacher is not viewing them as dumb, but, quite the contrary, believes in their potential to excel. African American students responded as favorably as White students to the critical feedback when the evaluator stated that the feedback was motivated by high standards and a belief in the student’s potential to reach those standards (for example, “Remember, I wouldn’t have gone to the trouble of giving you this feedback if I didn’t think, based on your first draft, that you are capable of meeting a higher standard”) (Cohen et al., 1999; Cohen & Steele, 2002). Indeed, this intervention led female science majors to produce revisions of a research presentation equal in quality to those of their male peers (Cohen & Steele, 2002). In a recent field experiment, in which the researchers tailored the intervention to a social studies course, the same message was found to boost African American students’ classroom GPA (Cohen, Garcia, Purdie-Vaughns, Apfel, & Brzustoski, in preparation).
APPLICATIONS FOR THE CLASSROOM

For teachers interested in exploring the four research-based strategies previously discussed in this report, the following five general points of guidance are offered. (See Appendix C for more details regarding the guidance.)

1. Stay true to the intervention as it was tested in the experiment but also realize that the intervention as tested in the experiment is meant to stand for a larger hypothesis or psychological process.

2. Consider when to use the intervention.

3. Follow through and try to study the impact of the intervention(s) on your students.

4. Try to monitor and better understand students’ perceptions of the way teachers treat them.

5. Consider starting a school study group to examine the psychological perspective of a stereotyped student.

Table 4 summarizes the interventions and the experimental studies that support the efficacy for each of the four social psychological research-based strategies. In addition, it provides examples of appropriate adaptations which “stay true to the intervention” while simultaneously adhering to the “larger hypothesis or psychological process.” The table is intended for use by teachers and administrators in group discussions of how to address each or the four strategies based on their own unique school or classroom context.

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2 The authors of this report are available for consultation with regard to the appropriate implementation of these interventions in a specific school context. Please contact Dr. Joshua Aronson, Department of Applied Psychology, New York University, 239 Greene St, 5th Floor, New York, New York, 10012 (joshua.aronson@nyu.edu) or Dr. Geoff Cohen, Department of Psychology, University of Colorado, Muenzinger Psychology Building, Boulder, Colorado, 80309-0345 (cohen.geoff@gmail.com).
### Table 4
Strategies, Interventions, and Adaptations Matrix

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Studies</th>
<th>Intervention Treatment Description</th>
<th>Possible Classroom Adaptation Examples</th>
<th>What are some examples of things I do or could do to address this strategy in my classroom/school?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Reinforce for students the idea that human intelligence is expandable and like a muscle, grows stronger when worked.</td>
<td>1. Aronson, Fried, &amp; Good (2002)</td>
<td>After viewing a video on how intelligence is not fixed, participants were asked to write a reply to their pen pal that would encourage them to work hard in spite of academic difficulties.</td>
<td>Other possibilities for helping students think of their intelligence as something that expands are: Explicitly point out that mistakes are to be expected—and are indeed to be celebrated—as part of the learning process and learning curve.</td>
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<td></td>
<td>2. Good, Aronson, &amp; Inzlicht (2003)</td>
<td>Students were assigned a college student mentor from a local college. Depending on the condition, students were either taught that intelligence is malleable, school difficulty is normal, or a combination of the previous two.</td>
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<td></td>
<td>3. Blackwell, Trzesniewski, &amp; Dweck (2007)</td>
<td>Students participated in an eight session course on learning that met once per week. During these sessions, students engaged in science-based readings, activities, and discussions related to the malleability of intelligence.</td>
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<tr>
<td>2. Teach students that their difficulties in school are often part of a normal “learning curve” or adjustment process, rather than something unique to them or their racial group.</td>
<td>4. Good, Dweck, &amp; Aronson (2007)</td>
<td>Students were exposed to role models who discussed their difficulties in transitioning from one level of schooling to another.</td>
<td>Other opportunities for helping students to interpret struggles with content include: The teacher’s, or other role model’s, own difficulties in becoming expert can be shared and are a potent source of motivation for the student.</td>
<td></td>
</tr>
<tr>
<td>Strategy</td>
<td>Studies</td>
<td>Intervention Treatment Description</td>
<td>Possible Classroom Adaptation Examples</td>
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<td>5.</td>
<td>Walton &amp; Cohen (2007)</td>
<td>Students were presented results of an upperclassman survey. Students were told that regardless of race, all students struggled with a sense of belonging that lessened as they moved through college.</td>
<td>Other opportunities for helping students to interpret struggles with content include: Group study and “rap” sessions in which students share their difficulties in school and in social life in a non-judgmental climate (Steele, 1997; Steele et al., 2002).</td>
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</table>
Most of us know from personal experience how we may perform far below our potential due to stress and performance anxiety. Likewise, students may perform below their potential, because of the stress of being under constant evaluation in the classroom. African American students, however, may experience two sources of stress rather than only one. The first is shared with their non-minority peers. It arises from the normal performance anxieties that people experience in evaluative settings. The second is distinct to negatively stereotyped groups. It arises from a fear of reinforcing negative stereotypes about their group. Because they must contend with two sources of stress rather than one, African Americans’ performance may be suppressed relative to that of their White peers.

This report summarizes strategies that teachers can use to reduce such stress. These are seemingly small moves that, when well-timed, well-targeted, and implemented thoughtfully and systematically, can have large positive results. Decades of psychological research suggest that human motivation is fragile (Aronson & Inzlicht, 2004; Aronson & Steele, 2005). Seemingly small moves that we make in the classroom can thus produce large effects for our students, both for good and for ill.
Appendix A: Methodology

Our first step in developing this report was to identify well-published social psychologists interested in summarizing strategies representing 3-5 lines of research with particular application to the issue of improving African American students’ motivation and academic performance. The intent was to focus on stereotype threat research, in general, as research that is important to the issue of the racial achievement gap. Two social psychologists with well-known publications on this topic were contacted and they agreed to summarize the social psychological research of high applicability for districts, schools, and teachers. The report was intended as a “translation of research into practice” tool for teachers because social psychological, experimental research, although very instructive in terms of possible strategies, does not often find its way into the hands of teachers and those who work with teachers. The qualifications of the two social psychologists are described below:

- Dr. Geoffrey Cohen recently published a report on two of his randomized field experiments in Science Magazine. The 2006 article, entitled Reducing the Racial Achievement Gap: A Social-Psychological Intervention, examined the effect of an intervention designed to counteract stereotype threat on minority student performance in the classroom. He is currently working with school districts on further studies of this strategy for reducing the achievement gap. Dr. Cohen received his Ph.D. from Stanford University in 1998. He was an Associate Professor at Yale and is now an Associate Professor of Psychology at the University of Colorado at Boulder. He is the Principal Investigator for a William T. Grant Foundation research grant on Addressing the Academic Performance Gap Between Minority and White Students and a Nellie Mae Education Foundation research grant on Threats to Social Identity and the Academic Achievement of Minority Students as well as on grants from the National Science Foundation and Spencer Education Foundation. He has published a number of articles in the most prestigious social psychology journals on stereotype threat.

- Dr. Joshua Aronson published two widely cited interventions that reduced the achievement gap by shaping students theories of intelligence. He recently co-authored the IES report on Encouraging Girls and Women in Math and Science, and edited the 2002 volume, Improving Academic Achievement: Impact of Psychological Factors on Education, and thus has experience in summarizing the kinds of research of interest here. He is an Associate Professor in the Department of Applied Psychology at New York University. He received his Ph.D. from Princeton University. Dr. Aronson is internationally known for his research on stereotype threat and minority student achievement. He has authored numerous chapters and scholarly articles. His current work continues to focus on methods of boosting the learning and test performance of underachieving youth. He is the founding director of the Center for Research on Culture, Development, and Education at NYU. He was winner of the Prestigious William T. Grant Faculty Scholar award and has received recent grants from the Spencer Foundation and the National Science Foundation on Psychological Barriers to Academic Development. He is currently completing two books, The Black-White Achievement Gap: New Views, New Hope and another called The Nurture of Intelligence.
Only a few social psychologists are conducting rigorous field-experimental research on assessing psychological processes that impede the academic achievement of minority youth in actual classroom settings. Drs. Cohen and Aronson are two of the experts in this area. Both investigators were interested in using their research findings to help teachers think more deeply about the kinds of psychological processes that seem to occur with minority or stereotyped groups in the classroom in evaluative situations. In initial planning calls, the umbrella concept for the types of research to include was described as “combating psychological threat in the classroom arising from negative stereotypes”. Within this umbrella concept, there are broad strategies for reducing the psychological threat that African American students may feel due to negative stereotypes about their group. Four strategies were selected for inclusion based on the following criteria:

- Interventions in the four areas summarized have been studied through the “gold standard” approach of experimental designs using random assignment to treatment and control conditions.

- Results from experiments in these areas have been published in high-tier, peer-reviewed journals.

- Positive results in terms of reducing racial achievement gaps have been found in studies in each of these four areas.

- Interventions in these areas can potentially be adapted by teachers for trial in their classroom settings.

The four strategies highlighted build on prior research and the experimental studies described in Appendix B are representative of the most recent findings relevant to the strategies. Having two experts work together in summarizing the research on the strategies was another safeguard to ensure that the studies included were appropriate to highlight. The report describes studies that met the following criteria: (1) they were aimed at reducing stereotype threat among minorities; (2) they obtained positive, statistically significant results; (3) they used randomized, double-blind experimental methodology; (4) there was evidence of the intervention’s efficacy as tested in an actual classroom setting; and (5) relevant results were published in peer-reviewed, high-tier scientific journals.

After undergoing several revisions with the SERVE CENTER staff, the draft was reviewed by a group of practitioners who represented potential end users at various levels. For example, two of the advisory group members have worked in the North Carolina Department of Public Instruction’s Achievement Gap office and have been responsible for planning the large annual statewide conference called Closing the Achievement Gap. The practitioners made a number of suggestions to the initial draft that they felt were critical to successful use of the document by teachers or teacher leaders. The final draft included their suggested changes.

**Limitations of studies.** The highlighted research has both strengths and weaknesses that affect confidence in its potential translation into general practice. As for strengths, each of the studies is high in methodological quality, featuring a randomized design. This is the most
inferentially powerful research methodology. The methodology increases our confidence in the positive causal impact of the intervention procedures. Additionally, until recently, this research has focused largely on students in university settings. But we now know that the benefits of such interventions generalize to students in a multitude of settings, including suburban middle- and high schools (Cohen et al., 2006; Good et al., 2003) and even students from relatively disadvantaged school districts. (See Blackwell, et al., 2007, which was a conceptual replication of Good et al., but with a relatively low-achieving sample of 6th graders, 79% of whom were eligible for free lunch.) Likewise, attributional re-training has been tested in a variety of settings and been found to improve the academic performance of students under psychological threat, including stereotyped students and students who worry about their academic performance or suffer from doubts about their ability (Wilson et al., 2002).

Most of the studies involve a small subset of the student body at a particular school site and thus the findings can’t be said to apply to the whole population of students in general. Indeed, for many studies, little if any data are provided concerning the representativeness of the featured sample. Thus, in spite of the fact that some of the interventions have been tested in multiple settings, it is possible, though unlikely, that benefits are limited to the select group of students who happen to agree to participate in the research. Additionally, in spite of recent advances, much more work needs to be done to test the ecological validity of the intervention strategies in various types of schools and districts. Moreover, each of these intervention studies was conducted by researchers working collaboratively with schools. No field-initiated studies that we know of have been published where teachers attempted to replicate these findings without the involvement of researchers.

Another factor to consider is that intervention effects can be highly “context-dependent.” What works in one setting, at one time, for one group may not work in another setting, at another time, for another group (see Wilson et al., 2002). For instance, depending on the study, attributional re-training has been found to benefit the performance of students overall, only students low in ability, primarily male students, or primarily female students (see Good et al., 2003; Wilson et al., 2002). The specific interventions tested yield benefits, but for whom, when, and under what circumstance (such as variations in how teachers apply the interventions) may be variable. Because of context dependency, it is likely that no “best practice” or “silver bullet” intervention will be found that will yield positive results in all classrooms indiscriminately.
Appendix B: Methodological Summary of Six Experimental Studies by Strategy

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Studies</th>
<th>Intervention Description</th>
<th>Sample</th>
<th>Design</th>
<th>Measures/Outcomes</th>
<th>Analysis Methods</th>
<th>Findings</th>
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</thead>
<tbody>
<tr>
<td>1. Reinforce for students the idea that intelligence is expandable and like a muscle, grows stronger when worked.</td>
<td>Aronson, Fried, &amp; Good (2002)</td>
<td>After viewing a video on how intelligence is malleable, participants were asked to write a reply to their pen pal that would underscore this message and encourage them to work hard in spite of academic difficulties.</td>
<td>109 college students initially consented to participate</td>
<td>Random Assignment</td>
<td>Spring quarter GPA</td>
<td>SAT scores included in all analyses as covariate</td>
<td>After completing the intervention, those in the malleable pen pal condition were more likely to view intelligence as malleable both in the short-term and long-term and obtain higher grades. Effects were consistently stronger for African Americans. The intervention did not reduce African Americans’ perception of stereotype threat. Thus, the intervention improved grades and perceptions of intelligence, but did not affect reported levels of stereotype threat.</td>
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<td>Final sample included 79 students (28% attrition)</td>
<td>42 of which were African American</td>
<td>3 conditions: Malleable pen pal, Control pen pal, &amp; Non pen pal</td>
<td>Short-term malleability beliefs</td>
<td>Analysis of Covariance (ANCOVA)</td>
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<td>6 groups: Race (Black vs. White) by Condition</td>
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<td>Long-term malleability beliefs</td>
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<td>Academic enjoyment</td>
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<td>Perceived stereotype threat</td>
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<td></td>
<td>Good, Aronson, &amp; Inzlicht (2003)</td>
<td>Students were assigned a college student mentor from a local college. Depending on the condition, students were either taught that intelligence is malleable, taught that school difficulty is normal, or were given a combination of the previous two message. The control group spent the same amount of time learning about the dangers of drugs.</td>
<td>138 seventh-grade students</td>
<td>Random assignment of students to 4 conditions:</td>
<td>Achievement scores on a state-wide standardized test of reading and mathematics</td>
<td>Analysis of Variance (ANOVA)</td>
<td>Results indicated that females achieved significantly higher mathematics scores if they were in the incremental ($d=1.13$), attributional ($d=1.50$), or combined ($d=1.30$) condition. Marginally significant improvement was found for males in the incremental condition ($d=0.64$). For reading, results indicated that students in the incremental ($d=0.52$) and attributional ($d=0.71$) conditions achieved significantly higher scores than students in the control condition. In both sets of analyses, the sample size was too small to examine racial differences.</td>
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<td></td>
<td>92 of which were Hispanic</td>
<td>18 of which were African American</td>
<td>Incremental, Attributional, Combination, &amp; Anti-Drug (Control)</td>
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<td>Strategies</td>
<td>Studies</td>
<td>Intervention Description</td>
<td>Sample</td>
<td>Design</td>
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<td>Blackwell, Trzesniewski, &amp; Dweck (2007)</td>
<td>Students participated in an 8 session course on learning that met once per week. During these sessions, students engaged in science-based readings, activities, and discussions related to the malleability of intelligence.</td>
<td>▪ 99 students entering seventh-grade in a large urban school district</td>
<td>▪ Random assignment</td>
<td>▪ Seventh and eighth grade fall and spring term grades in math</td>
<td>▪ Analysis of Variance (ANOVA)</td>
<td>▪ Students in the experimental group scored significantly higher on the incremental theory sub-scale (d=0.95), indicating that the theory of intelligence message was successfully communicated.</td>
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<td>▪ 52 of which were African American</td>
<td>▪ 2 conditions: Intervention &amp; No intervention</td>
<td>▪ Incremental theory subscale</td>
<td>▪ Patterns of Adaptive Learning Survey Task Goal Orientation subscale</td>
<td>▪ Paired Sample T-test</td>
<td>▪ Analyses revealed that students in the experimental group were more likely to be spontaneously cited as showing positive change by their teachers.</td>
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<td>▪ 44 of which were Latino</td>
<td>▪ Positive Effort Beliefs</td>
<td>▪ Commonalities of Adaptive Learning Task Goal Orientation subscale</td>
<td>▪ Positive Strategies</td>
<td>▪ Hierarchical Linear Modeling (HLM)</td>
<td>▪ Students in the experimental condition earned higher grades in math. The intervention interrupted a downward trajectory in performance common in middle school.</td>
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<tr>
<td>2. Teach students that their difficulties in school are often part of a normal “learning curve” or adjustment process, rather than something unique to them or their racial group.</td>
<td>Walton &amp; Cohen (2007)</td>
<td>Students were presented results of a survey. Students were told that regardless of race, all students struggled with uncertainty about their belonging, which was said to lessen as they moved through college.</td>
<td>▪ 55 first year college students</td>
<td>▪ Random assignment</td>
<td>▪ Academic fit and achievement behavior</td>
<td>▪ SAT scores and pre-intervention data were included in analyses as covariates if they were significant</td>
<td>▪ Assessments given immediately after completion of the intervention revealed that African American students rated their academic fit more positively (d=1.37), their academic potential higher (d=1.63), and were more likely to prefer challenging courses (d=1.11) in the experimental condition compared to the control condition. Results suggest that these mean level effects did not persist long-term for African American students.</td>
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<td></td>
<td>▪ 25 of whom were African American</td>
<td>▪ 2 conditions: Intervention &amp; No intervention</td>
<td>▪ Challenge-seeking in course selection</td>
<td>▪ GPA</td>
<td>▪ Factor Analysis</td>
<td>▪ In the long term, African American students in the experimental condition were relatively less likely to experience lower academic fit on moderately or highly adverse days (d=1.02).</td>
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<td></td>
<td>▪ 4 cells: Race (Black vs. White) by Condition</td>
<td>▪ Adversity level</td>
<td>▪ GPA</td>
<td>▪ Adversity level</td>
<td>▪ Analysis of Covariance (ANCOVA)</td>
<td>▪ Academic outcomes were more positive for those participating in the intervention. Students in the experimental group reported engaging in more achievement behavior (d=1.47), specifically studying longer (d=1.54), and sending more e-mail queries to professors (d=1.70) compared to the control group.</td>
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<td>▪ SAT scores and pre-intervention data were included in analyses as covariates if they were significant</td>
<td>▪ GPA</td>
<td>▪ Adversity level</td>
<td>▪ In terms of GPA, African American students in the experimental group earned higher grades than those in the control (an average effect of .34 grade points; d=1.10).</td>
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<tr>
<td>Strategies</td>
<td>Studies</td>
<td>Intervention Description</td>
<td>Sample</td>
<td>Design</td>
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</table>
| 3. Help students to reflect on other values domains in their lives, not only in school but also beyond, that are sources of self-worth for them. | Cohen, Garcia, Apfel, & Master (2006)                                    | Students completed an in-class writing assignment early in the school year (a stressful time) by writing about an important value they held. The writing exercises involved a series of 15 minute prompts designed to help students focus on something of value in their lives. | 243 middle school suburban students  
119 of whom were African American | Random assignment  
2 conditions: Intervention & No intervention  
4 cells: Race (Black vs. White) by Condition | GPA                                                                              | Multiple Regression                                          | African American students participating in the intervention earned higher grades in the course than students in the control group (average effect = .30 grade points).  
The intervention reduced the percentage of African American students receiving a D or below in the course from 20% to 9%. |
| 4. Make it clear that critical feedback reflects high standards and a belief in the student’s potential to reach those standards. | Cohen, Steele, & Ross (1999)                                               | A White evaluator stated that critical feedback provided on an assignment was motivated by high standards and a belief in the student’s potential to reach those standards (i.e., wise feedback) | 239 college students  
121 of whom were African American | Random assignment  
3 conditions: Control, Wise Criticism (Intervention), & Positive Criticism (Criticism given with positive feedback)  
6 cells: Race (Black vs. White) by Condition | Task Motivation  
Identification with writing skills  
Bias perceptions  
Performance on presentation (follow-up with female science majors; Cohen & Steele, 2002) | Factor Analysis  
Analysis of Covariance (ANCOVA) | African American students in the control group rated their reviewer more biased than white students in the same group. African American students in the wise feedback condition rated their evaluator’s bias no higher than their white counterparts. Responses in the positive criticism condition fell between control and wise feedback conditions.  
African American students reported significantly greater task motivation in the wise feedback condition group compared to African Americans in the control condition. Responses in the positive criticism condition fell between control and wise feedback conditions.  
African American and white students in the wise feedback condition were marginally more likely to report being identified with writing skills.  
In a follow-up study with women in science, wise feedback led to significantly better performance on a revision of a research presentation, compared with women in a control condition. |
Appendix C: Guidance for Implementing Strategies to Enhance the Classroom Performance of African American Students

For teachers interested in exploring the four strategies and ideas discussed in this report, we offer the following general guidance:

1. Stay true to the intervention as it was tested in the experiment but also realize that the intervention as tested in the experiment is meant to stand for a larger hypothesis or psychological process.

Interventions are always tailored to the specific research setting. Although the interventions used in the studies are ones that achieved positive results, they may need to be adapted to fit a particular teacher’s classroom setting, and then they must be closely monitored to determine their effects. Partnering with researchers can be an important step a school can take in this endeavor.

We do not recommend a cookbook approach to interventions whereby one simply follows predetermined steps as followed in the experimental study. Rather, we advocate an understanding of the purpose and process involved in using the strategy, and a use of your professional wisdom in how to make the process apply in a given classroom context. This tends to insure that the spirit of the intervention is not lost when local conditions prevent the teacher from following a recipe verbatim. If teachers do not grapple with the underlying theory or purpose of an intervention, key ingredients may be left out, rendering the use of the intervention less effective.

We also recommend an empirical approach, as it is always possible that an intervention may result in different student reactions in different settings. Thus, it is important to pilot the intervention, such that the intervention in its original form is first tested among a small subgroup, its effects observed, and if results are positive, then used to reach more children, or refined as needed.

2. Consider when to use the intervention.

The timing of some of the interventions is important. Some of the interventions reviewed seem to interrupt a downward spiral, (Blackwell, et al., 2007; Cohen et al., 2006; Wilson et al., 2002; see also Mendoza-Denton, Downey, Purdie, Davis, & Pietrzak, 2002. Some psychological interventions, such as the self-affirmation assignment, may be most effective when given at times of high stress such as the beginning of the school year, as a means to interrupt a downward slide that would otherwise feed off its own consequences, with stress worsening performance, and worsening performance heightening stress, in a repeating cycle. Such downward slides coincide with academic transitions, such as the transition to middle school, high school, or college. These are times when the performance standards shift upward, when students’ sense of identity is in flux, and when existing social-support circles are disrupted, heightening stress and feelings of exclusion. If a small psychological intervention can interrupt a downward spiral at such times, or prevent it from emerging in the first place, there is the possibility for large and long-term effects (Cohen et al., 2006).
It is also important to time the intervention to the psychological need. For instance, if the attributional re-training intervention is given too early, before students feel uneasy or insecure in their academic work difficulties, it could create the very concerns it is intended to alleviate, for instance by suggesting to students that they should be wondering about their ability and belonging in school (see Wilson, et al., 2002).

Similarly, the frequency of the intervention is another important variable to consider. Some interventions may work better with repetition, others worse. For instance, if a teacher repeatedly expresses a belief in students’ potential, his or her sincerity may begin to be doubted. Likewise, if the same intervention assignment is used repeatedly rather than varied in its content, its freshness and impact may ebb. And it should go without saying that saying things to students such as “I believe in your potential” will have better results if the teacher actually believes what he or she is saying.

3. **Follow through and try to study the impact of the intervention(s) on your students.**

Teachers and schools should test new practices but always be aware of unintended consequences. Indeed, some interventions may prove less effective than others in a particular class or school. For instance, attributional retraining might prove less effective in classrooms in which students are trying hard but do not yet have the resources to understand the content being taught. The message of optimism offered in such attributional interventions (for example encouraging students to interpret failure as a result of lack of effort rather than lack of ability) may contradict students’ actual experiences in the classroom, leading to frustration and disappointment (Wilson et al., 2002). This may make it critical, with students who are behind academically, to pair such attributional training (how to think more positively about their struggles) with skill-development workshops that provide the study skills and other resources students need to improve (see Blackwell et al., 2007).

Likewise, giving critical feedback with a message of high standards, and an assurance of students’ potential to reach those standards, might prove detrimental if that message were provided in a rote, repetitive, or unpersuasive manner, or if the substantive feedback and instruction needed for students to reach the standard in question were absent.

Given this complexity, we recommend teachers work together with other highly experienced and successful teachers and researchers in this endeavor. We also recommend collecting data at various points from target students to find out how they are performing and how they are thinking about their academic performance.

4. **Try to monitor and better understand students’ perceptions of the way teachers treat them.**

The research results shared in this report are not intended to imply that these are all the possible fixes for reducing the level of psychological threat students experience in the classroom. Teachers can be acting in many ways that communicate low expectations or lack of confidence in students, or other factors such as poor resources and school or familial disorder may be inhibiting students’ achievement. These problems will not be solved with these strategies. Some teachers may be communicating low expectations to African American students in ways that are
very subtle, perhaps even not understood, and perhaps even motivated by good intentions. For instance, over-praising African American students out of a desire to encourage them may in fact deepen stereotype threat by conveying low expectations; praising students’ ability may set them up for discouragement and failure later, by teaching them that ability rather than effort is the critical force determining success (Harber, 1998; Massey, Scott, & Dornbush, 1975; Mueller & Dweck, 1998).

For this reason, it is critical for individual teachers, groups of teachers, or whole faculties to regularly check in with underperforming student groups and try to understand what students are actually experiencing, thinking, and feeling as related to their classroom and school. Thus, at a more complex level, a highly critical factor in determining if, when, and how teachers could effectively intervene is the nature of students' concerns regarding themselves and the learning environment.

If, when offered the opportunity to comment on how they feel about their teachers’ support, all the African American students in a particular class sound like the student below, there is likely no need for interventions to reduce psychological threat. This teacher is already creating a healthy classroom learning environment for minorities:

This year for pre-calculus I had Mrs. Lord, who is White. She just tells us all the time how smart we are, and she really makes us feel special about what we are learning. If we cannot figure a problem out, she will continue to push us to think harder, analyze the properties, and talk out loud about how we are trying to process... I think it’s because she believes in all of her students, we start believing in ourselves (Howard, p. 9, 2003)

But if some students offer comments as the one below, there is room for improvement in trying some new strategies.

I had this one teacher and he would just smirk and shake his head whenever I got an answer wrong. It was like he was thinking to himself “dumb black kids, he just needs to stick to sports”. It’s hard to explain because teachers don’t ever come straight out and say it (that they have low expectations for African American students) but their actions and expressions say a lot. And you can try to ignore that, but when it’s your teacher, you can’t tell me that it doesn’t affect what you think about yourself, and how smart you think you are (Howard, p. 10, 2003)

In thinking about the strategies to try, it is important to understand whether the problem for particular African American students might be a concern about being stereotyped, a general mistrust of teacher intentions, a lack of belonging, or an elevated stress level about their performance, it is important to understand this as background for thinking about the strategies to consider. Given this, one of the most productive activities we could recommend that teachers and administrators engage in is the systematic assessment of the perceptions of at-risk subgroups. While there are a number of such survey tools available, we would suggest the use of a climate assessment survey, which assesses students' perceptions of school and their various concerns related to being in the school environment. Administration of a survey, in conjunction with gathering comments from students as shown above, would provide teachers and administrators
the opportunity to gain a fuller understanding of the nature, intensity, and pervasiveness of concerns related to students’ perceptions of the climate present in their schools, which, in turn, could lead to the generation of other productive strategies for altering the school climate and students’ perceptions of it.

5. Consider starting a school study group to examine the psychological perspective of a stereotyped student.

The importance of students’ perceptions about how they are seen by others and the impact of such perceptions on academic performance lies at the heart of the reviewed research. Given this, we would suggest that, as another productive starting point, teachers and administrators could start an informal work or study group as a way of engaging each other in open discussions concerning this idea of the need to combat psychological threat in the classroom for African American students. A professional learning team action cycle is illustrated on the following page to provide a process for school groups to use when examining this, or any other, issue.

As advised in the professional development action cycle, teachers are encouraged to use data to identify student needs. A climate survey is an instrument that would provide teachers with the data necessary to assess their specific school and/or classroom environment. Three school climate survey resources are provided below. In addition, the social psychologists who wrote this report are available for consultation with regard to providing and selecting appropriate climate assessment surveys for a given school³.

1. School Climate Inventory (SCI)
   - http://crep.memphis.edu/
   - Developed by the Center for Research in Educational Policy, University of Memphis.
   - Consists of seven dimensions associated with effective school organizational climates. The seven dimensions are: order leadership, environment, involvement, instruction, expectations, and collaboration.

2. School Climate Inventory
   - Copyrighted by Keith King.

3. The Comprehensive School Climate Inventory
   - http://www.csee.net/climate/csciassessment/
   - Measures 10 dimensions of school climate. The 10 dimensions are: physical, social emotional, quality of instruction, ethical learning, professional development, leadership, respect for diversity, school community and collaboration, morale, and environment.

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Professional Learning Team Action

Communicate information to other stakeholders

Use data to identify student needs

Examine studies and research

Continually Revisit Reflect Revise

Engage in rigorous reflection

Monitor and assess implementation

Collaboratively experiment with new teaching practices

Use research and professional wisdom to make good choices

Adapted from the Evidence Based Decisionmaking Cycle, SERVE Center at the University of North Carolina at Greensboro
References


Washington, DC.


