The science of “small things”: Psychological interventions to reduce racial achievement gaps in STEM

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Atlanta-based visual recognition startup
Psychology works in small unexpected ways...

...often without us knowing it

...it accumulates across people but manifests in local contexts

...to create a university culture
The threat and stress of confirming stereotypes about one’s group in evaluative situations, such as, test-taking, interviews, sales pitches, and performance evaluations.
Stereotype threat

African American and White American college students.

Test instructions:

Standard test instructions

OR

Standard test instructions +
“Please indicate your racial group”

(Steele, Quinn, & Spencer, 1997)
Stereotype threat

Verbal Test Performance

# of items solved

- Asked to Indicate Race
- Not Asked to Indicate Race

blacks
whites
Small Changes in Psychology to Block Racial Bias
Because of racial bias Black students have difficulty trusting criticism
“How can I (White American) offer criticism so this person who is different from me (Black American) will thrive?”
Critical of work

Critical of work +

Critical of work + I believe in you.
How do we block racial bias so that Black professionals can thrive?
Using psychology to improve engagement and retention
The majority of students who plan to graduate in science drop out.

A major contributing factor to leaving is feeling isolated.
Social networks

Greater life satisfaction

Greater career success

Better physical and mental health

Better occupational pursuits

Social Networks In Biology for One Semester
Social Networks In Biology for One Semester

FRIENDSHIP

STUDY

SUPPORT

SEPTEMBER

DECEMBER
## WHAT ARE YOUR PERSONAL VALUES?

Below is a list of characteristics and values, some of them may be important to you; some may be unimportant to you. Please rank them from 1 to 11 according to how important they are to you ("1" being the most important item, "11" being the one that is least important to you). Use each number only once.

- [ ] Being Good at Art
- [ ] Physical Attractiveness
- [ ] Creativity
- [ ] Independence
- [ ] Membership in a Social Group (such as your community, racial group, or school club)
- [ ] Music
- [ ] Politics
- [ ] Relationships with Friends or Family
- [ ] Religious Values
- [ ] Sense of Humor
- [ ] Sports Ability
Directions

1) Look at the value you picked as most important to you (the value you ranked as #1 on the previous page).

2) Think about times when this value was or would be very important to you.

3) Describe why this value would be important to you.

Focus on your thoughts and feelings and don’t worry about spelling, grammar, or how well written it is.

How can one get by without friendship or family? I know I couldn’t, I need that support, at times it can feel like the only thing I have that is real. At other times I don’t need it, but love and comfort from relationships is something that is always nice... when in need I fall back on my support, friends and family, without that support I would never stop falling.
Friendship network over the course of one semester

NUMBER OF FRIENDS

CLOSENESS WITH FRIENDS

Affirmation

Control


Number of students who enrolled in Part II of course

Took Spring Course

Control

Affirmation
Impact
Conclusion
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Thank you.