

A diverse group of people, including young adults, a middle-aged woman, an older man, and a young girl, are walking together in a park at sunset. They are all smiling and looking towards the right. The background is a warm, golden light from the setting sun filtering through trees.

Wired for Connection:

The Neuroscience Behind Student Belonging and Actionable Strategies for Schools

Dr. Suzie White



73%

...feel lonely at least sometimes

Over Half

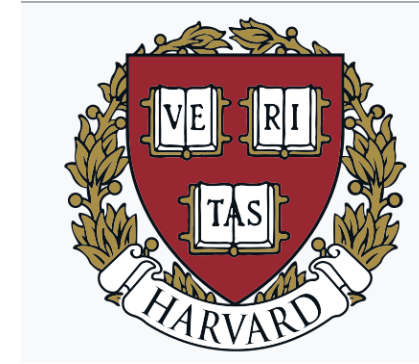
...feel disconnected every single week

Gen Alpha—youngest students, may be following same path



You have the power to change this.
I know you are working hard and care.





Niobe Way, NYU



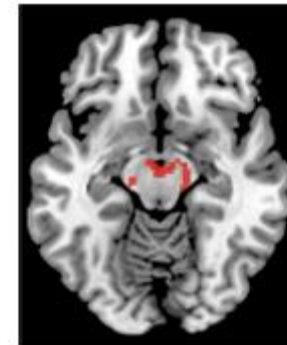
Withheld food (hungry/thirsty):



a Anatomical SN/VTA



b Functional ROI



New + reward
> familiar + no reward

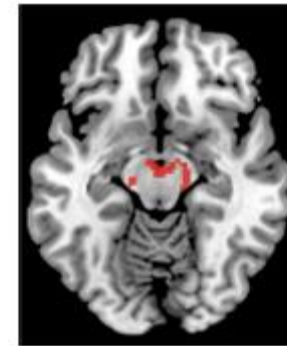
Withheld social contact:



a Anatomical SN/VTA



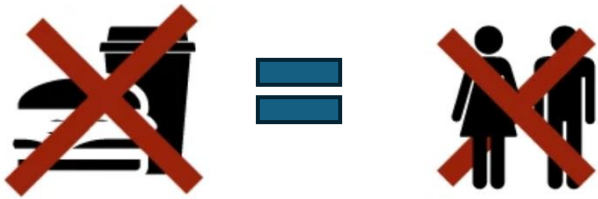
b Functional ROI



New + reward
> familiar + no reward

“People who are forced to be isolated crave social interactions similarly to the way in which a hungry person craves food.”(Tomova, 2020)

No gender differences.

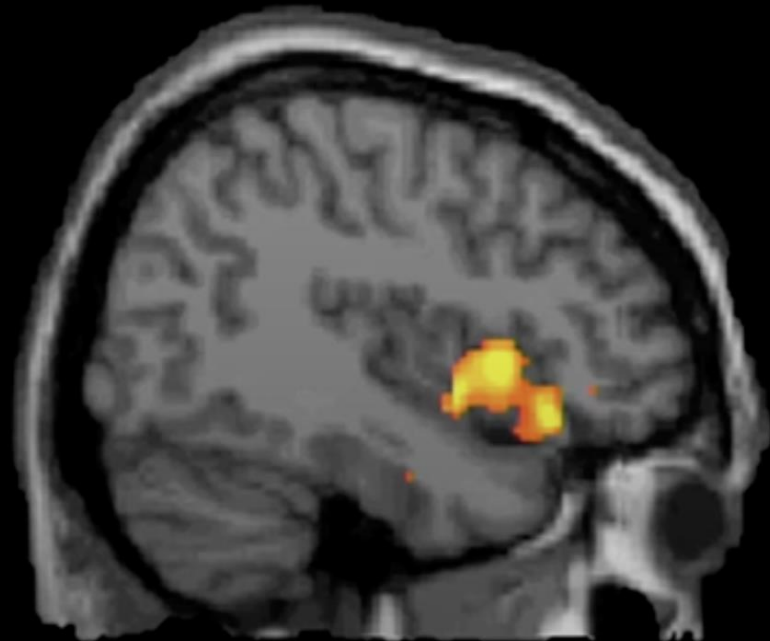


Connection= core human need

Matthew Lieberman, Social Neuroscientist (UCLA)



Physical
Pain:
(dACC)



fMRI: Social
rejection, social
isolation, exclusion



Social pain is real pain.

Why do we have this need?

Evolution.

- We evolved to need to be in groups for protection, to protect ourselves from predators, get food, etc.
- Social separation and isolation meant death.
- Our bodies have evolved to feel social separation as painful (to keep us alive)
- Cacioppo



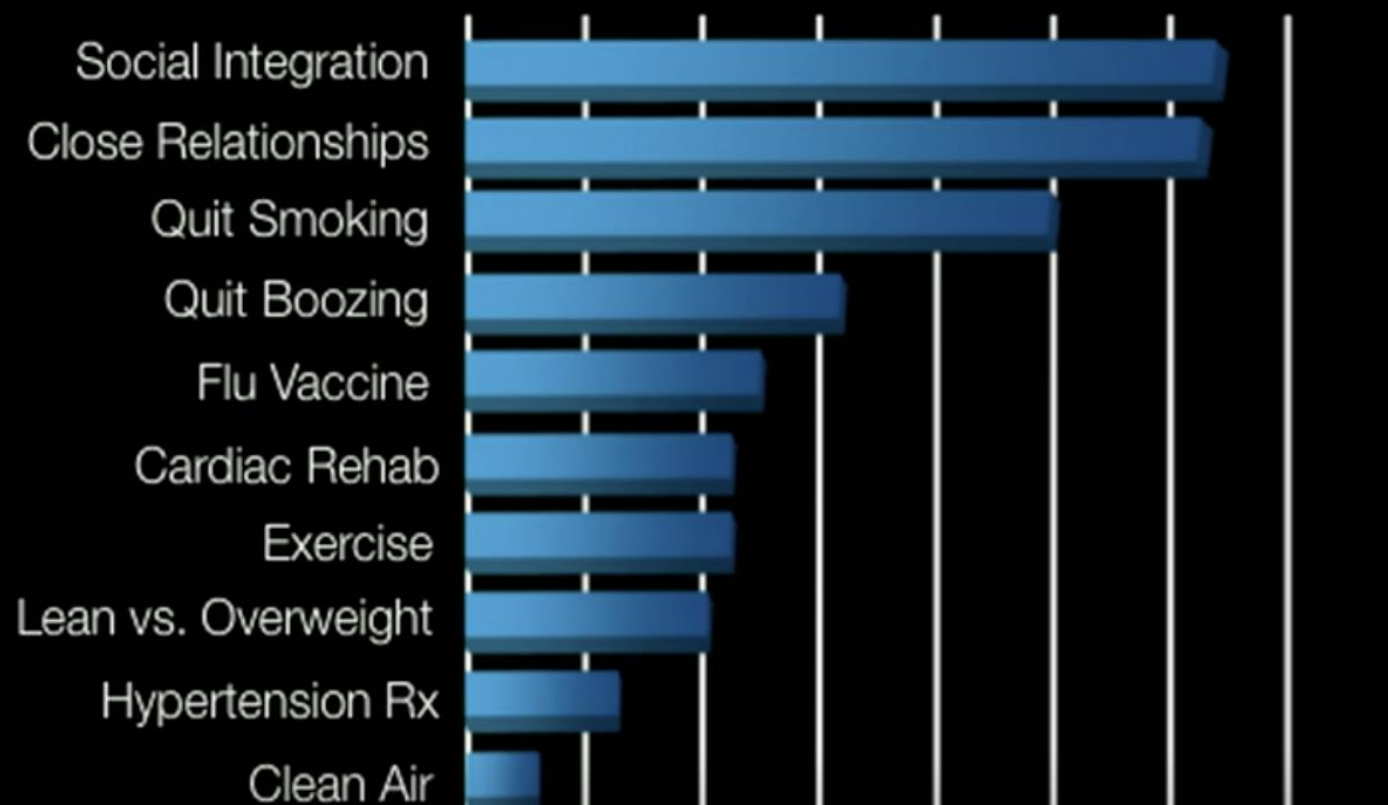
What do we need to thrive?



Biggest predictor of happiness and health?

The quality of our connections.

Staying Alive



Susan Pinker *at* TED2017

The secret to living longer may be your social life



What is Social Connection?

- **Feeling close to and connected to others**
- **Social support:** thoughts and feelings; provide help when needed
- **Social integration:** feeling part of a larger community



“Social connection is an evolutionary need, hardwired in the brain.

We need it to survive and thrive.”



Social Connection, Schools, and Students

My Dissertation: How do students make the decision to go to college?

Sponsoring Committee: Professor Robert Teranishi, Chairperson
Professor Pedro Noguera
Professor Joseph McDonald

INCREASING ACCESS TO COLLEGE FOR LOW-INCOME
URBAN STUDENTS: HOW TEACHERS AND OTHER
INSTITUTIONAL AGENTS MATTER

Suzanne M. White

Program in Higher and Postsecondary Education

Submitted in partial fulfillment
of the requirements for the degree of
Doctor in Philosophy in the
Steinhardt School of Culture, Education, & Human Development
New York University
2012



One adult: share their thoughts and feelings

+

Said to them in 1:1 conversation,
“you are going to college”=the child went.

Findings:

- Parent
- Parent-not say, teacher said yes (elementary)
- No parent, no teacher: ?
- Parent said I would like for you to go but it's your choice: ?
- Teacher said go, but student could not share thoughts/feelings...
- Not to say everyone should go to college...
- ...how we talk to students about their futures impacts decisions

The Research: Influential Relationships

Parents:

- Build self-worth, provide emotional safety (*Sroufe, 2005*)
- Shape long-term mental health & resilience (*Steinberg, 2001*)

School Adults:

- Foster academic motivation/achievement, build belief in competence and potential, school belonging (*Wentzel, 1998*)
- Protective for students without strong emotional support at home (*Werner, 1993*)

Peers:

- Influence social norms and identity, self-esteem through comparison (grades 6–12) (*Brown & Larson, 2009*)
- Become more dominant when adult support is missing, but are not protective on their own (*Allen et al., 2005*)

School-Adults and Student Relationships Improve Academic Outcomes



Boosts engagement, motivation, and academic achievement
(Roorda et al., 2011; Pianta, 1999)

Improves behavior, reduces discipline disparities, and fosters belonging
(Gregory & Fergus, 2017; Bryk & Schneider, 2002)

Protects against depression and anxiety, and builds resilience—especially for students lacking home support
(Resnick et al., 1997; CDC, 2021)

“Children who do well despite serious hardship have had at least one stable...relationship with a supportive adult.”

Trusted adults foster resilience.



Center on the Developing Child
HARVARD UNIVERSITY

People standing at the bottom of a hill perceived it as less steep when they were with a friend.



- Things seem much harder without social support

How do students develop self-concept? (Pfeifer)

- Two brain networks:
 1. Mentalizing network:
trying to understand how others view us
 2. Self-perception network:
how we see ourselves
- Adolescents were asked, do you think you are smart? Capable? Fun? Etc.
- They then asked adults, do you think you are smart? Capable? Fun? Etc.



Adults

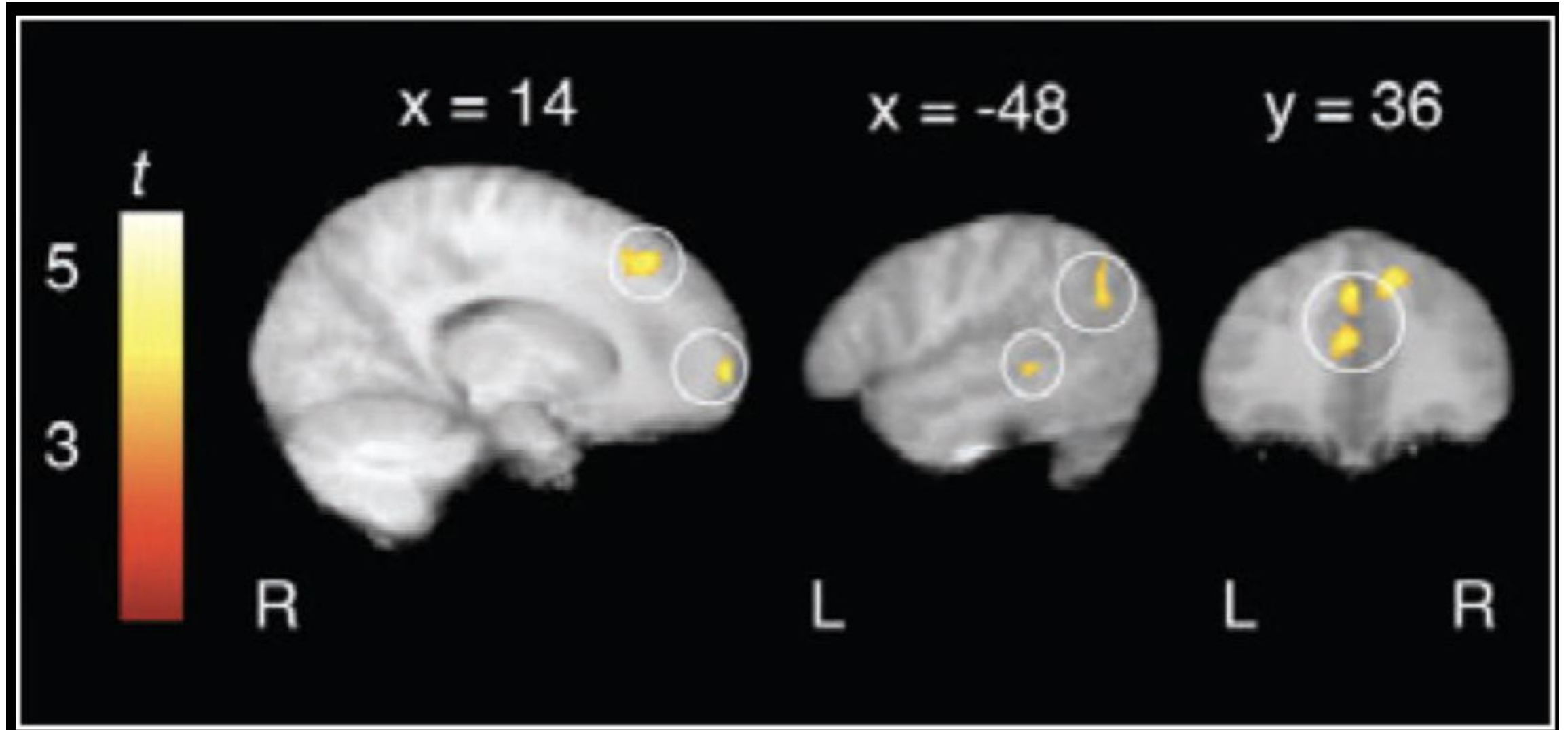


- Brain activity was mostly in areas linked to **self-reflection**.
- Self-concept mainly shaped by what *they* thought of themselves.

Adolescents



- The same self-reflection areas lit up, **but so did the brain's “mentalizing network”**, regions used when figuring out **what others think**.



Parts of adolescent brain that lit up (didn't light up the same for adults)

Adolescents' self-concept is significantly shaped by how they think others see them.

“Smart”, “capable”, “hardworking”:
sensitive to adult perceptions

Pair and Share:

Reflect: Which information from the neuroscience of connection is most meaningful/relevant to you in your own life? Your school?

Thinking ahead: Please share about one school adult that had an impact on you, or one student you had an impact on.



Research-based Ways to Strengthen Social Connection for Students in Schools

Problem: Many of our students don't have connection to a trusted adult at school.

Recent Findings...

- **Only 1 in 3 Gen Z students** say they feel like an adult at school knows them well. (*Search Institute / EdWeek Research*)
- **1 in 5 middle/high schoolers** in the U.S. say they don't have a single trusted adult at school. (*CDC's Youth Risk Behavior Survey (2023)*)
- **Connection to Parents: Only 45% of teens** say they talk to their parents about their feelings "often." (*C.S. Mott Children's Hospital National Poll on Children's Health (2022)*).



Principal Checklist: Schoolwide Strategies

- Build a shared vision of connection
- Build staff awareness and capacity

“Every student should have at least one trusted adult at school.”

School-wide
approach to
identify
students
without one
trusted
school adult

Teachers: already building relationships with students, this is a strategy to make sure no students fall through the cracks.
We need the data. We need a system.



MAKING
CARING
COMMON
PROJECT

Relationship Mapping.

Purpose: identify students who don't have at least one positive and trusting relationship with a school adult (strategy make it easier when challenges arise later)

1. Teachers identify positive relationships with students (dots/spreadsheet)



2. Students answer survey on the # of people in school could go to with a problem (6-12)



3. Ask faculty, school adults to volunteer to build a relationship with each of these students

4. Provide volunteers scripts/strategies to build those relationships

5. Monitor progress, track pre/post

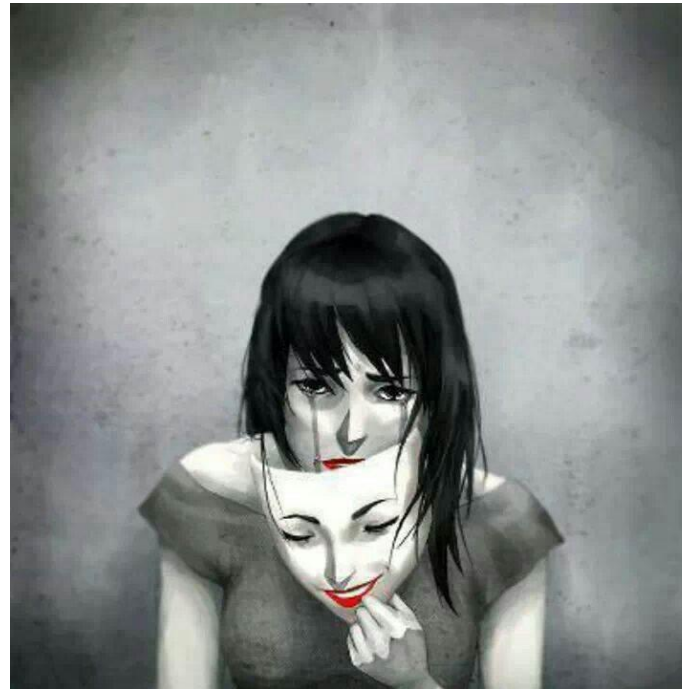


Teacher-Student Relationship- Building 4 Pillars



I See You

- Build trust through asking questions, listening, and empathizing (understand who they are beyond academics)
- Beginning of the year questionnaire, 1:1 meetings, etc.



5-7 Touchpoints

- Be persistent.
- It may take many tries to connect with a student.
- Especially if sharing feelings caused disconnection in past.

P&G



Why people don't share feelings:

- Connection paradox: In order to have deep connection, we need to be able to share our deepest thoughts and feelings with another person
- BUT, we don't share our thoughts and feelings because

WE FEAR LOSING CONNECTIONS

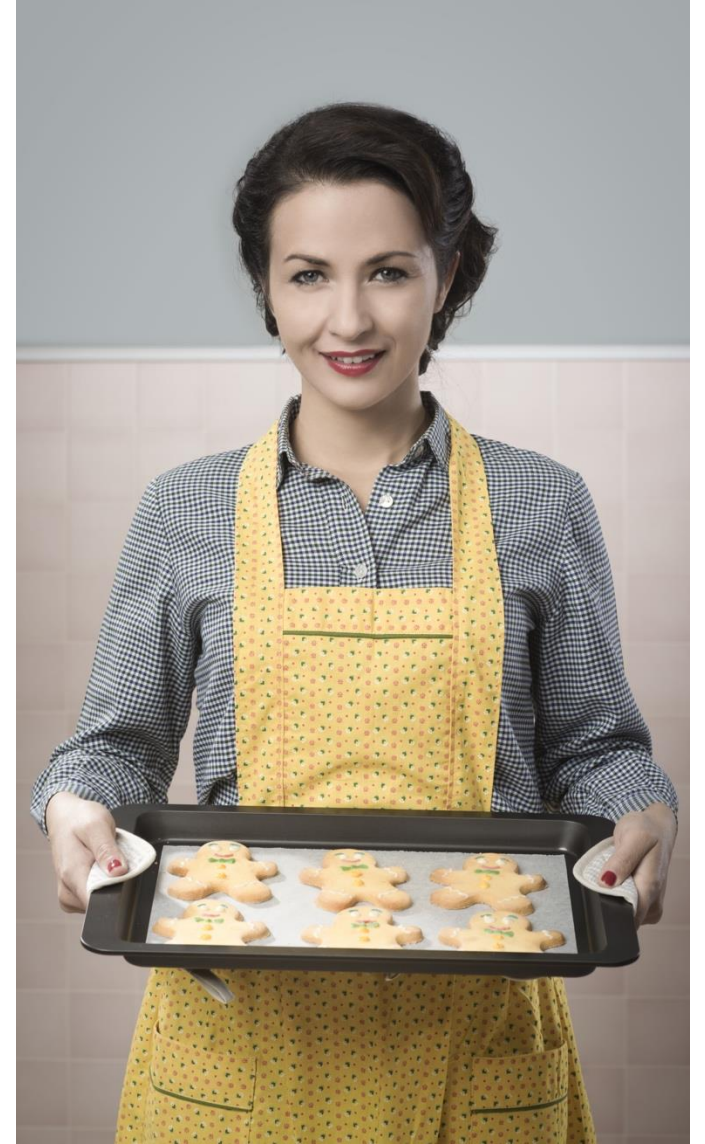
...which leaves us...

WITHOUT real human connection



Gender Expectations

- Men: we tell men, to be strong, independent, do not show weakness (not ok to be sad, it's ok to be mad)
 - So, men think if they share their feelings they will look weak, people won't like them, and they will lose that connection
 - So they talk about safe topics (cars, sports, video games)
- Women: We tell women to always be nice (it's ok to be sad, not ok to be mad)
 - If share their feelings (conflict), people will think they are not nice, and they will lose that connection
- Makes it hard for both genders to have authentic connection (Way and Gilligan)



I Like You

- Excited to see them! Smiles!
- Tell them why you like them. Point out their strengths
- Share joy! Cheer them on!
- Affirm their identity



5 : 1

+

-

I Believe In You

- Wise Feedback: communicate high expectations + confidence in student's ability (strengths) + actionable guidance
- Normalize struggles:
 - 1) student overcame challenge
 - 2) famous people
 - 3) personal story of overcoming academic challenge

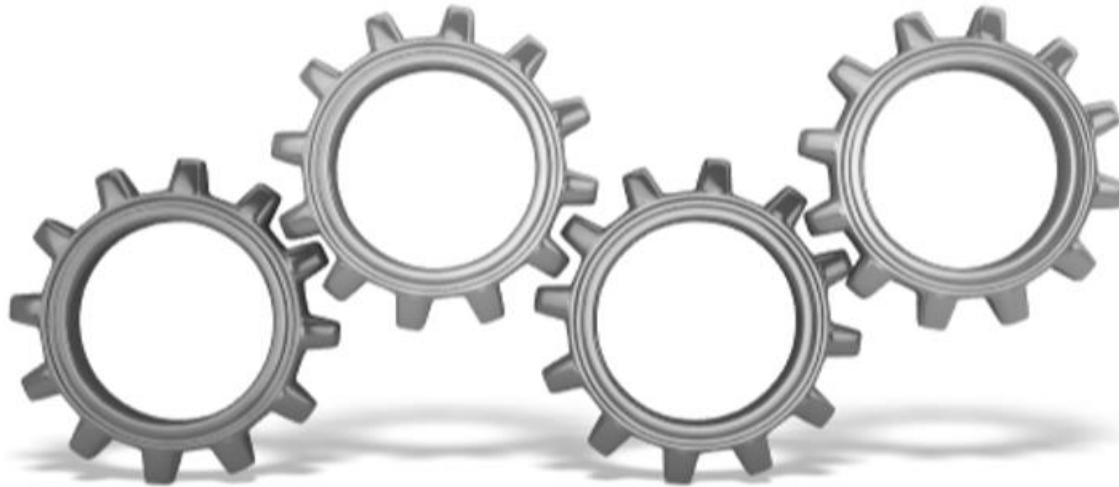


I Help You Climb

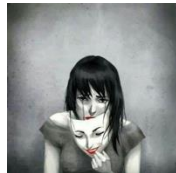
- Help students with academics, current problems (resources), future goals (college/career info)
- Partner with families
- Connect students to peer organizations



All Four Gears → Student Success



**Seen/
Understood**



Liked



Sees potential



**Helps them
climb**



High Expectations/Demand

**Authoritarian/
Traditionalist**

Professional Distance (low warmth)

Elitest

Low Expectations/Demand

High Warmth/Care

Sentimentalist

Peer Belonging Strategies

1. **School belonging:** Barbershop Talks/Identity Groups (Dr. Jarrod Druery)
2. **Academic belonging:** Cooperative classroom learning structures: think, pair, share; jigsaw; numbered heads together
3. **Peer relationships:** SEL curriculums (Dr. Kate Kennedy)



Pair and Share:

What steps would you need to take to implement relationship mapping or strengthen student-teacher relationships using the 4 pillars this year?

What barriers do you think you might encounter, and what plan could you make to overcome these obstacles?

Q&A: Please write questions. I can answer most common questions. (handouts)



Q & A

If you would like support along this journey...

- I have digital resources, where these same documents are hyperlinked to resources (will email)
- I am here to help (talk, relationship mapping (short: October), teaching strategies)
- Thank you!

Elephant Calves + Parents

- A calf needs its mother to survive.
- Nurses it
- Shields it from predators
- Teaches it how to navigate the world
- Find hidden water holes during droughts
- How to strip bark for food



A photograph of a herd of elephants in a savanna. In the foreground, a large elephant on the right is spraying water from its trunk, creating a misty cloud. To its left, another large elephant stands prominently. Behind them, a smaller elephant is visible. The background consists of green bushes and trees under a bright sky.

Calves + Other Adults

- Step in when needed
- Offering this same protection and guidance.

Calves + Peers

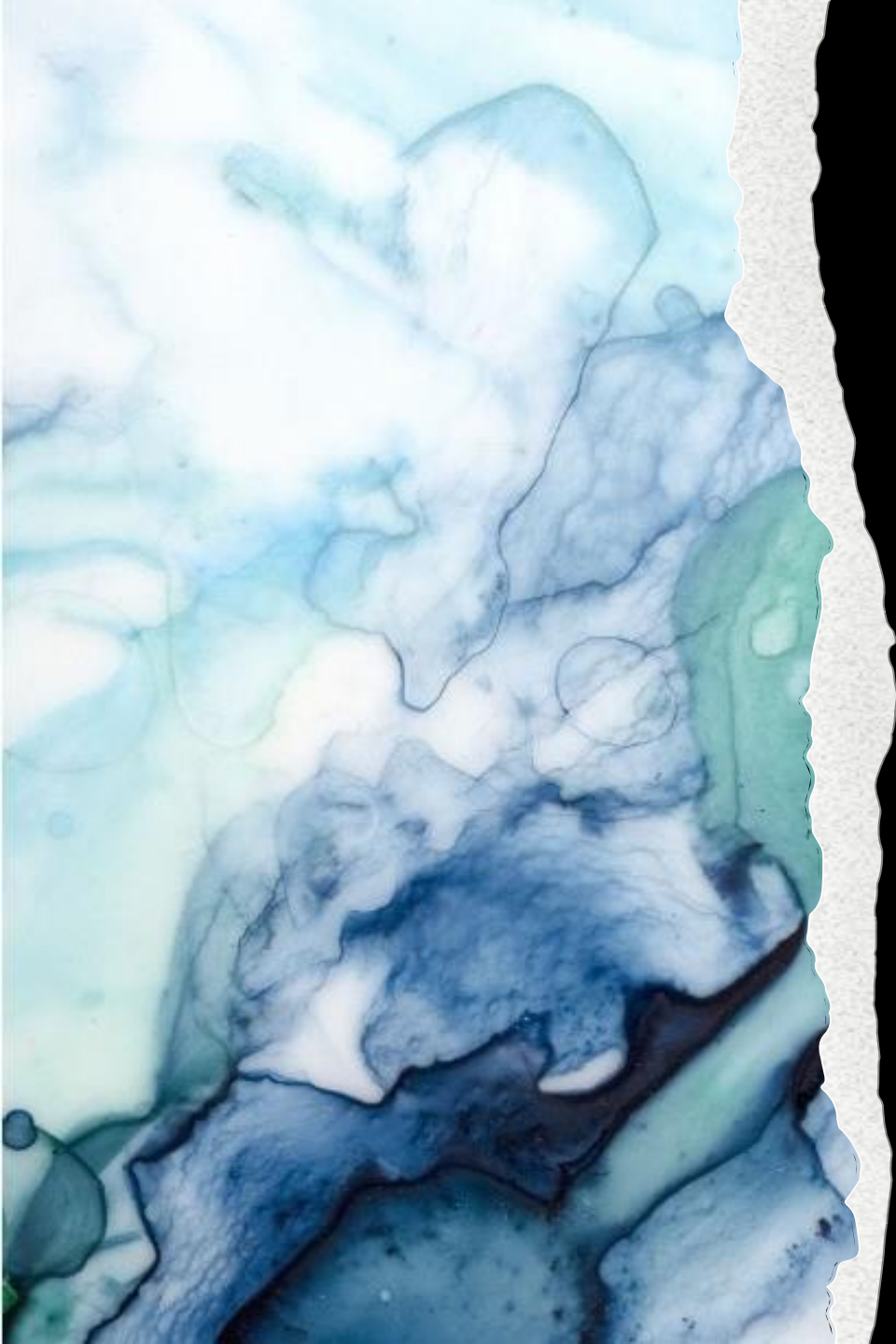
- Play with peers--social skills.
- Can't teach survival skills or offer protection.
- Safe migration paths
- Signs of danger
- Find food in dry seasons.



Surviving and
thriving takes
caring adults.



- In every class, there's a child who will thrive because one adult chooses to see them.
- Most of you became principals because you were that teacher.
- You have the power to make sure no child walks your halls unseen.



Thank you!

Survey

