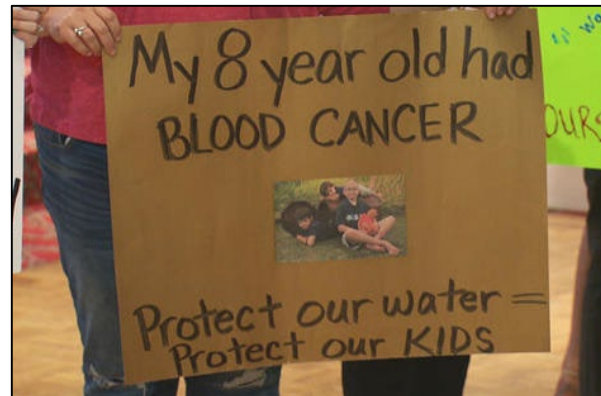


Youth as Community Change Agents: How Marine and Coastal Education are Shaping How Communities View Coastal Challenges

NC STATE UNIVERSITY

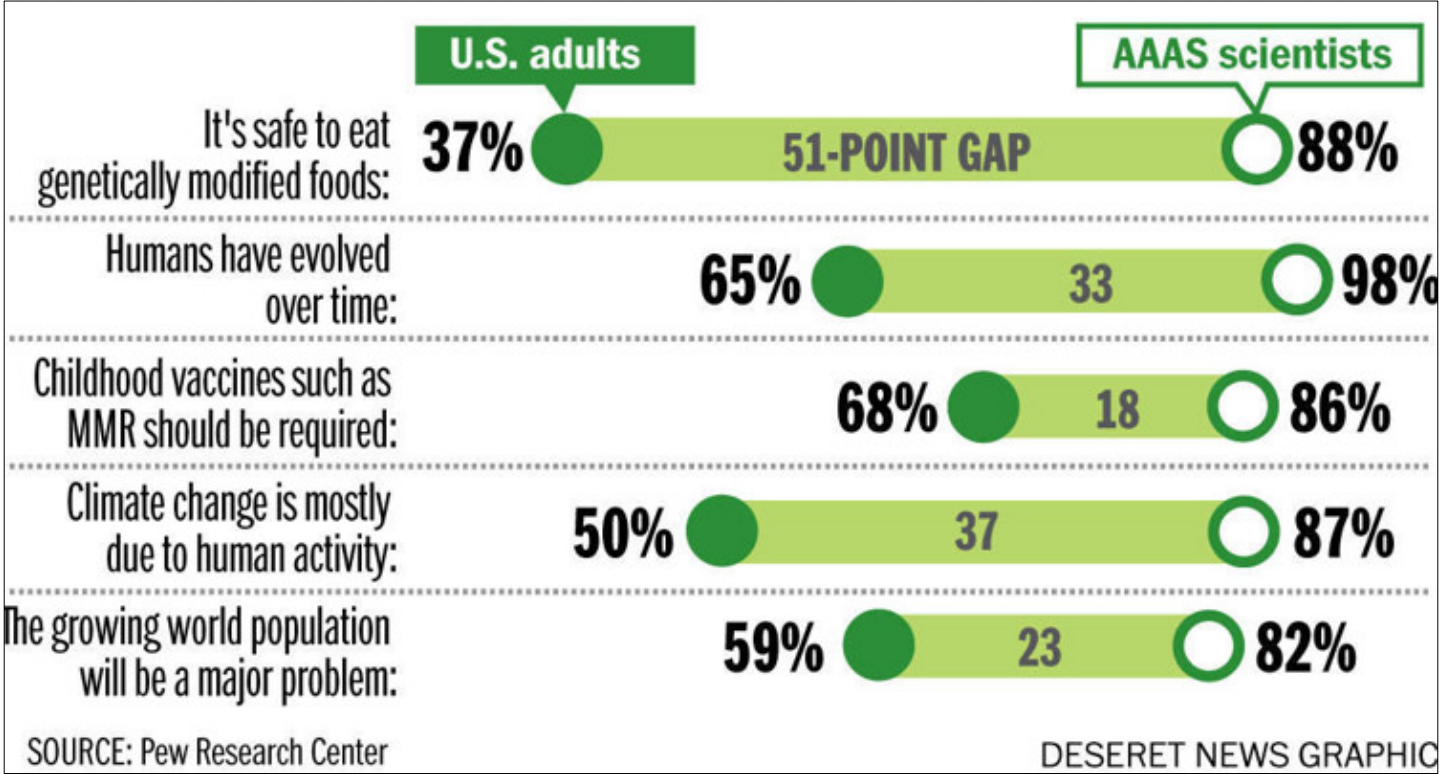
Kathryn Stevenson, Jenna Hartley, Danielle Lawson, M. Nils Peterson, KC Busch, Sarah Carrier, Renee Strnad
Elizabeth DeMattia





Human actions emerge from:

- Personal experiences
- Worldviews
- Political ideologies
- Cultural identities
- Attitudes
- Socio-structural context
- Political systems...



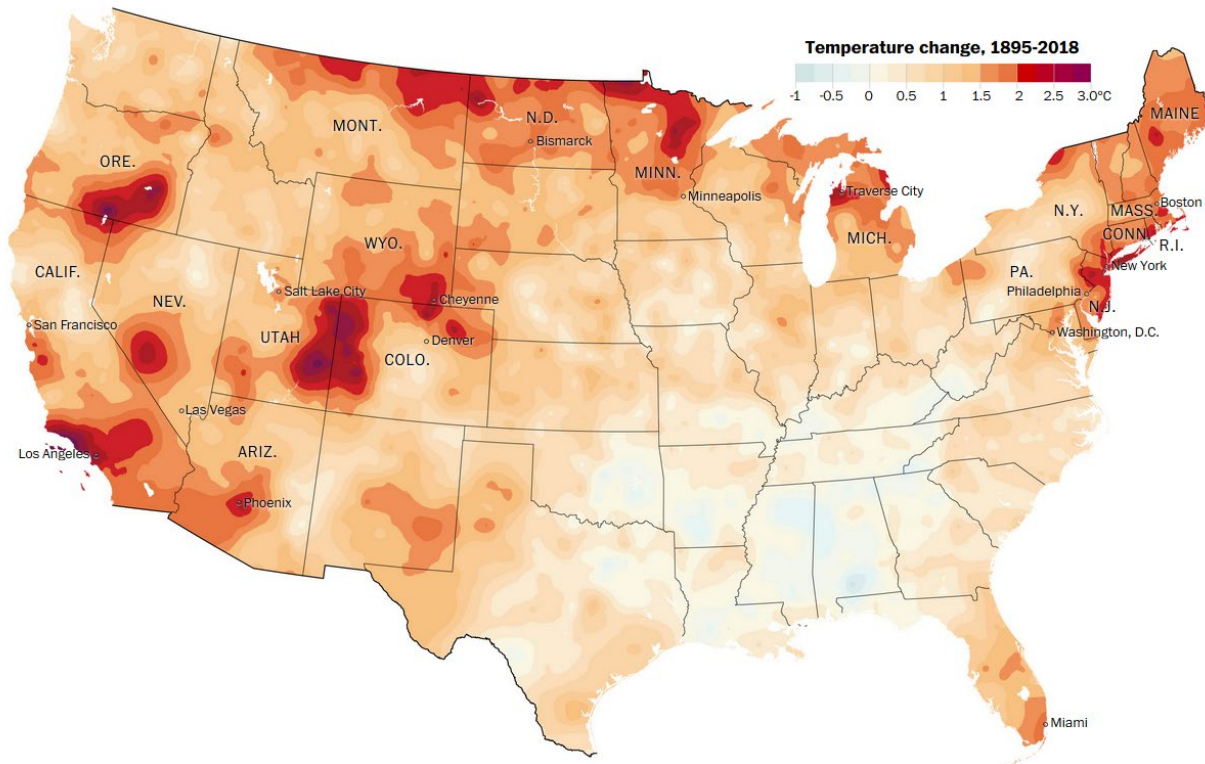
**How can we overcome ideological
barriers to evidence based action?**

The potential of K-12 education

- Early intervention matters
- Compulsory education insures large impact
- Children are less affected by polarizing social influences
- Children can inspire and lead adults

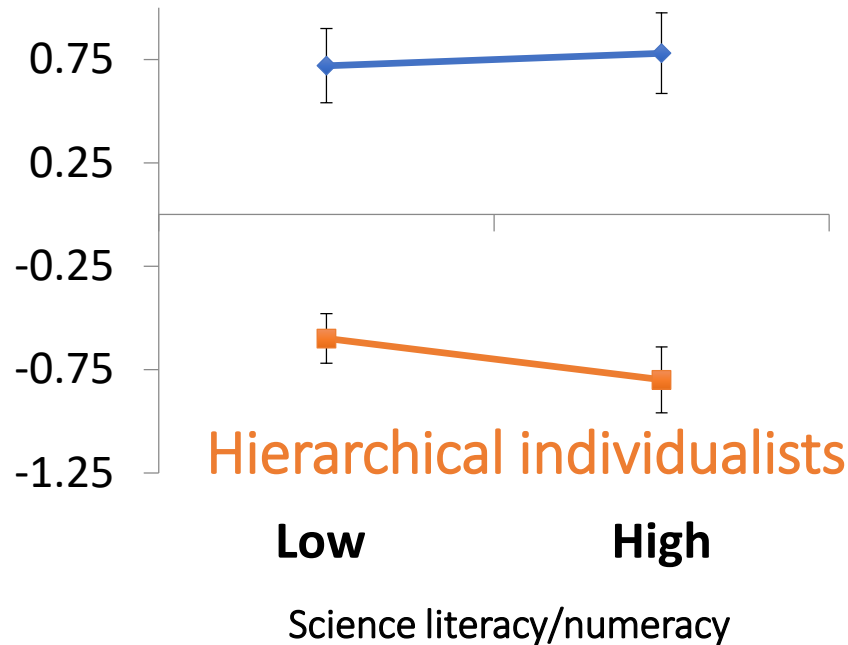


The Climate Case



Adults

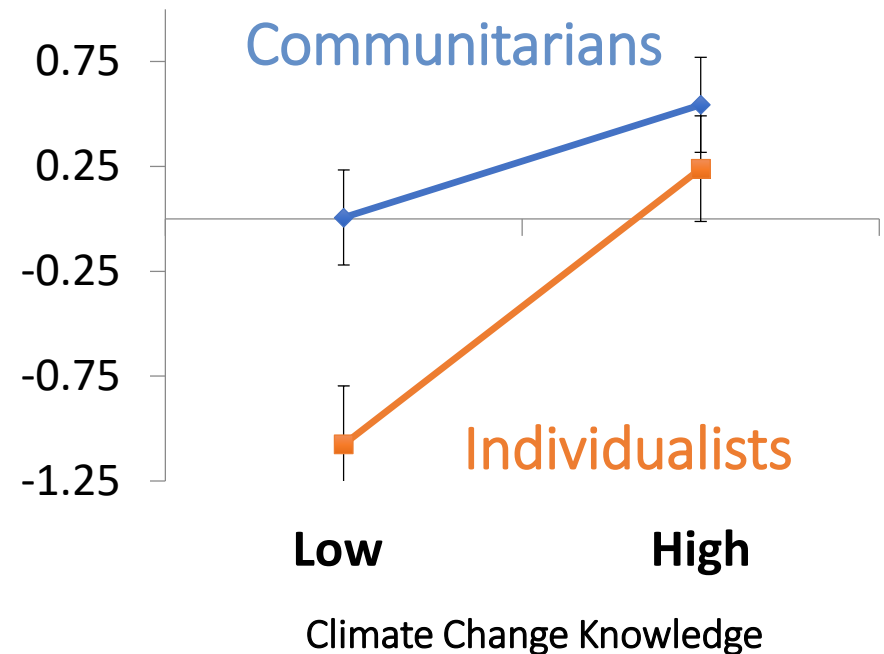
Egalitarian communitarians



Kahan et al., 2012:
Increase in scientific
literacy → Increase in
polarization

Children

Communitarians



Stevenson et al., 2014:
Worldview has no effect
at high levels of climate
change knowledge
Coastal NC study

Can impacts of climate education programs targeted at youth spill over to the adults in their lives?

The Theory of Intergenerational Learning (IGL):

IGL can result in the bidirectional transfer of knowledge, attitudes and behaviors



Topic	Knowledge	Attitude	Behavior
Marketing			✓
Views on Sexual Orientation	✓	✓	✓
Specific Plant/Animal Conservation			✓
Recycling		✓	✓

Climate Change Curriculum

Wildlife, Weather, Climate & Change
A climate literacy module for North Carolina

Prepared for Project WILD



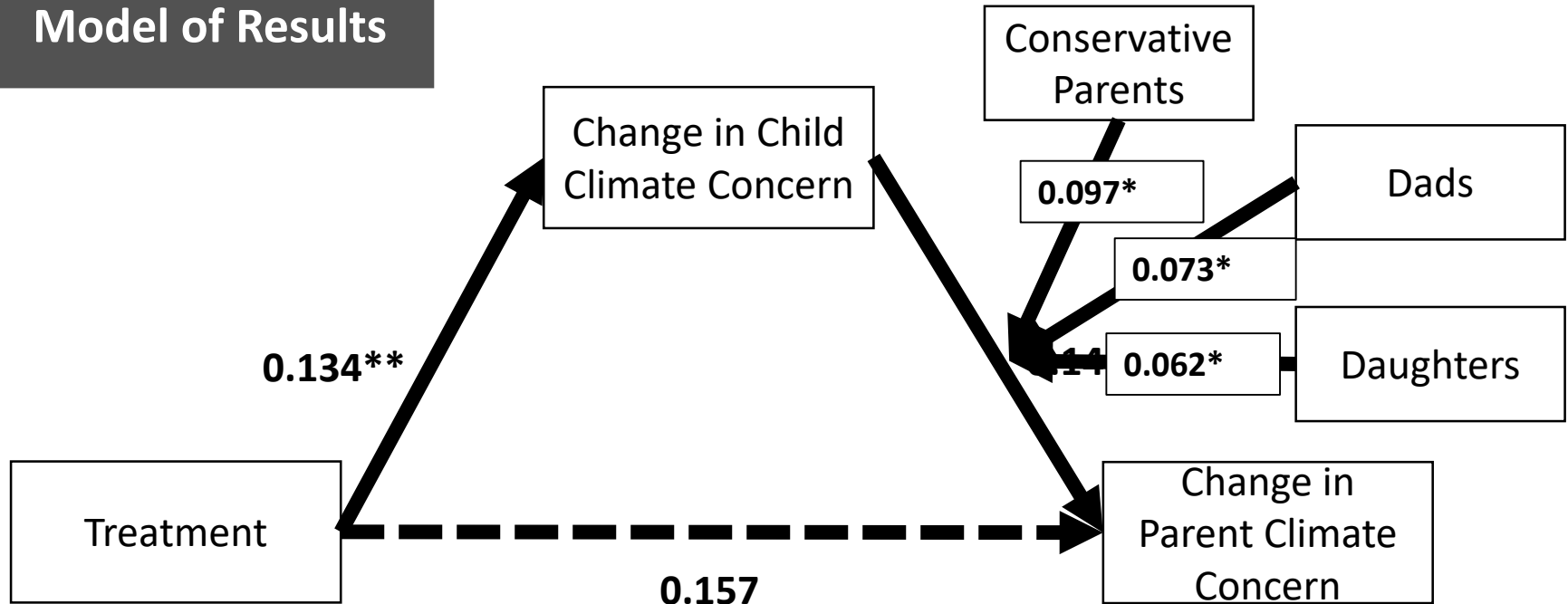
go.ncsu.edu/wwcc

At least five key principles should guide efforts to promote child-to-adult IGL in EE curricula

1. Local Issues
2. Longer term/in-depth
3. Hands-on
4. Enthusiastic Teachers
5. Encourage Parental Participation

Lawson et al., 2018

Model of Results



Controlled for:

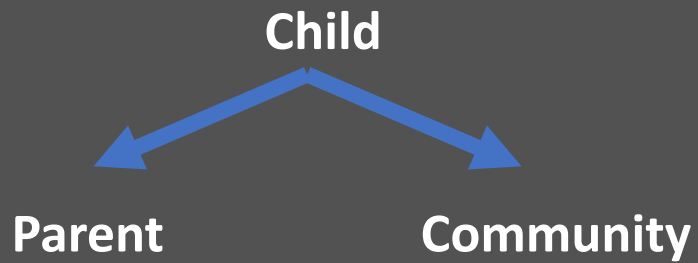
Pretest scores, Child/Parent Race, Parent Political Identity, Child/Parent Sex, Level of Family CC Discussion, Year

- The success of CC education with adolescents may be due to an age-related window of influence
- Child-to-parent IGL works in a climate change context
- Seems to overcome trends that decades of social science research on climate change perceptions have established, reaching men and conservatives and empowering girls



The Marine Debris Case





- 4th and 5th grade students from across the state of North Carolina





Duke Community Science Marine Debris Curriculum



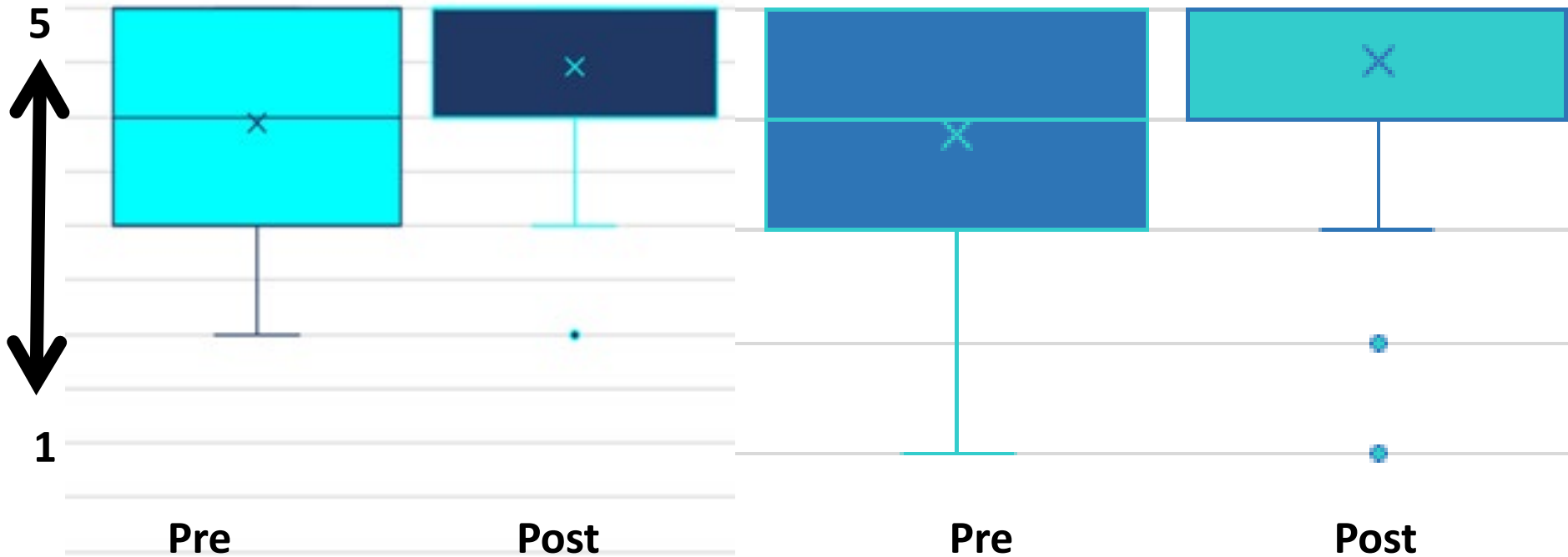
**Public service
announcements**

**Community
engagement
events**



VERY preliminary results: belief that kids can change my...

Opinions on environmental issues Actions on environmental issues

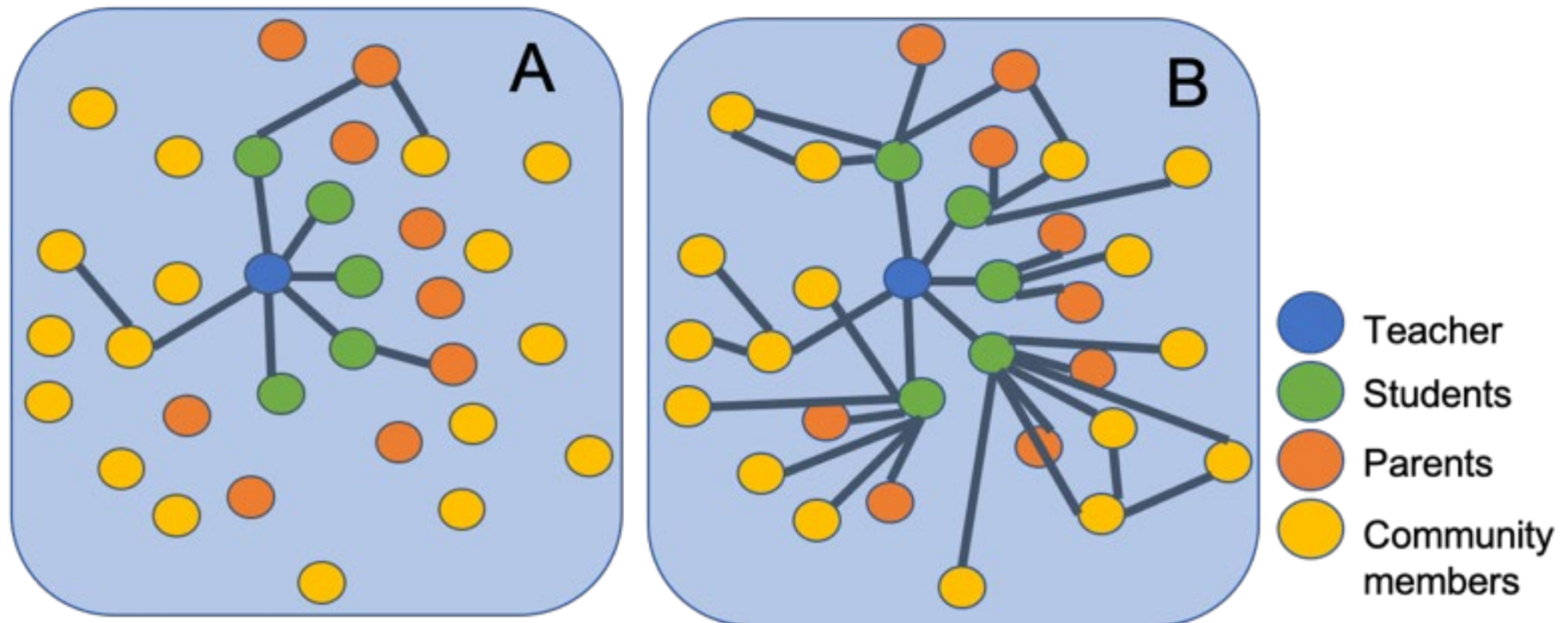




The Water Quality Case



Community Level Literacy: A way to work together for healthy coasts?



Thank you!



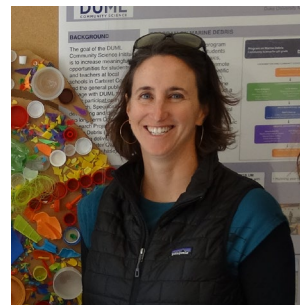
**Kathryn
Stevenson**



Nils Peterson



Danielle Lawson



Liz Demattia



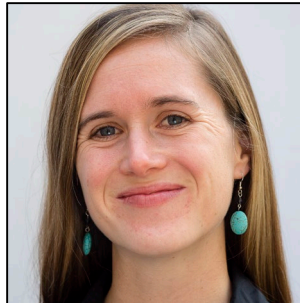
Lauren Gibson



Renee Strnad



Sarah Carrier



Jenna Hartley



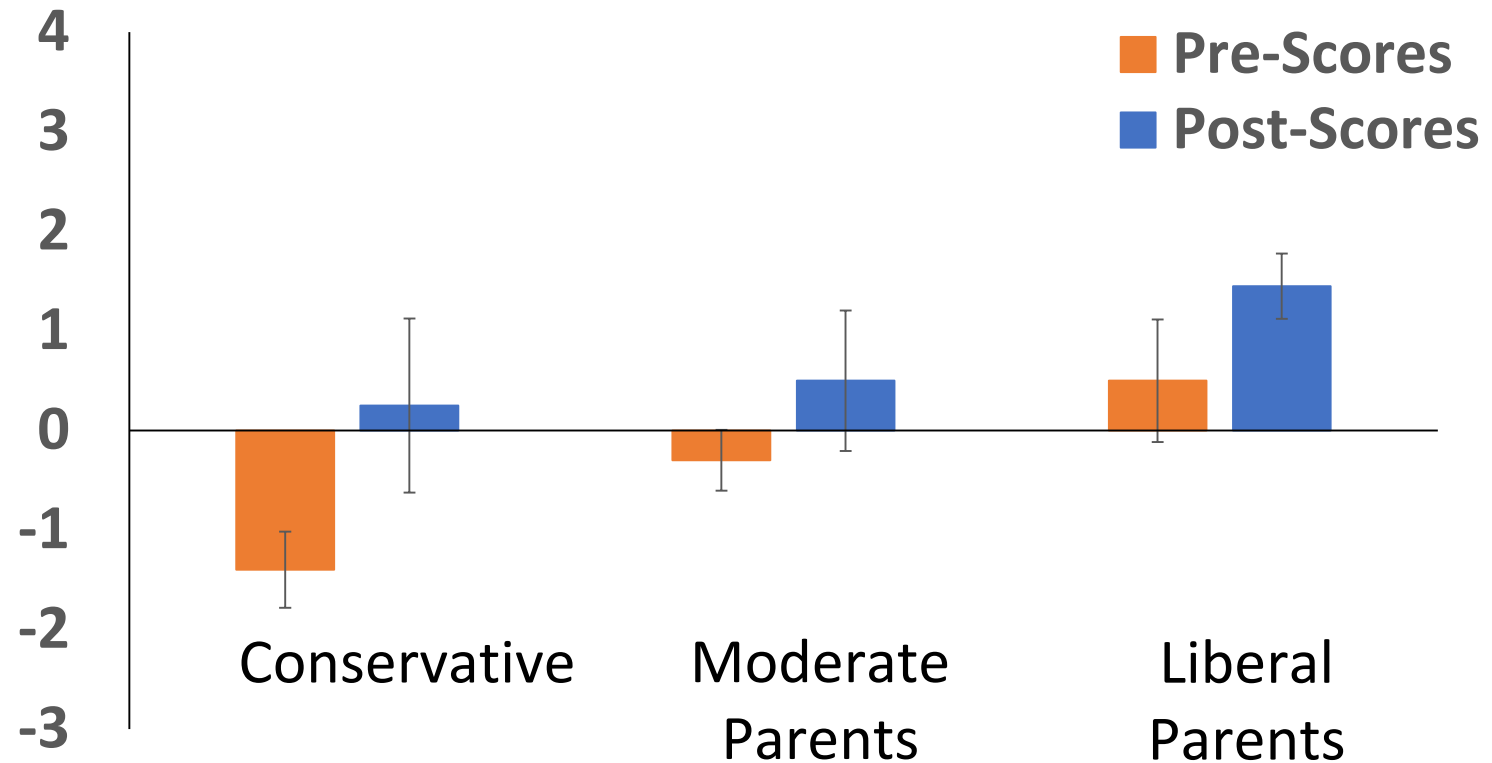
KC Bush



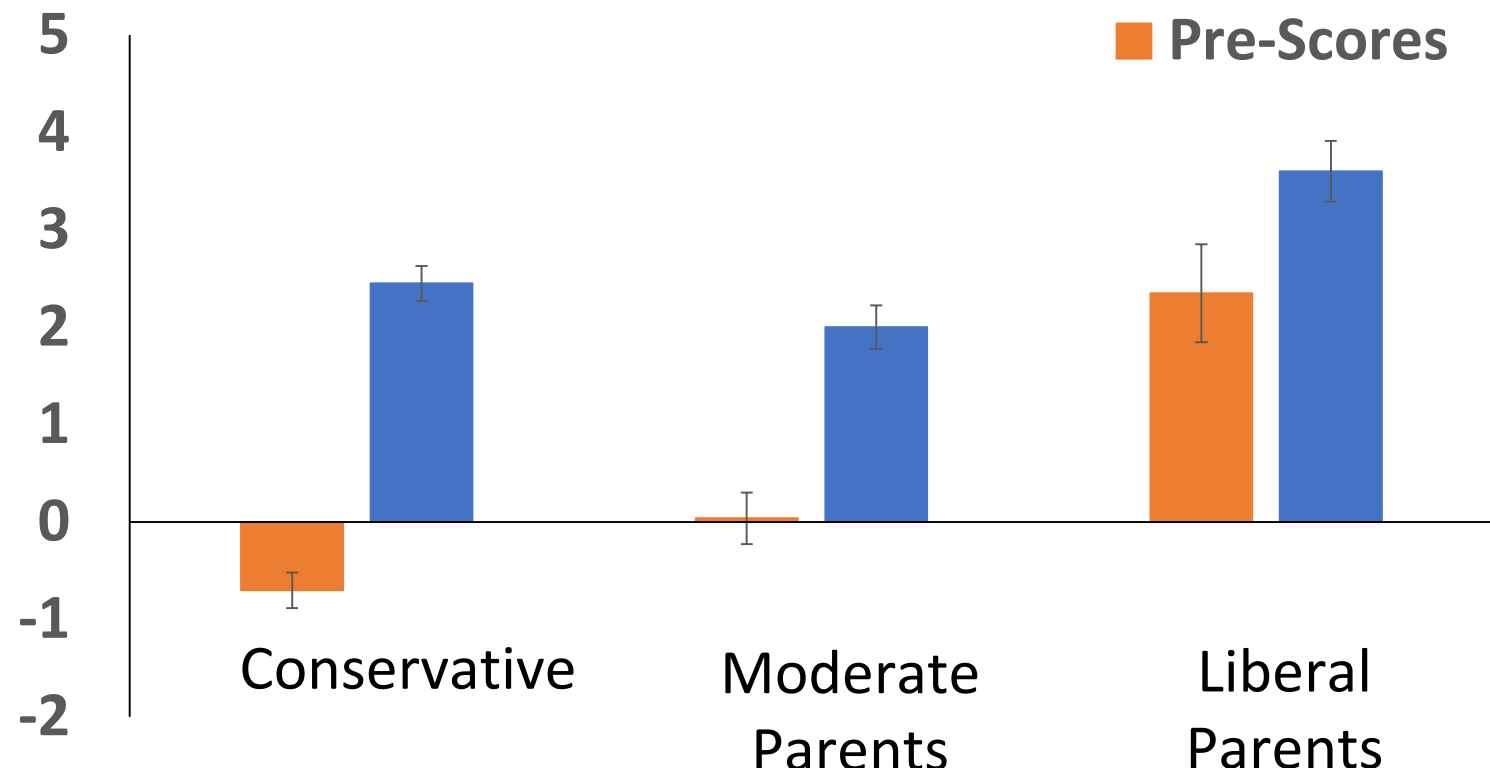
College of Natural Resources
College of Education



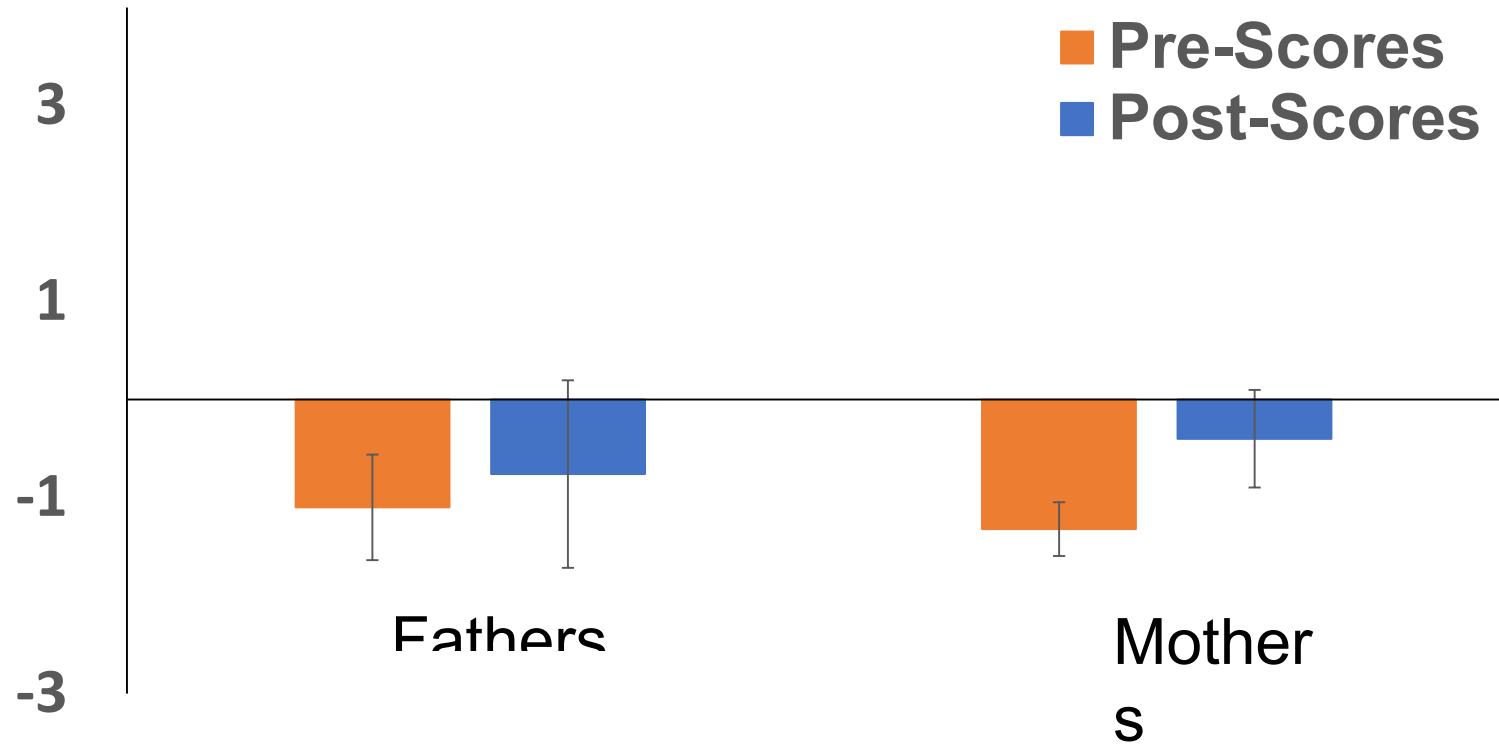
**Change in climate concern as expected
in control group across politics**



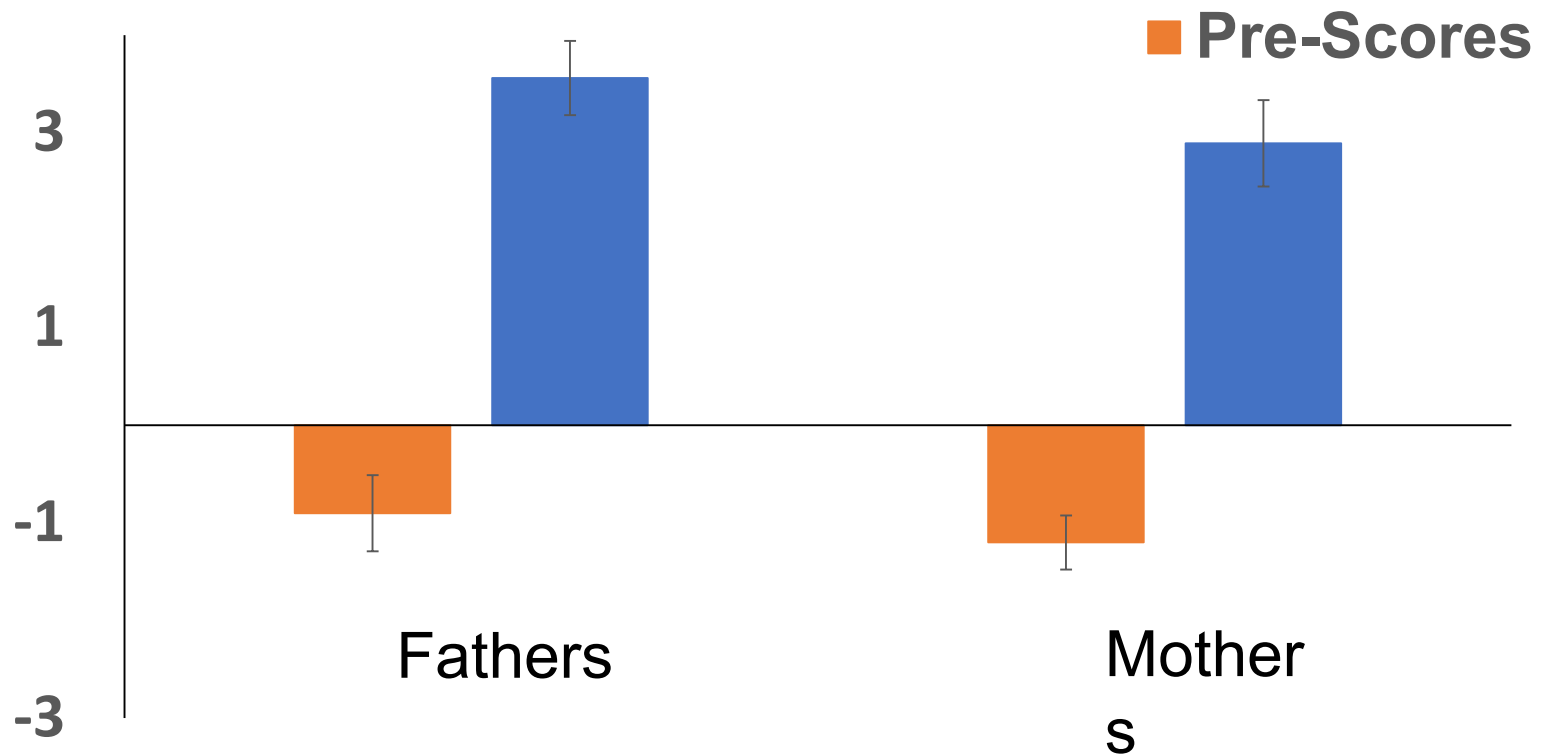
Conservatives have biggest jump in climate concern in treatment group



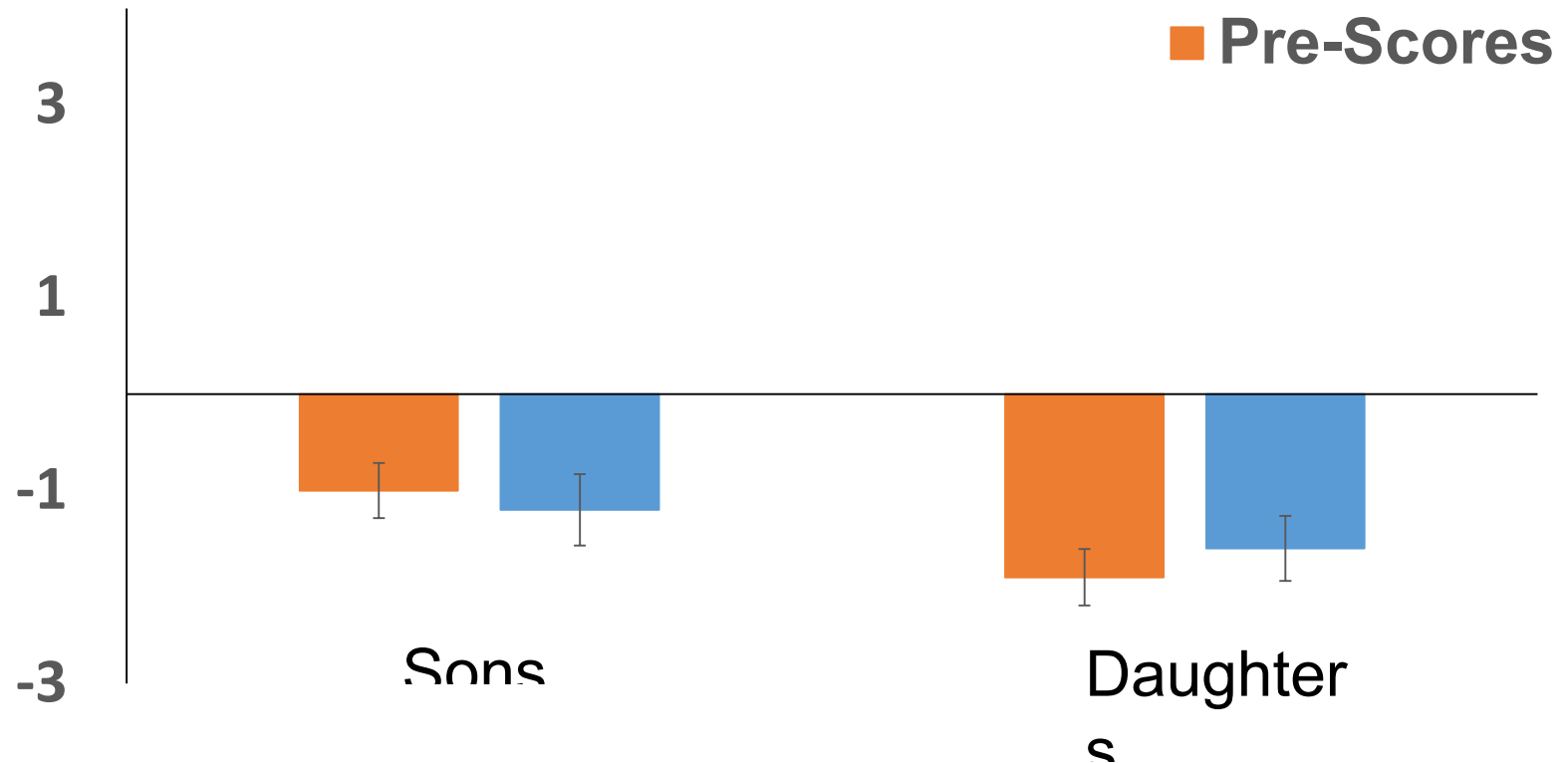
**Similar changes in climate concern between
moms and dads in control group**



**Dads have a slightly bigger jump than moms
in climate concern in treatment group**



Similar changes in climate change concern when information comes from sons vs. daughters in control group



Bigger jump in climate concern when information coming from daughters in the treatment group

