Stereotype Threat and Perceptions of Mathematics Experiences

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Goal(s)

- Find preliminary information on gender(s) and ethnic group(s)/Race(s)
- IRB Training and Application
- Design survey
- Learn to Analyze Results with RapidMiner™
- Establish measures of stereotype susceptibility at App State
- IRB Exemption Approval Pending

Checklist

- IRB Training ✓
- IRB Approval . . .
- Survey Designed ✓
- Statistical Model . . .
- Results Compiled
- Analysis

Research Questions

- How is App State doing?
- How are we doing in comparison to other schools?
- What do women, specifically, need to succeed in mathematics?

What do women in mathematics need to succeed?

- Fellow women role models in STEM fields
  - Teachers
  - Speakers
  - Leaders in a given field
- Family/friends/peers that encourage success
- Promoted assertive discussion in the classroom
- Schools stressing the role of mathematics in differing fields

Creating an IRB proposal

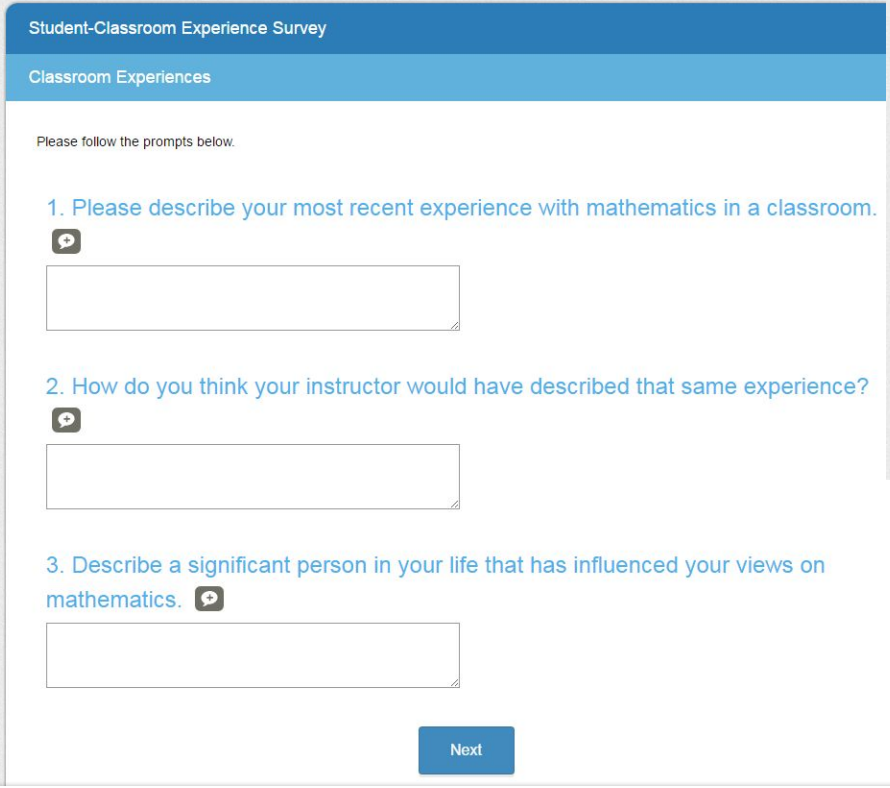
- IRB Training
- Submitting the proposal
  - Extensive information
  - Mock - survey
  - Example email - consent form
- https://appstate.myresearchonline.org/irb/eform_routing.cfm?MasterId=101025
- Editting

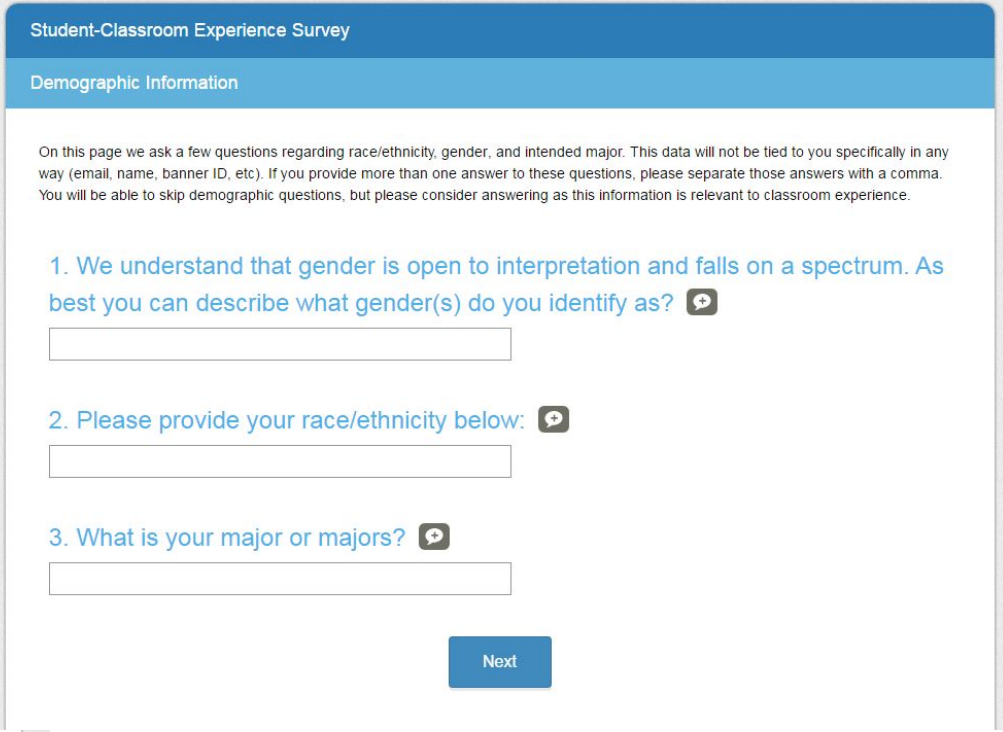
Stereotype Threat and its Consequences

- Sociocultural Phenomenon
- Three Factors Contribute
  - Awareness of Stereotype
  - Identification with Stereotyped Group
  - Importance and Complexity of Challenges in threat environment
- "Stereotype threat refers to the phenomenon whereby individuals perform more poorly than their ability dictates on a task when a relevant negative stereotype is made salient to the performance situation."

Maloney, E. A., W, S. M., & Beilock, S. L. (2013). Mathematics anxiety and stereotype threat: Shared mechanisms, negative consequences and promising interventions. Research in Mathematics Education, *15*, 115–128. Doi: 10.1080/14794802.2013.797744

- Ordering of pages
- Stereotype susceptibility
  - Our students are more resilient to stereotype threat

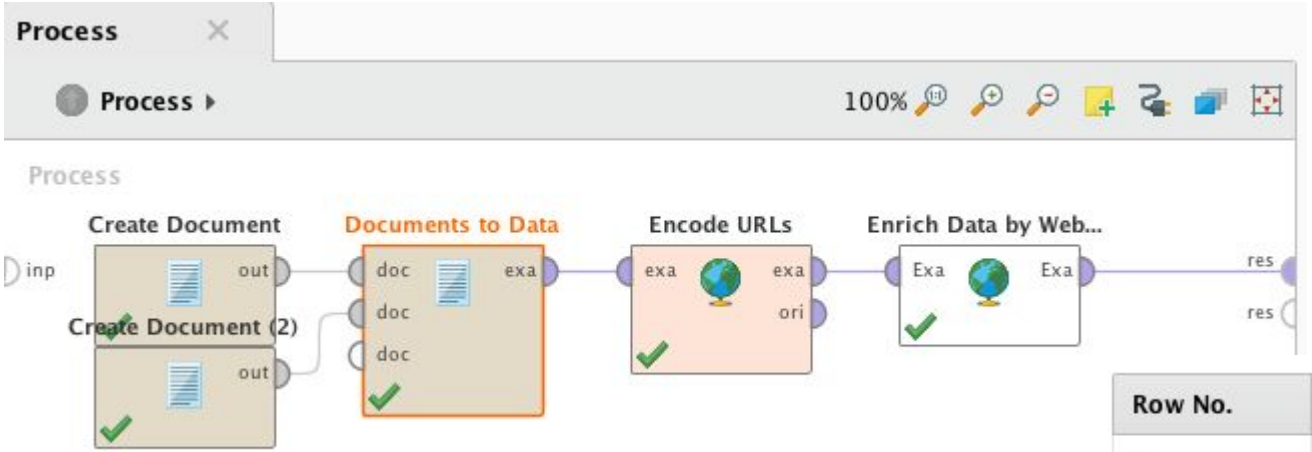




- Keep track of who was primed before filling out open ended questions
- Why open ended questions on demographic

RapidMiner

- Sentiment analysis in RapidMiner
- Would have been used to analyze the essay responses



Row No.	text	polarity
1	I+love+my...	positive
2	This+is+my...	neutral

Future Work

- Get IRB proposal approved
- Send out surveys
- Make conclusions based on data
- Possible summer opportunity to continue this

Thank you!

A big thank you to Dr. Sarah for helping us at every step of this project!

Thanks for listening everyone, we've been great!