

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
- Editing

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

Student-Classroom Experience Survey

Classroom Experiences

Please follow the prompts below.

1. Please describe your most recent experience with mathematics in a classroom.



2. How do you think your instructor would have described that same experience?



3. Describe a significant person in your life that has influenced your views on mathematics.



Next

Student-Classroom Experience Survey

Demographic Information

On this page we ask a few questions regarding race/ethnicity, gender, and intended major. This data will not be tied to you specifically in any way (email, name, banner ID, etc). If you provide more than one answer to these questions, please separate those answers with a comma. You will be able to skip demographic questions, but please consider answering as this information is relevant to classroom experience.

1. We understand that gender is open to interpretation and falls on a spectrum. As best you can describe what gender(s) do you identify as?

2. Please provide your race/ethnicity below:

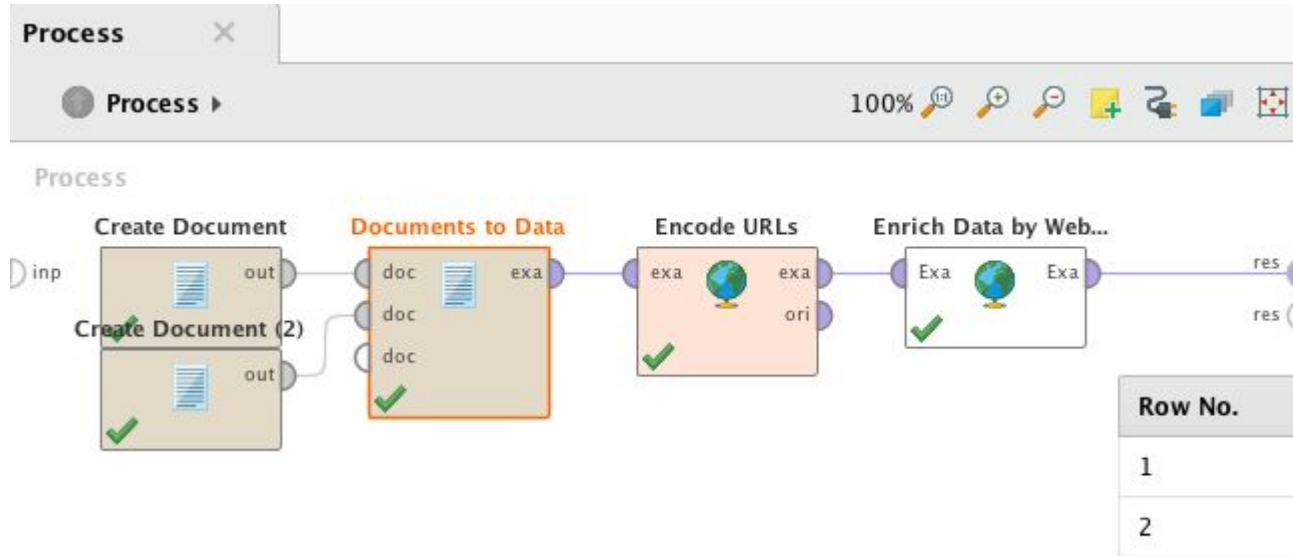
3. What is your major or majors?

Next

- 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



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!