

# Are Epistemic Profiles Associated with Differences in Dissonance Negotiation and Postsecondary Service-Learning Outcomes?

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# Service-Learning: Transformative Potential

A background image showing a group of students, primarily young women, gathered around a table. They are engaged in a hands-on activity, possibly a craft or a project. One student in the foreground is wearing a blue shirt and is focused on her work. Another student to her right is wearing a dark shirt and is also working. The table is cluttered with various materials, including a large blue bowl filled with wooden clothespins, a clear plastic cup, and several sheets of paper. The overall atmosphere is one of collaborative learning and engagement.

- High-impact practice (AAC&U, 2007)
- Develop students' cognitive reasoning and commitment to social justice (Eyler & Giles, 1999; Kiely, 2005)
- Can promote personal, intellectual, and civic development:
  - Growth in complex cognitive processes (Astin & Sax, 1998; Moely & Ilustre, 2014)
  - Perspective-taking, multicultural awareness, social justice orientations (Einfeld & Collins, 2008; Engberg & Fox, 2011; Jay, 2008; Kilgo, Pasquesi, Sheets, & Pascarella, 2014)

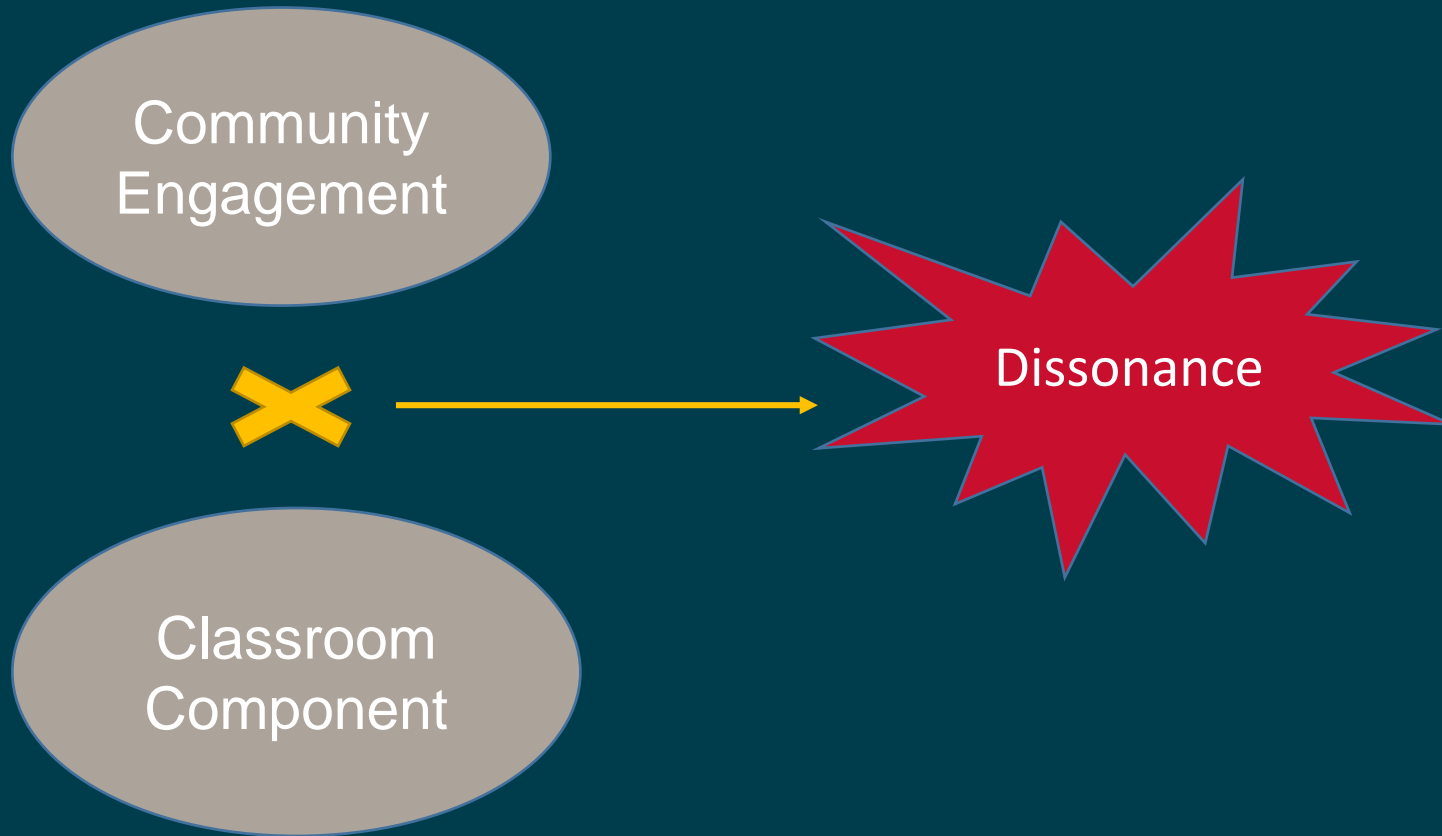
# How Service-Learning Works

Community  
Engagement

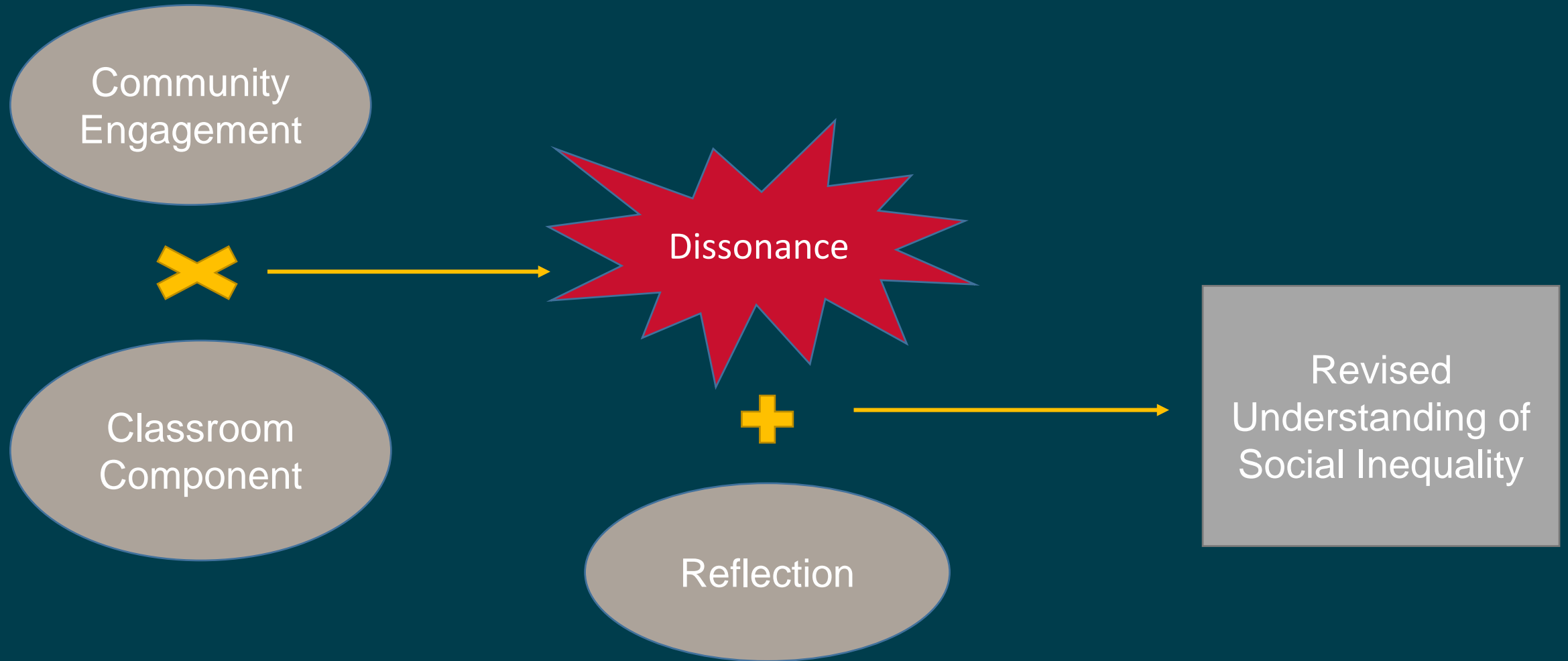


Classroom  
Component

# How Service-Learning Works



# How Service-Learning Works



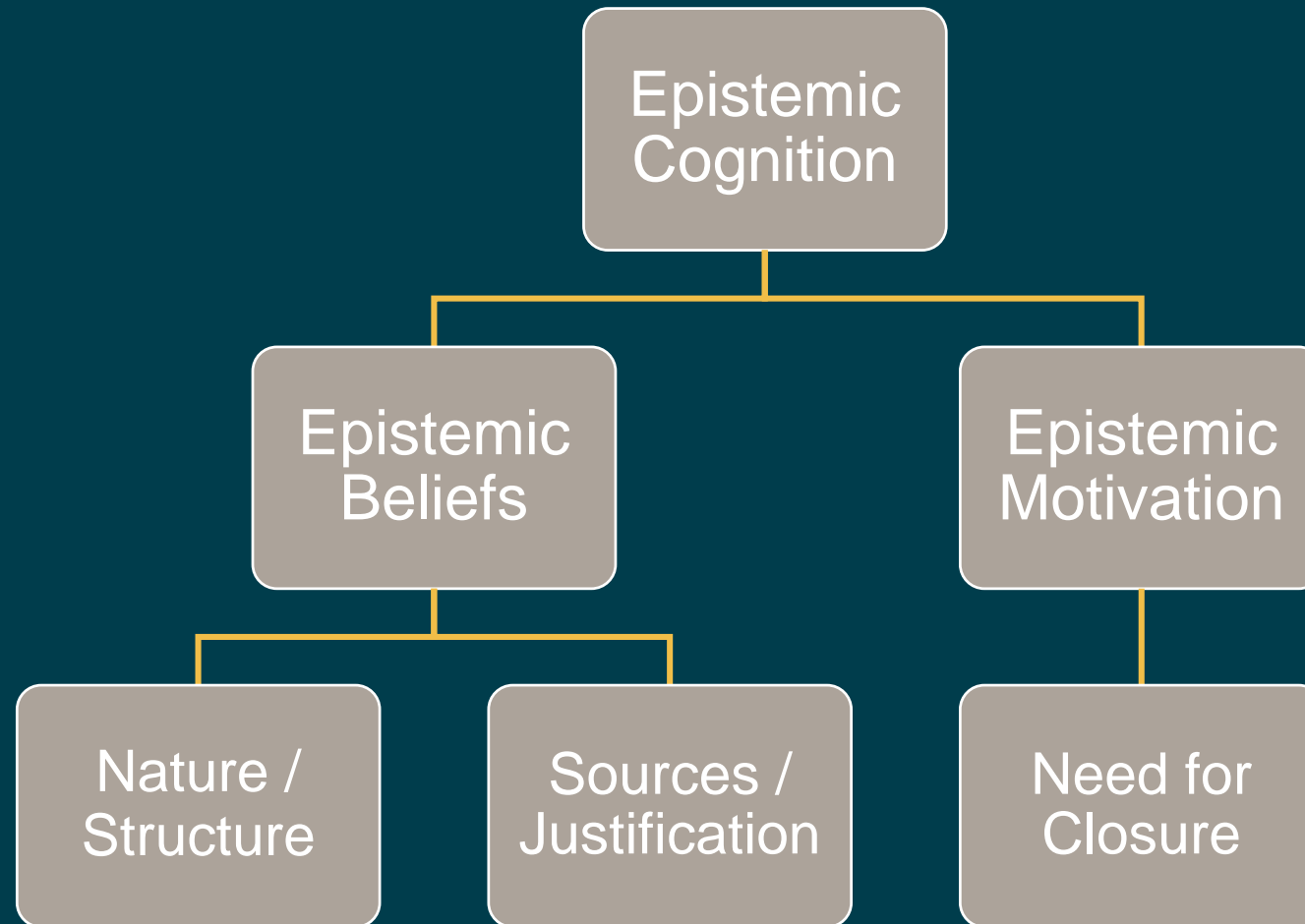
# Service-Learning: The Challenge

- Service-learning should respond to cognitive dissonance by questioning, deconstructing, and reconstructing their beliefs about inequality (Kiely, 2005)
- Instead, some students respond with:
  - Stereotypes
  - Oversimplifications
  - Denial
  - Trivialization

## Overarching Question

Why do some service-learning participants engage in ways that lead them to develop a more complex understandings of social inequality, whereas others do not?

# Theoretical Framework

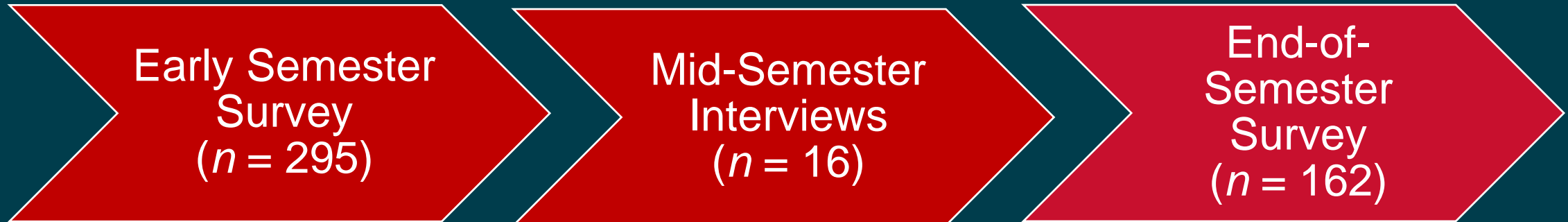




## Research Goal

Examine the associations between epistemic cognition – particularly epistemic beliefs and motivation – and students' engagement and outcomes in service-learning contexts.

# Data Sources



- Epistemic Beliefs Inventory (Schraw et al., 2002)
  - Simple/Certain Knowledge
  - Authority as Source of Knowledge
- Need for Closure (Roets & Van Hiel, 2011)
- Beliefs in a Just World
- Individual and Structural Attributions for Poverty

- Describe service-learning context
- Identify and describe dissonance-inducing experiences
  - Context/event
  - Response(s)
  - Conclusion
- Describe course outcomes

- Beliefs in a Just World (Lipkus, 1991)
- Individual and Structural Attributions for Poverty (Bullock, 1999)

**Research Question 1:** Do students with different patterns of epistemic beliefs and motivation demonstrate different service-learning outcomes?

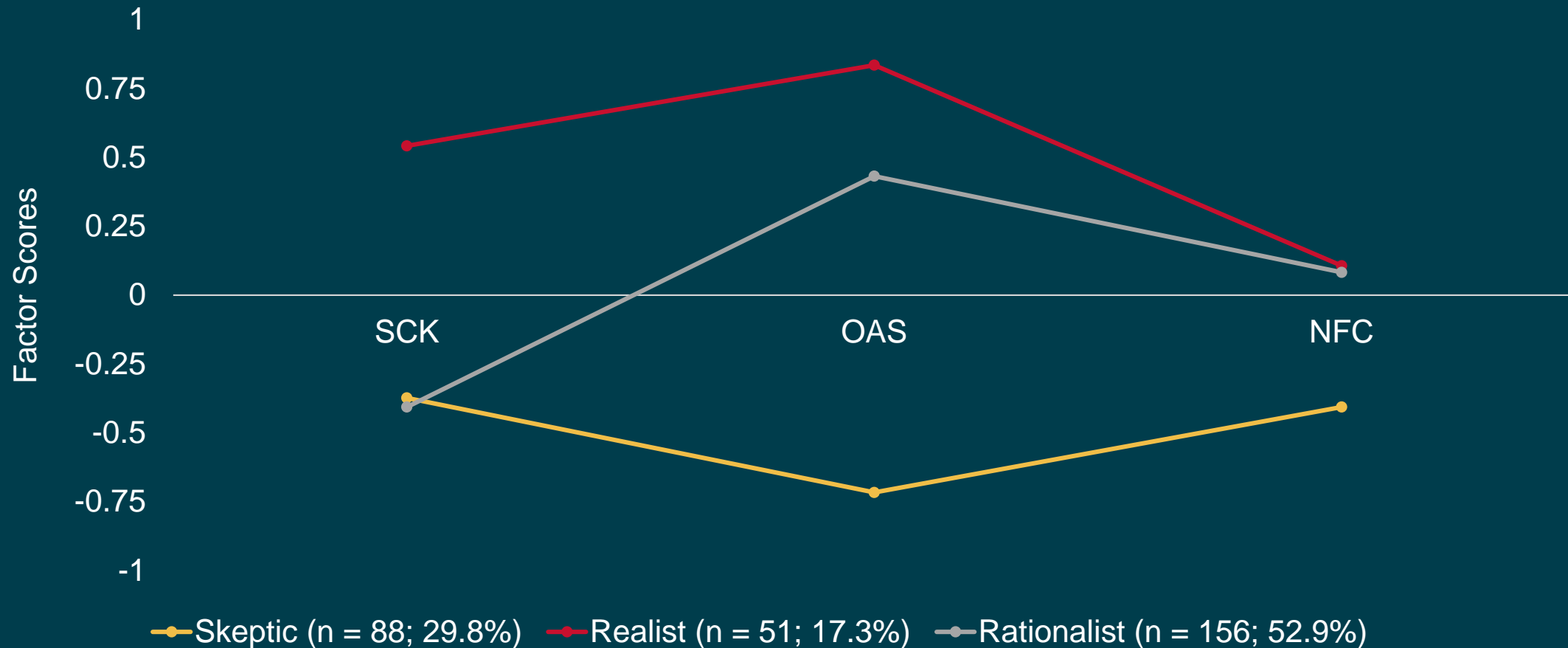
**RQ1:** Do students with different patterns of epistemic beliefs and motivation demonstrate different service-learning outcomes?

Methods:

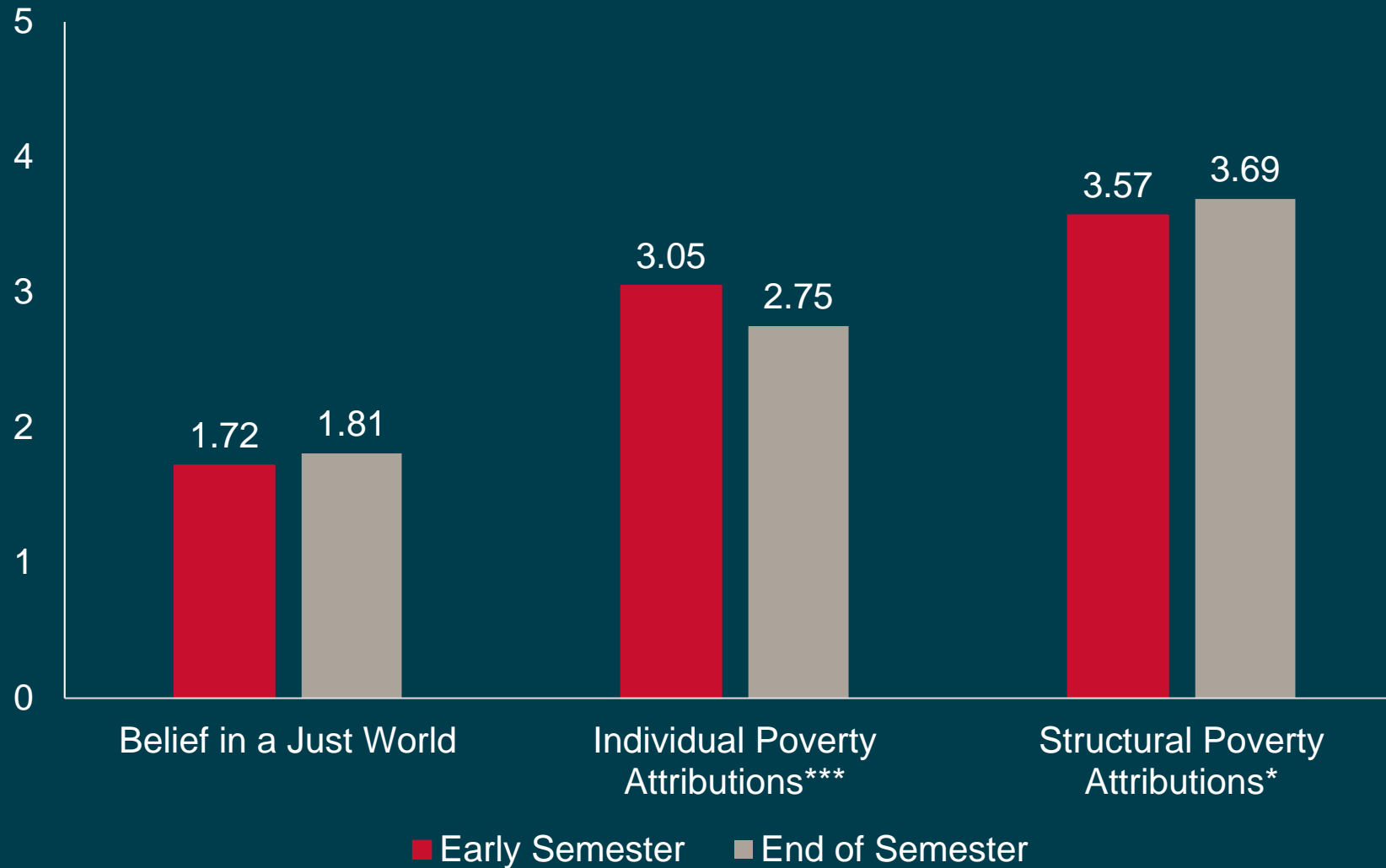
1. Using data from the early-semester survey, identify epistemic profiles using latent profile analysis
2. Measure students' beliefs about inequality at the start and the end of the semester
3. Assess whether epistemic profile membership at the start of the semester predicted students' end-of-semester beliefs about inequality, controlling for baseline beliefs (along with gender and race)

# Study I Results: Latent Profile Analysis

## Epistemic Scales by Profile



# Study I Results: Beliefs about Inequality



# Study I Results: Predicting Beliefs about Inequality from Epistemic Profiles

Belief in a Just World	Skeptic M (S.E.)	Realist M (S.E.)	Rationalist M (S.E.)
Intercept	0.57 (0.20)**	2.08 (0.66)**	0.63 (0.38)
Pre-BJW	0.82 (0.12)***	0.18 (0.32)	0.60 (0.18)**
Male	-0.07 (0.18)	-0.40 (0.26)	0.23 (0.30)
Student of Color	0.03 (0.18)	-1.27 (0.60)*	0.04 (0.29)

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Wald  $\chi^2 = 4.84^*$   
(d = -0.75)

Wald  $\chi^2 = 3.19$   
(d = 0.44)



# Study I Results: Predicting Beliefs about Inequality from Epistemic Profiles

Individual Poverty Attributions	Skeptic M (S.E.)	Realist M (S.E.)	Rationalist M (S.E.)
Intercept	0.13 (0.18)	2.52 (0.67)	0.17 (0.53)
Pre-Individual	0.92 (0.08)***	0.34 (0.13)**	0.84 (0.16)***
Male	0.05 (0.33)	-0.94 (0.32)**	-0.26 (0.33)
Student of Color	0.11 (0.23)	-0.38 (0.43)	-0.19 (0.36)

Wald  $\chi^2 = 12.18^{***}$   
(d = -1.18)

Wald  $\chi^2 = 7.14^{**}$   
(d = 0.58)

# Study I Results: Predicting Beliefs about Inequality from Epistemic Profiles

Structural Poverty Attributions	Skeptic M (S.E.)	Realist M (S.E.)	Rationalist M (S.E.)
Intercept	0.87 (0.51)	0.95 (0.29)**	1.27 (0.48)**
Pre-Structural	0.83 (0.11)***	0.83 (0.12)***	0.64 (0.13)***
Male	-0.70 (0.23)**	-0.29 (0.24)	0.30 (0.21)
Student of Color	0.18 (0.23)	0.19 (0.35)	-0.27 (0.36)

# Study I Conclusions

- Epistemic profile membership at the start of the semester was associated with changes in some, but not all, beliefs about inequality
- Students with Realist epistemologies had the least favorable outcomes
- Limitations:
  - Issues with measurement of epistemic beliefs
  - WHY is there an association between epistemic beliefs and service-learning outcomes?

**Research Question 2:** How do students with different epistemic characteristics engage with (or disengage from) service-learning experiences that provoke dissonance?

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Methods:

1. Conduct an intensive interview with 16 service-learning participants
  - Identify and describe dissonance-inducing experiences (n = 54)
2. Develop constructivist grounded theory (Charmaz, 2014) of dissonance negotiation process and patterns
3. Examine students' epistemic cognition (Chinn et al., 2011)
4. Compare analysis of epistemic characteristics with patterns of dissonance negotiation

# Study II Analysis: Epistemic Differences in Dissonance Negotiation

Theme 1: Students' beliefs about the nature and sources of knowledge were linked with the ways in which they interpreted dissonance-inducing experiences.

*Sarah: I was glad that they didn't get that much into sexual orientation discussion. I didn't really want to hear it because I disagree with them. I can get ... it's irritating to see other people saying that sin is okay when I know it's not.*

*Sarah: Well at home, everyone more so agrees with me. We are all Bible believers at home and so it's nice to go home and talk to them and at home they're like wow, I can't believe they're talking about that at school or yeah, that's what this world believes. It's just comforting and stuff to have family at home who agrees with you.*

# Study II Analysis: Epistemic Differences in Dissonance Negotiation

Theme 2: Among students who saw knowledge as complex and uncertain, need for closure seemed to drive reflection on their experiences in order to achieve a clear conclusion.

Casey: I think it's me just learning how the process works and will policy help? Will overthrowing a system help? What are the steps to take to fix certain issues. **All these issues are still linked to each other, which is also terrifying.** If you're in poverty, you might not have a good education and an education will help you for the future, but if you're hungry and don't have a home, how are you supposed to focus on school? Incarceration rates are so high, everything is linked together which goes back to where do we start? **I think just learning about me and learning about how systems work and seeing them all intertwined is both daunting and exciting.**

# Conclusions and Future Directions

- Results of both studies provide evidence that epistemic cognition is associated with students' engagement and outcomes in service-learning
- Some patterns of epistemic characteristics may not allow students to fully engage with complex, dissonance-inducing experiences in service-learning contexts
- Future directions include examining:
  - How different epistemic factors (aims, beliefs, motivation) intersect
  - How students' personal context informs their epistemic cognition
  - The influence of the classroom epistemic context (subject and discipline, instructional practices, assessment)



# Thank you!

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## Questions?

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