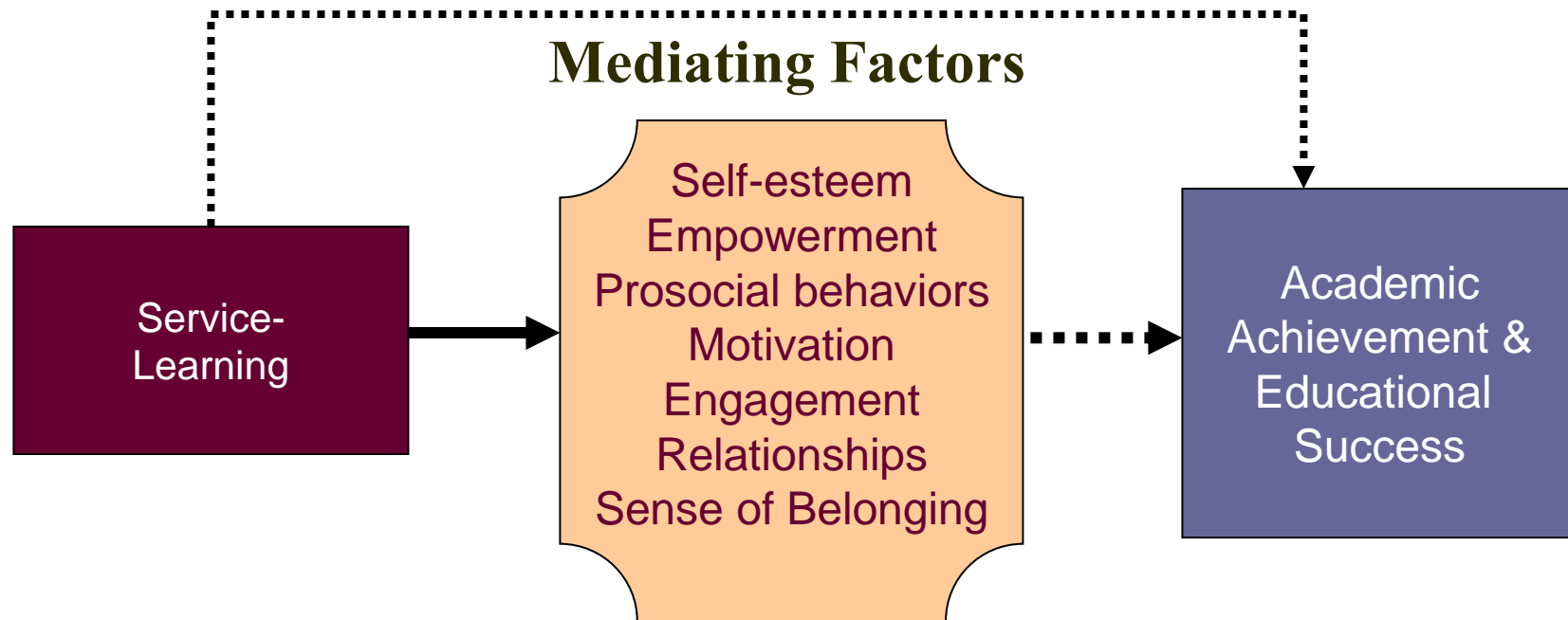# Community-Engaged Learning and Academic Gains in College

Andrew Furco, Ronald Huesman, Jr.,

Daniel White-Jones, & Krista Soria

University of Minnesota
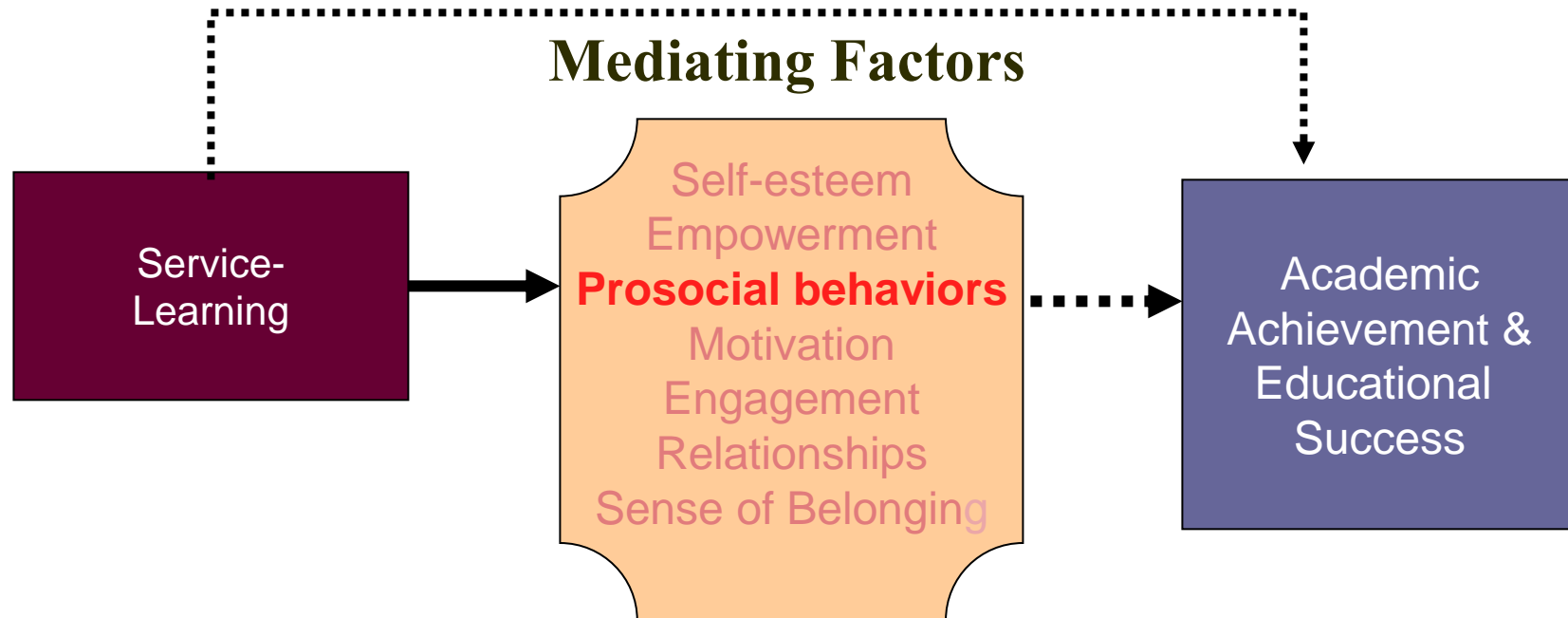
CONCEPTUAL FRAMEWORK
Service-Learning
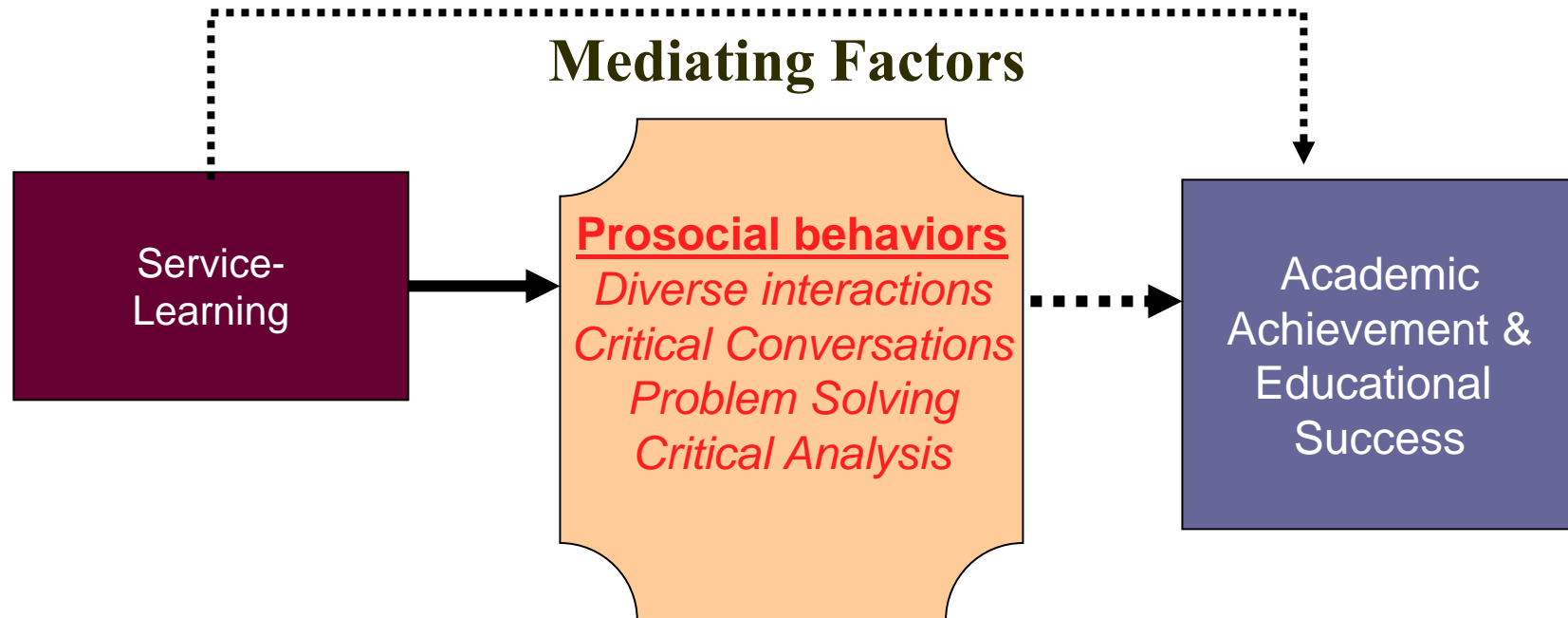## and *Academic Achievement & Educational Success*

Mediating Factors

| Service-Learning | → | Self-esteem
Empowerment
Prosocial behaviors
Motivation
Engagement
Relationships
Sense of Belonging | ⇢ | Academic Achievement & Educational Success |

CONCEPTUAL FRAMEWORK
Service-Learning
and *Academic Achievement & Educational Success*

Mediating Factors

Service-Learning

Self-esteem
Empowerment
Prosocial behaviors
Motivation
Engagement
Relationships
Sense of Belonging

Academic Achievement & Educational Success

CONCEPTUAL FRAMEWORK
Service-Learning
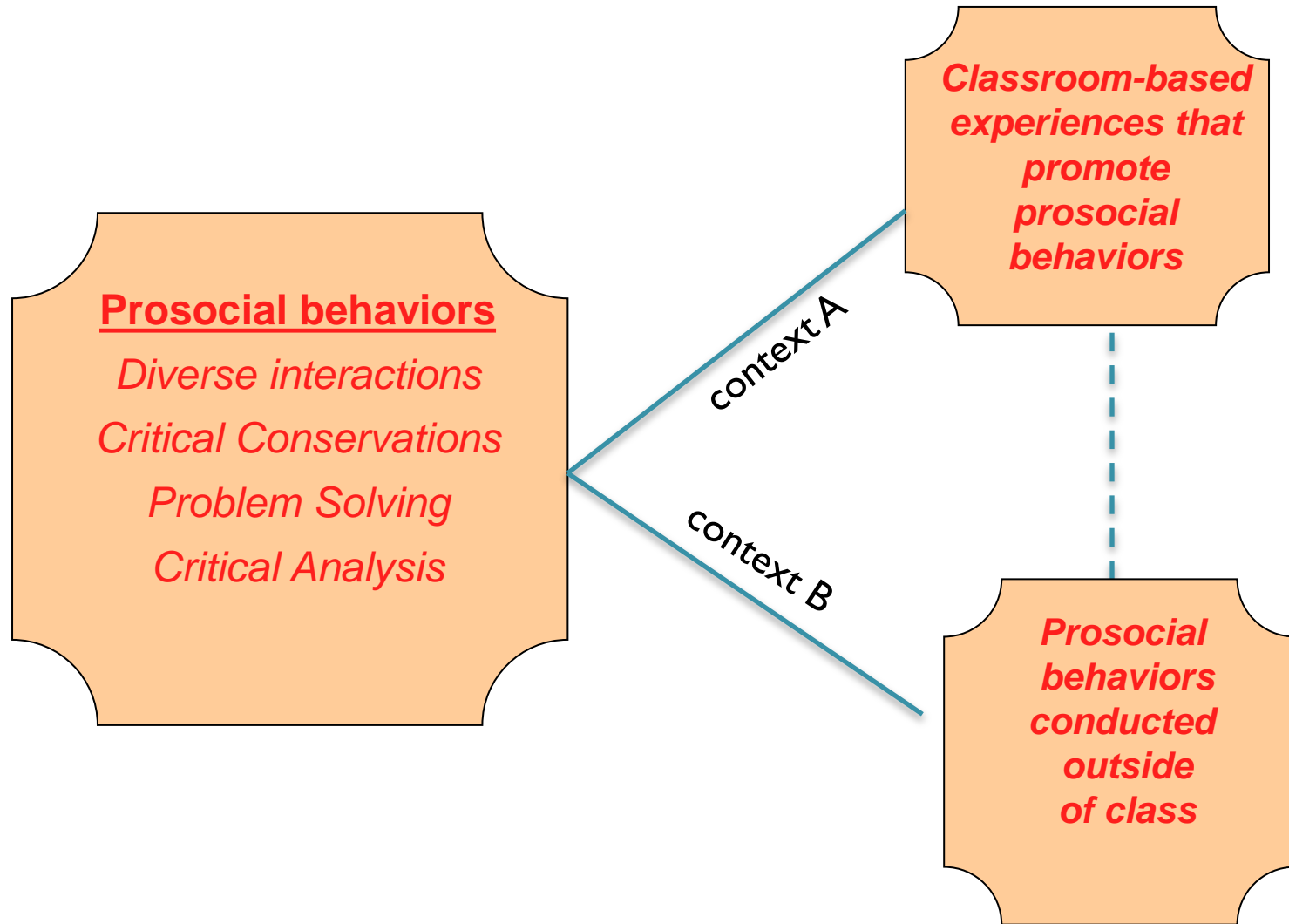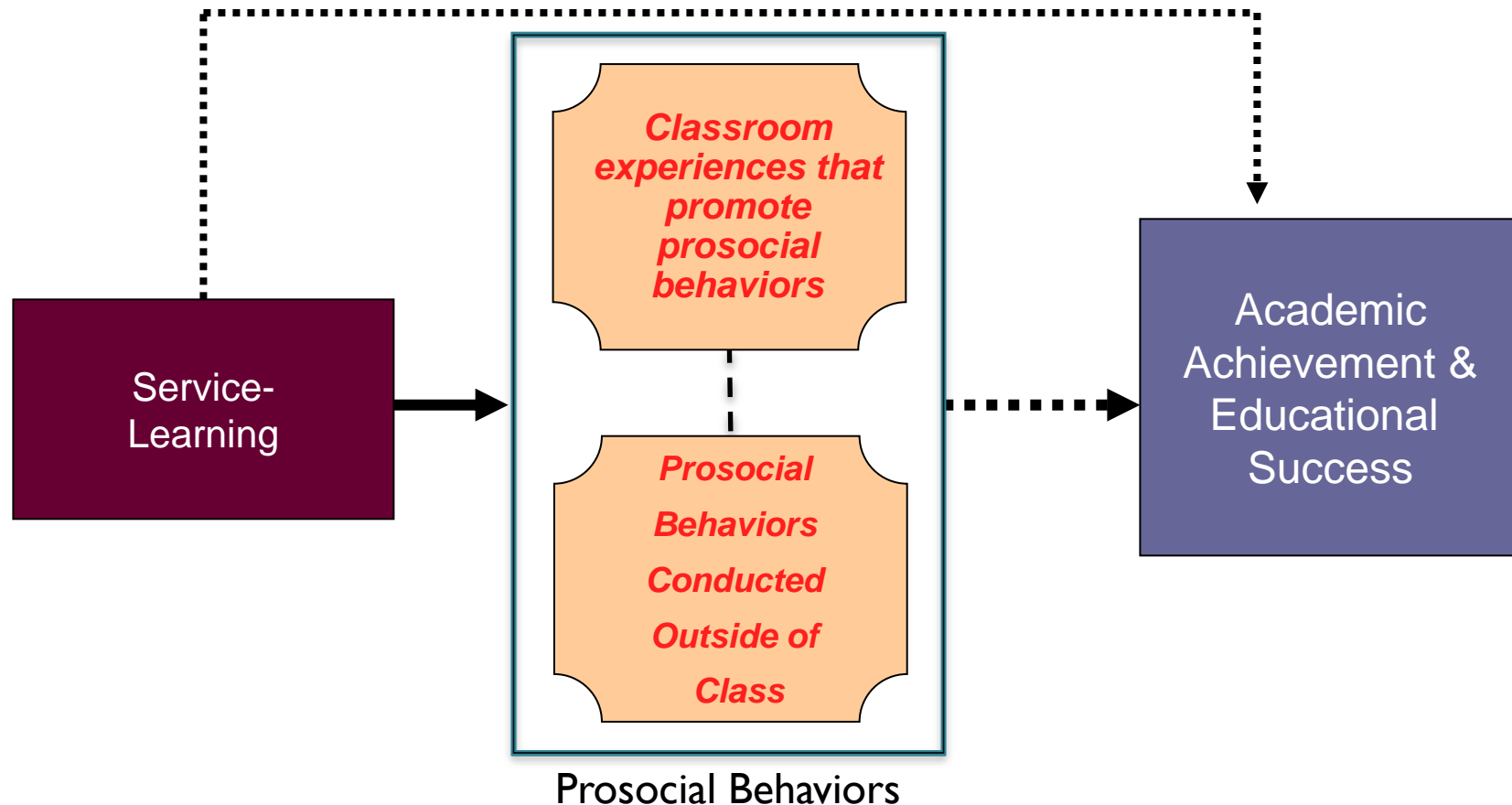## and *Academic Achievement & Educational Success*

Mediating Factors

Service-Learning →

Prosocial behaviors
Diverse interactions
Critical Conversations
Problem Solving
Critical Analysis

→ Academic Achievement & Educational Success

Measuring a Prosocial Behaviors

Prosocial behaviors
Diverse interactions
Critical Conservations
Problem Solving
Critical Analysis

Classroom-based experiences that promote prosocial behaviors

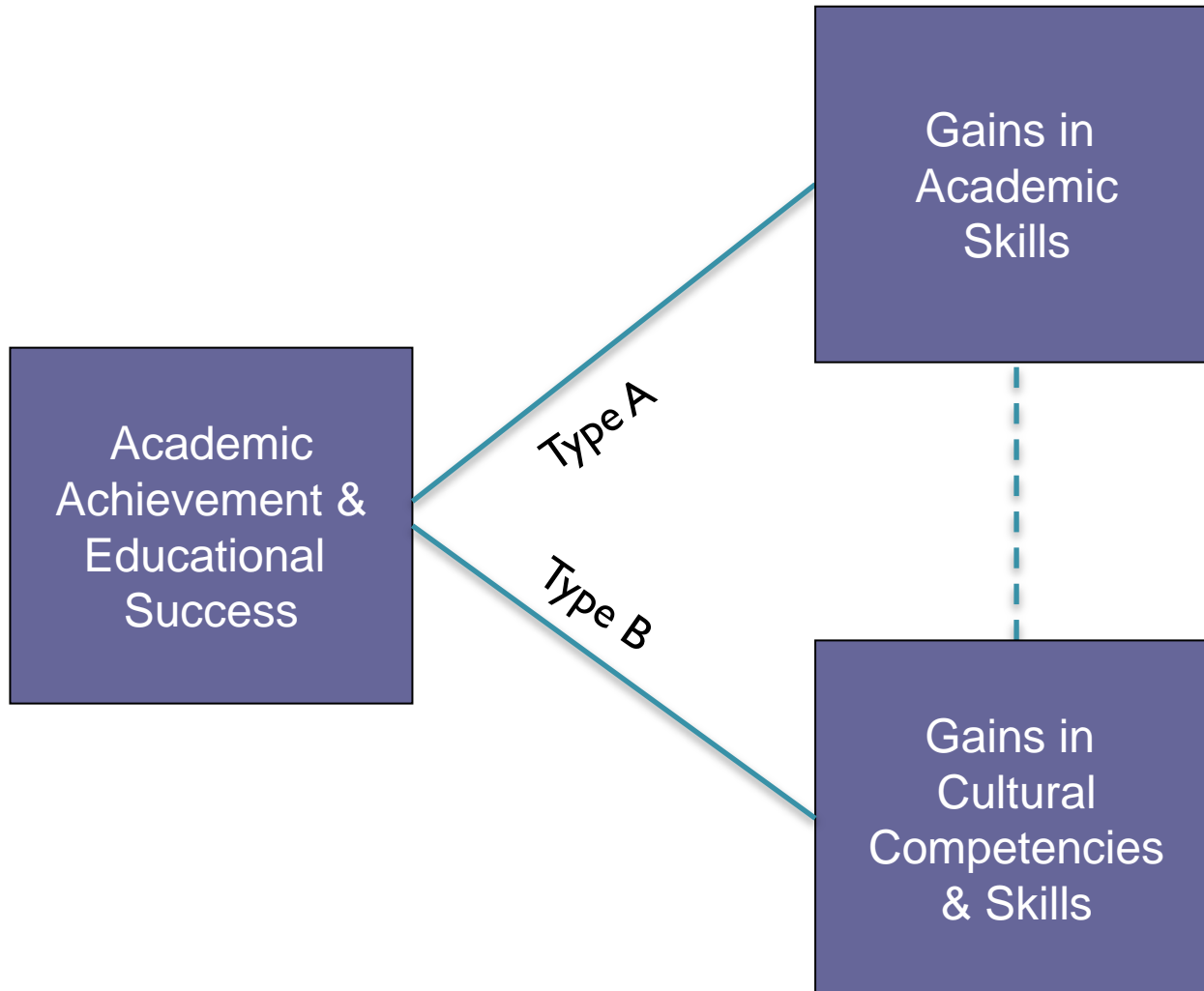*Prosocial behaviors conducted outside of class*

context A

context B

CONCEPTUAL FRAMEWORK
Service-Learning
and *Academic Achievement & Educational Success*

Prosocial Behaviors
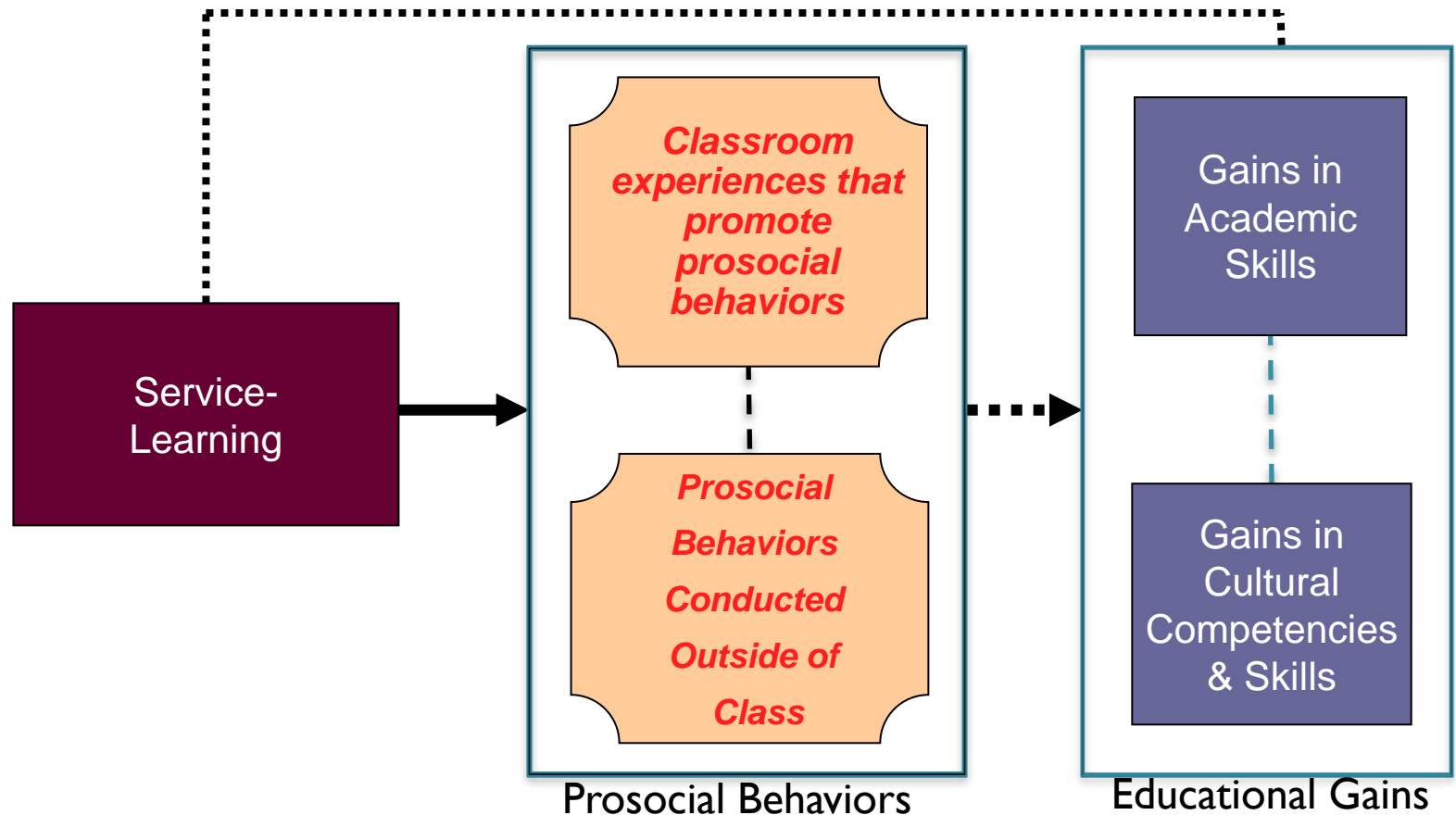
Measuring Skills Gains in College
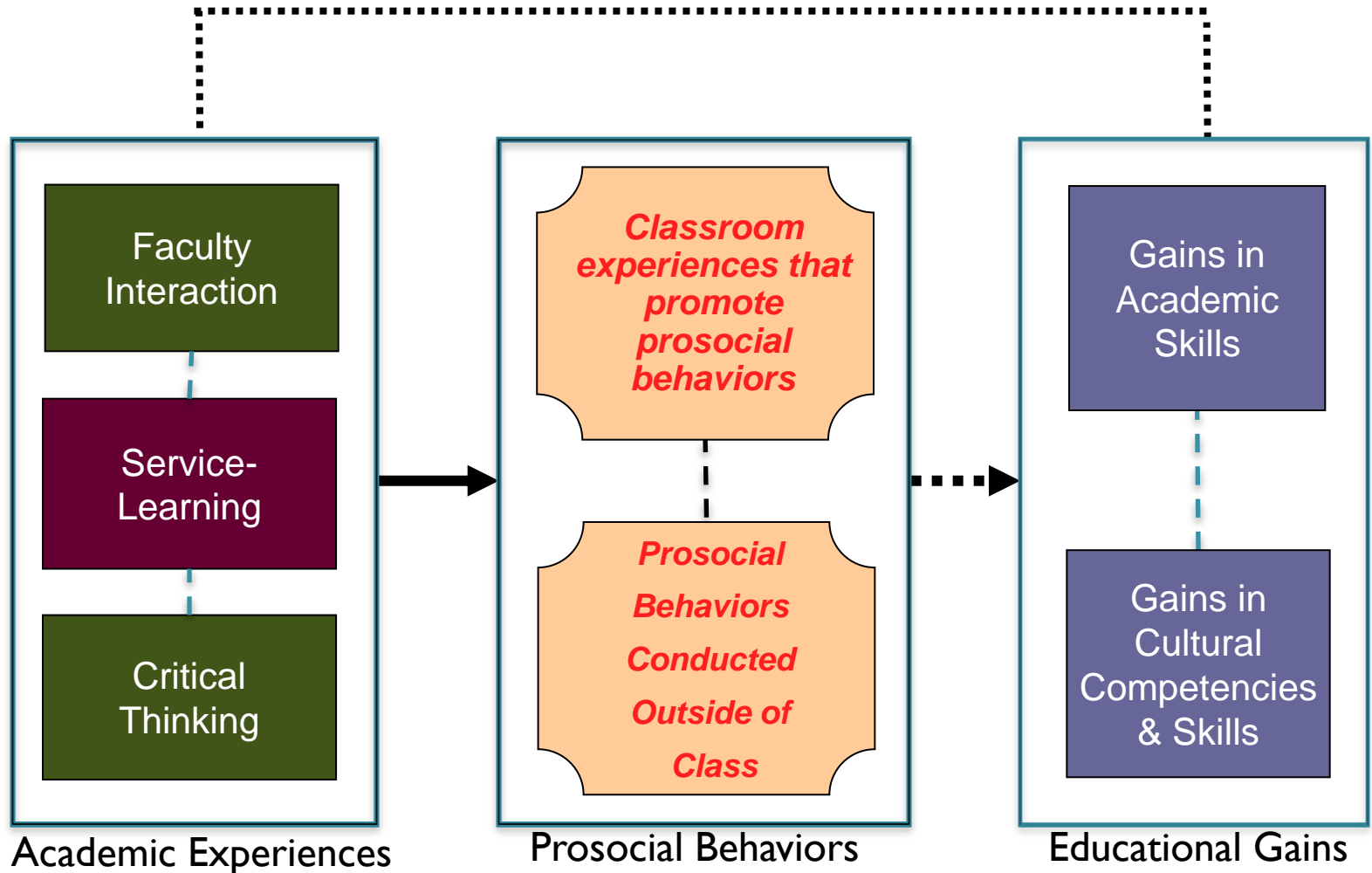
CONCEPTUAL FRAMEWORK
Service-Learning
and *Academic Achievement & Educational Success*

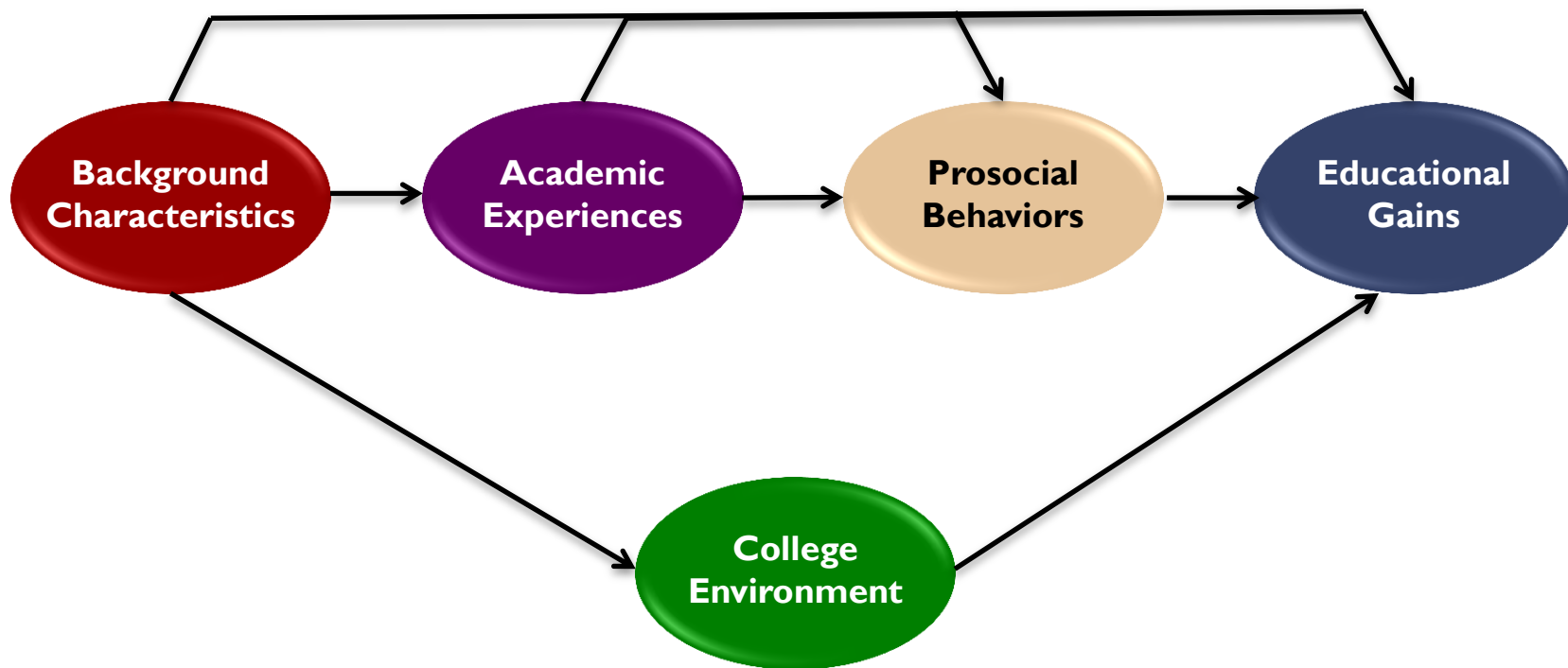Service-Learning

Classroom experiences that promote prosocial behaviors

Prosocial Behaviors Conducted Outside of Class

Prosocial Behaviors

Gains in Academic Skills

Gains in Cultural Competencies & Skills

Educational Gains

CONCEPTUAL FRAMEWORK
Service-Learning
and *Academic Achievement & Educational Success*

Academic Experiences

- Faculty Interaction
- Service-Learning
- Critical Thinking

Prosocial Behaviors

- *Classroom experiences that promote prosocial behaviors*
- *Prosocial Behaviors Conducted Outside of Class*

Educational Gains

- Gains in Academic Skills
- Gains in Cultural Competencies & Skills

Conceptual Model

Research Question:

Does participation in service-learning opportunities contribute, either directly or indirectly, to improved academic and cultural skills development for students?

Motivations for our Study

- The need for more rigorous methods in service-learning research.

- The need for more robust study designs.

- The need for multi-institutional studies of service-learning.

- The need to develop models that incorporate service-learning with academic skills and educational outcomes.

SERU: Multi-institutional Study of Student Engagement

- Systematic environmental scan of the undergraduate experience
- In-depth analysis of the varied types and levels of undergraduate engagement in research universities
- The survey is organized around five thematic research areas:
  - Academic engagement
  - Civic and community engagement
  - Global knowledge, skills, and awareness
  - Student life and development
  - Wildcard module

Participating Institutions

Data

- 2010 SERU survey data from community engagement module.

- 20,426 data points from 12 AAU institutions.

- Large sample allowed for random halves which could be utilized for exploration and validation.

- After removing missing cases 1st half N = 5,751 and 2nd half N=5,802.

Latent Variable Structural Equation Model

- Comprised of two distinct parts:
  - A _measurement model_ which relates items or measures to theoretical constructs or latent variables.
  - A _structural model_ which examine the potential relationship between latent and/or manifest variables with regressions.

Endogenous Measures

- **Stage Two: Academic Experiences**
  - Faculty Interaction ($\alpha = 0.802$)
  - Critical Thinking ($\alpha = 0.861$)
  - Service-Learning ($\alpha = 0.830$)

- **Stage Three: Prosocial Behaviors**
  - In-Class Prosocial Behaviors ($\alpha = 0.934$)
  - Out-of-Class Prosocial Behaviors ($\alpha = 0.940$)

- **Stage Four: Educational Gains**
  - Academic Skills ($\alpha = 0.777$)
  - Cultural Competencies and Skills ($\alpha = 0.779$)
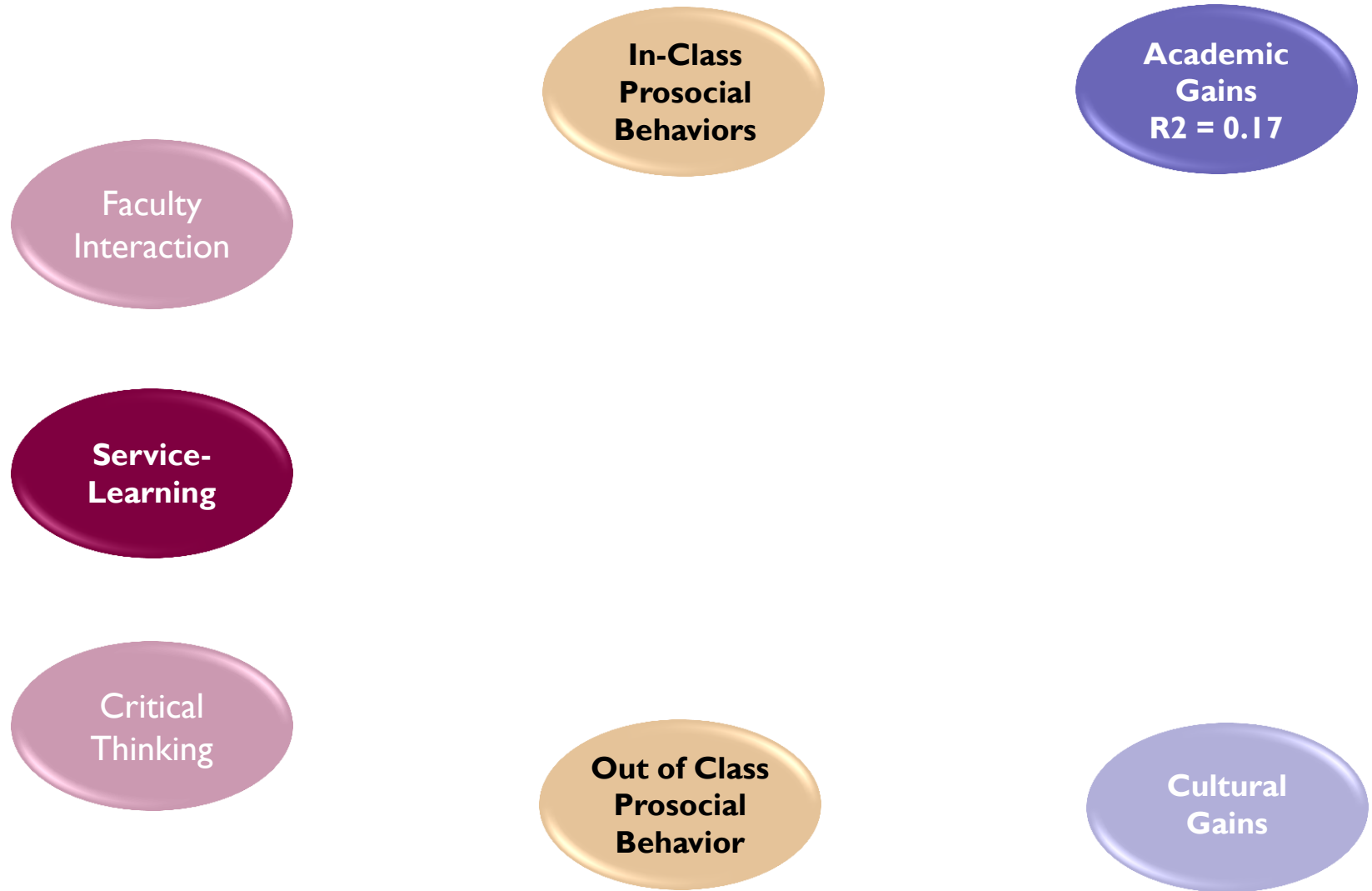
Proposed Structural Model
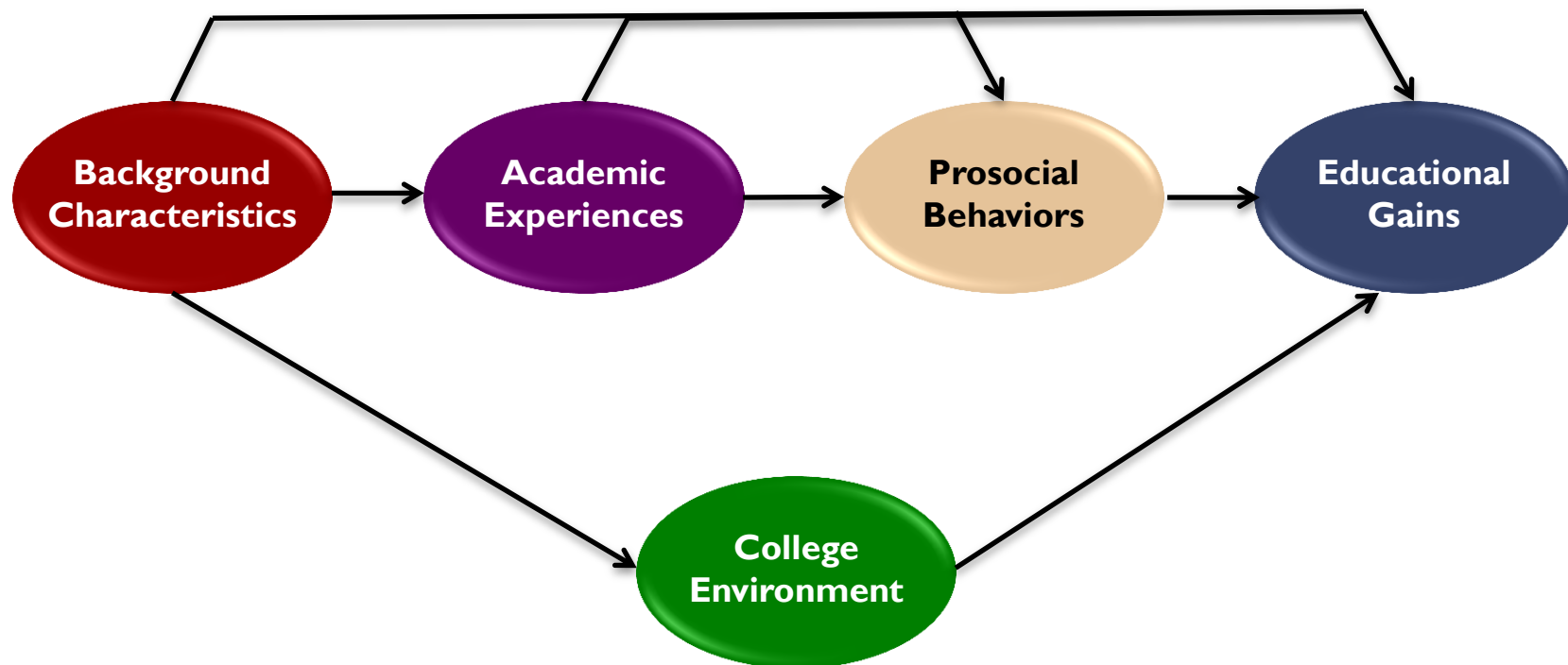
Does the model fit?

Criteria	Recommendations (Schreiber , et al. 2006)	1st Random Half	2nd Random Half
Chi-Squared (df)	Ratio to df ≤ 2 or 3, useful for nested models	11717.10 (692)	10552.19 (692)
Normed Fit Index	≥ .95 for acceptance	0.96	0.96
Tucker-Lewis Index	≥ .95 for acceptance	0.97	0.96
Comparative Fit Index	≥ .95 for acceptance	0.96	0.96
Root mean square error of approximation (RMSEA)	< .06 to .08	0.053	0.052

What does the model tell us about the effects of service-learning on educational gains at research universities?

RESULTS

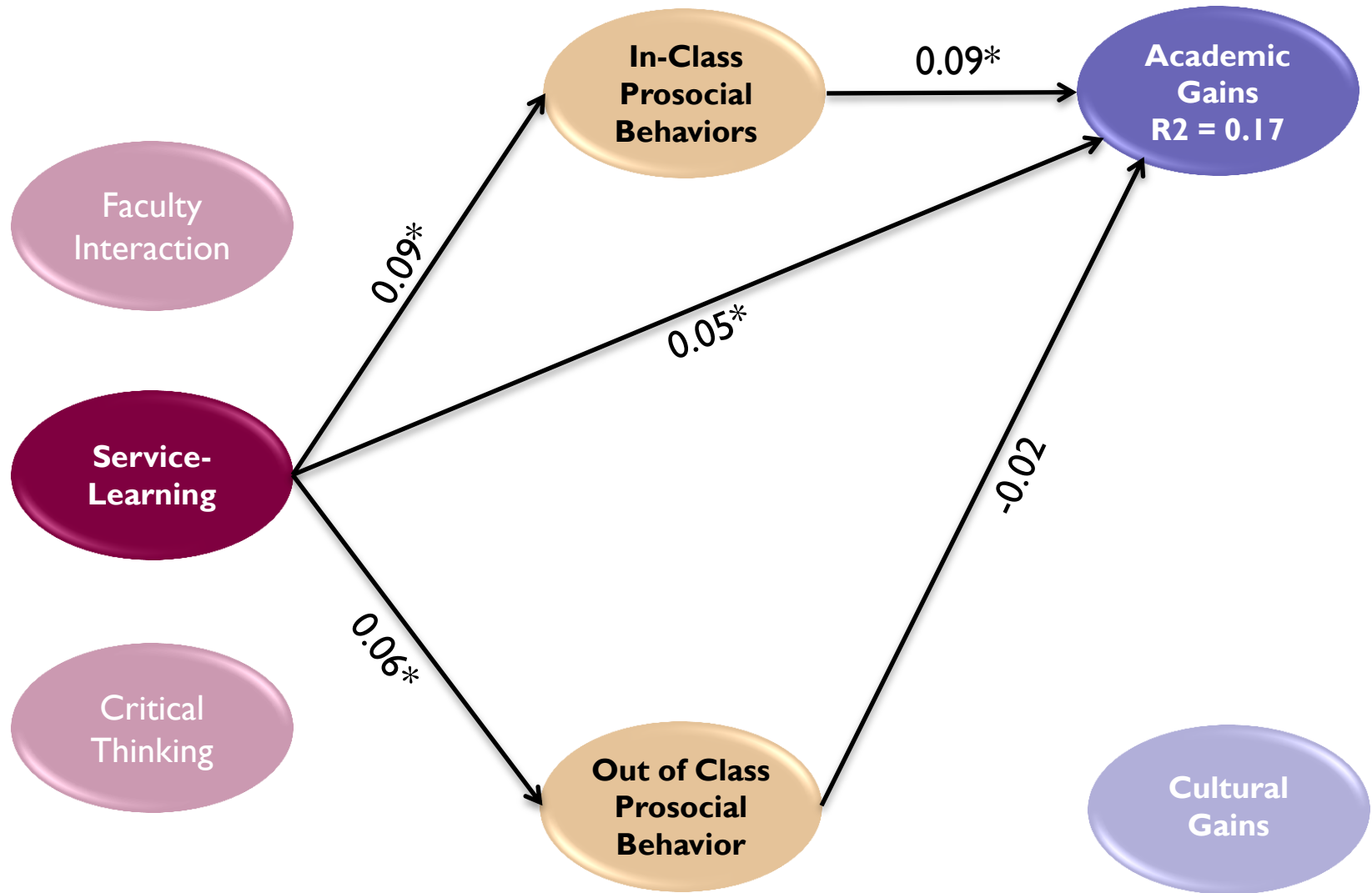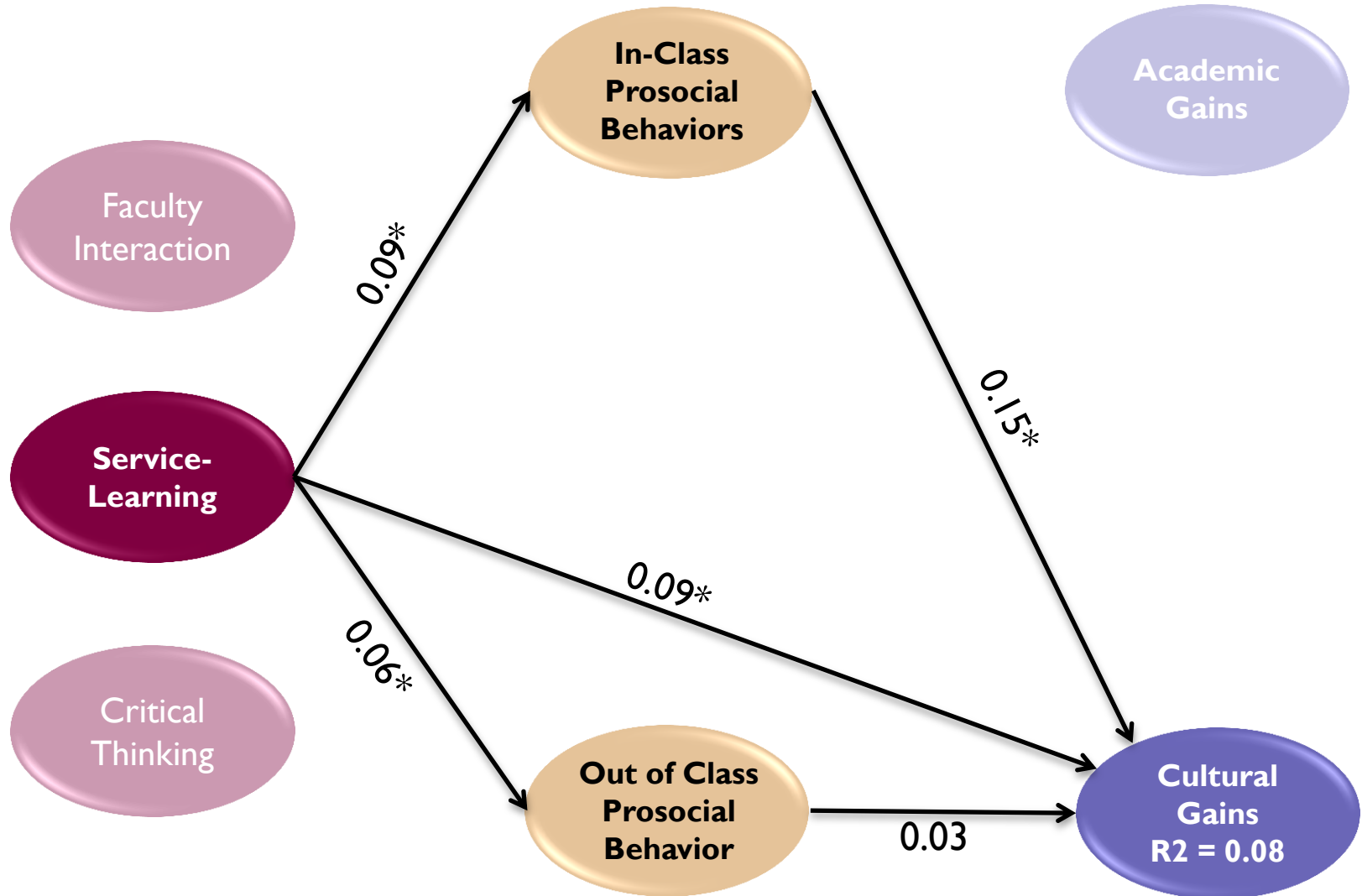# Service-Learning
and Reported Gains in Academic Skills

In-Class Prosocial Behaviors

Academic Gains
R2 = 0.17

Faculty Interaction

Service-Learning

Critical Thinking

Out of Class Prosocial Behavior

Cultural Gains

Standardized Beta Coefficients

Service-Learning
and Reported Gains in Academic Skills

In-Class Prosocial Behaviors

Academic Gains R2 = 0.17

Faculty Interaction

Service-Learning

Critical Thinking

Out of Class Prosocial Behavior

Cultural Gains

0.09*

0.09*

0.05*

0.06*

-0.02

Standardized Beta Coefficients

Service-Learning
and Reported Gains in Cultural Skills

Standardized Beta Coefficients

Summary of Results

Academic Experiences	Effects	Academic Gains	Cultural Gains
Service-Learning	Direct	0.05	0.09
	Indirect	0.01	0.02
	Total	0.06	0.11
Critical Thinking	Direct	0.09	0.03
	Indirect	0.03	0.07
	Total	0.12	0.10
Faculty Interaction	Direct	0.11	0.00
	Indirect	0.01	0.02
	Total	0.12	0.03

Summary of Results

Academic Experiences	Effects	Academic Gains	Cultural Gains
Service-Learning	Direct	**0.05**	0.09
	Indirect	0.01	0.02
	Total	0.06	0.11
Critical Thinking	Direct	**0.09**	0.03
	Indirect	0.03	0.07
	Total	0.12	0.10
Faculty Interaction	Direct	**0.11**	0.00
	Indirect	0.01	0.02
	Total	0.12	0.03

Summary of Results

Academic Experiences	Effects	Academic Gains	Cultural Gains
Service-Learning	Direct	0.05	0.09
	Indirect	0.01	0.02
	Total	**0.06**	0.11
Critical Thinking	Direct	0.09	0.03
	Indirect	0.03	0.07
	Total	**0.12**	0.10
Faculty Interaction	Direct	0.11	0.00
	Indirect	0.01	0.02
	Total	**0.12**	0.03

Summary of Results

Academic Experiences	Effects	Academic Gains	Cultural Gains
Service-Learning	Direct	0.05	**0.09**
	Indirect	0.01	0.02
	Total	0.06	0.11
Critical Thinking	Direct	0.09	**0.03**
	Indirect	0.03	0.07
	Total	0.12	0.10
Faculty Interaction	Direct	0.11	**0.00**
	Indirect	0.01	0.02
	Total	0.12	0.03

Summary of Results

Academic Experiences	Effects	Academic Gains	Cultural Gains
Service-Learning	Direct	0.05	0.09
	Indirect	0.01	0.02
	Total	0.06	**0.11**
Critical Thinking	Direct	0.09	0.03
	Indirect	0.03	0.07
	Total	0.12	**0.10**
Faculty Interaction	Direct	0.11	0.00
	Indirect	0.01	0.02
	Total	0.12	**0.03**

Potential Limitations

- Institutional Setting?
- Survey Instrument?
- Nonresponse Bias?
- Measurement Error?
- Nomanalistic Fallacy?
- Self-Reported Gains?

Conclusions

Future research directions

- Examine differential service-learning outcomes for different subgroups of students

- Analyze mediating factors beyond prosocial behaviors

- Incorporate in analyses issues pertaining to the quality of service-learning experiences
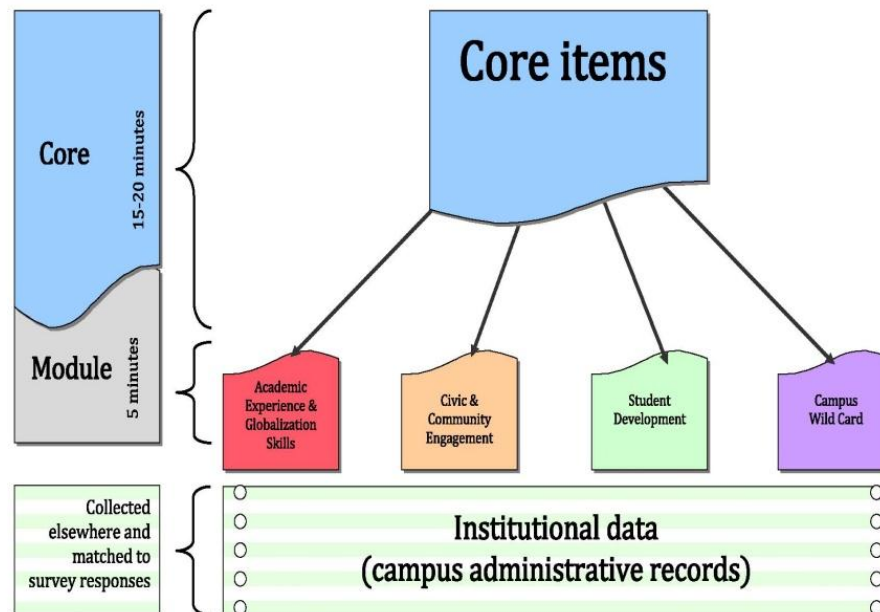
Questions?

DANIEL JONES-WHITE
djwhite@umn.edu

ANDY FURCO
afurco@umn.edu

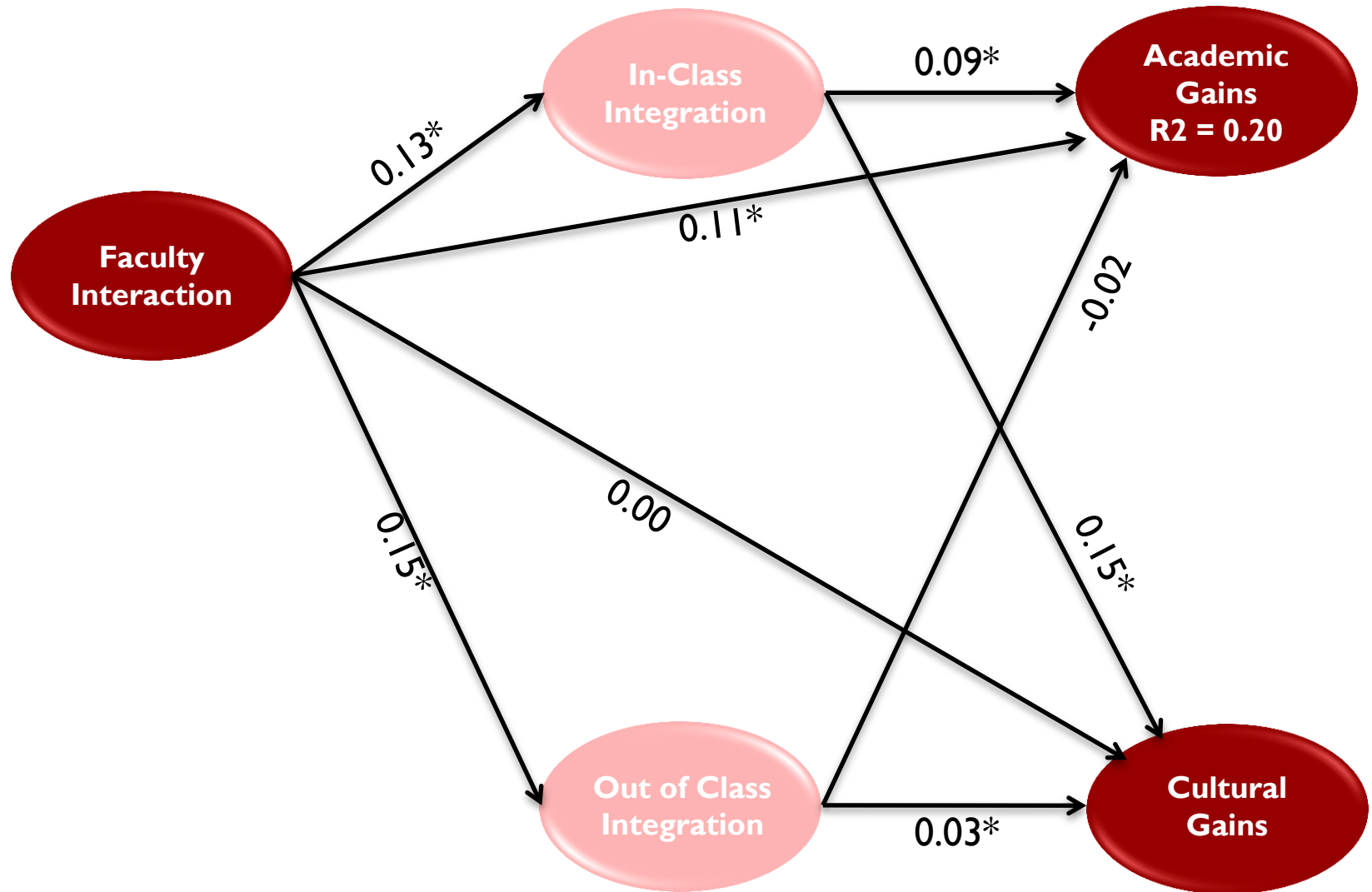SERU results for University of Minnesota
http://engagement.umn.edu

Powerpoint available at

SERU Survey Design
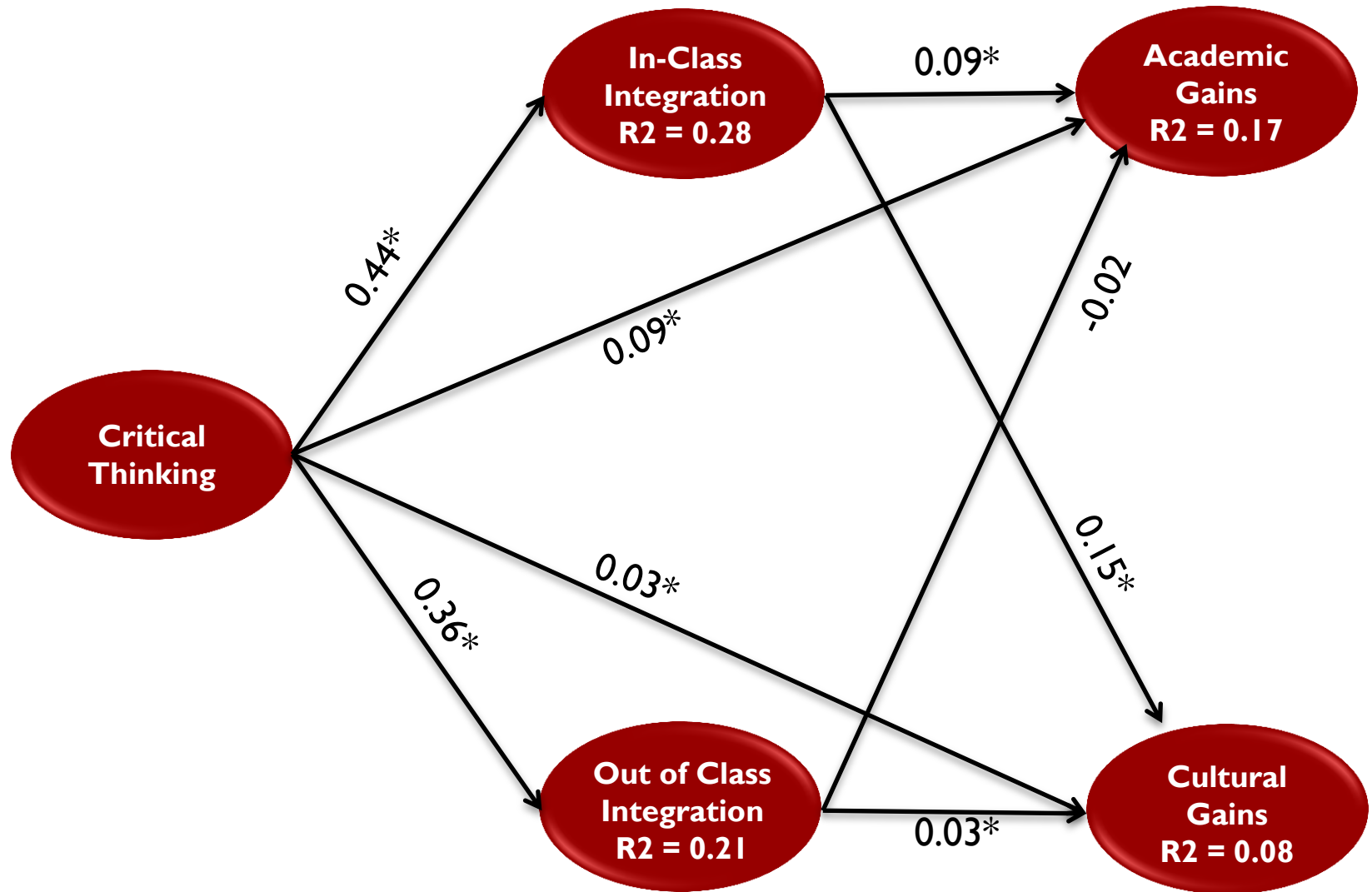

- Web-based Census Survey of Undergraduates
- Modular Construction—minimize time needed for completion
- Core Items (100% of participants)
- Modules (1 of 4 randomly assigned to varying % of participants)
  - Academic Engagement - 30%
  - Community & Civic Engagement - 20%
  - Student Development - 20%
  - "Wild-Card"—30%

Results:
Faculty Interaction

Faculty Interaction

In-Class Integration

Out of Class Integration

Academic Gains
R2 = 0.20

Cultural Gains

0.13*

0.11*

0.15*

0.00

0.09*

-0.02

0.15*

0.03*

Results:
Critical Thinking

Results: Service-Learning