

# Relationships at School and Environmental Fit as Resources for Adolescent Engagement and Achievement



Melanie J Zimmer-Gembeck, Peter A. Creed, Heather M. Chipuer,  
Michelle Hanisch, and Leanne McGregor

Griffith University – Gold Coast, Queensland, Australia

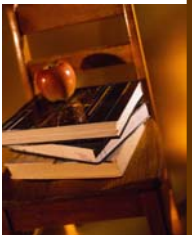


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## Reference

Zimmer-Gembeck, M. J., Creed, P. A., Chipuer, H. M., Hanisch, M., & McGregor, L. Relationships at school and environmental fit as resources for adolescent engagement and achievement. In T. Walls (organizer). *Belief-based influences on school adjustment in adolescence*. Symposium presented at the biennial meeting of the International Society for Behavioral Development, Melbourne, Victoria, Australia.

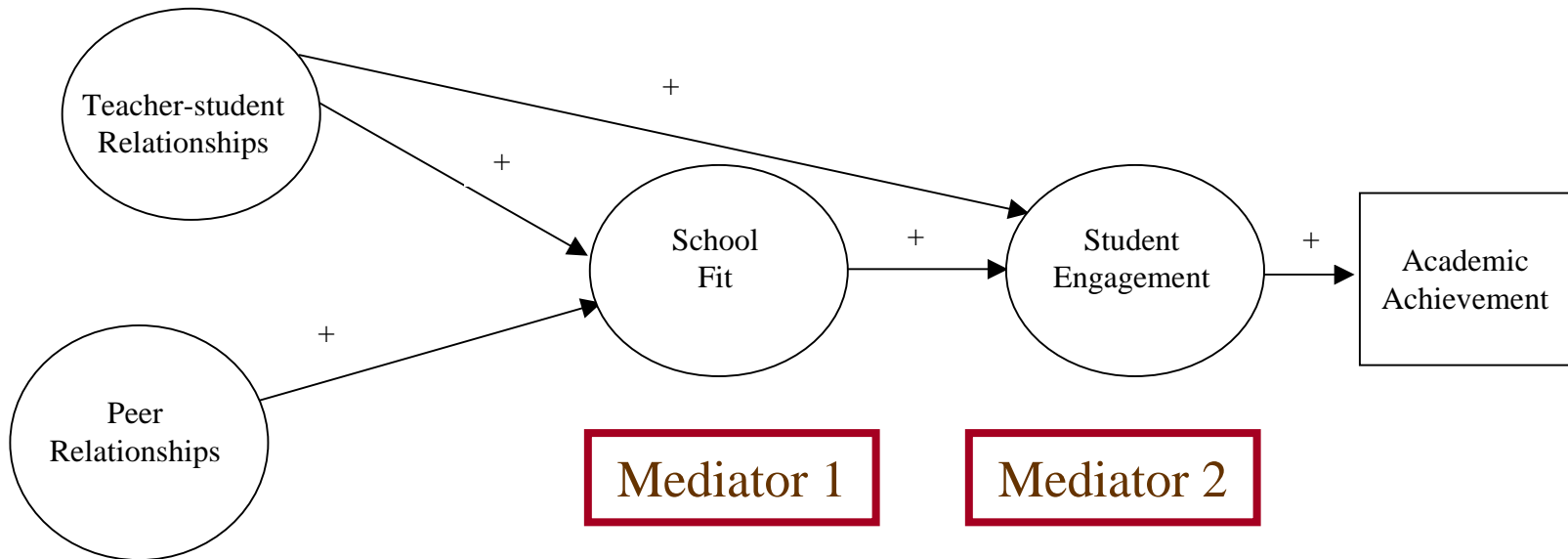


# Overview

- Adolescent academic achievement and engagement in school
- Engagement
  - Being more interested and self-reliant in learning activities
  - Being more interested, and less anxious and bored when facing new and ongoing schoolwork
  - Observable demonstrations of motivation
    - Intensity and extent of effort
    - Emotional quality of involvement in actions



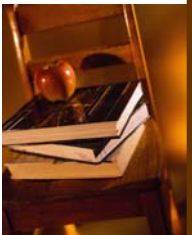
# The Hypothesized Model



Latent-variable structure equation model (SEM)

# Bootstrapping

- Used bootstrapping to examine the strength of mediational (indirect) pathways (see Shrout & Bolger, 2002)
- Resampling method – 1000 samples of 200 participants with replacement
- Useful
  - Cross-sectional mediational path models
  - Relatively small to moderate sample sizes ( $N < 400$ )
  - Variables depart from a normal distribution
  - Fairly easy to implement



# Background

- Self-determination theory (Deci & Ryan, 1985; Ryan & Deci, 2000, 2002) and
- Developmental theories of motivation, agency, initiative, positive youth development (Connell & Wellborn, 1991; Eccles, Larson, 2000; Wigfield & colleagues; Walls & Little, 2005; Wentzel, 1999)
  - ✦ Environments can promote or undermine adolescents' behavioral and emotional engagement in academic activities and achievement at school



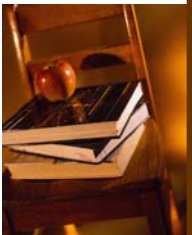
# Background

- ▶ Engagement will be greater when environments have features that meet individual psychological needs for...
  - ▶ Autonomy (a feeling of agency, opportunities for making decisions)
  - ▶ Relatedness to others (belongingness, involvement, acceptance)
  - ▶ Competence (an understanding of contingencies and self-efficacy)

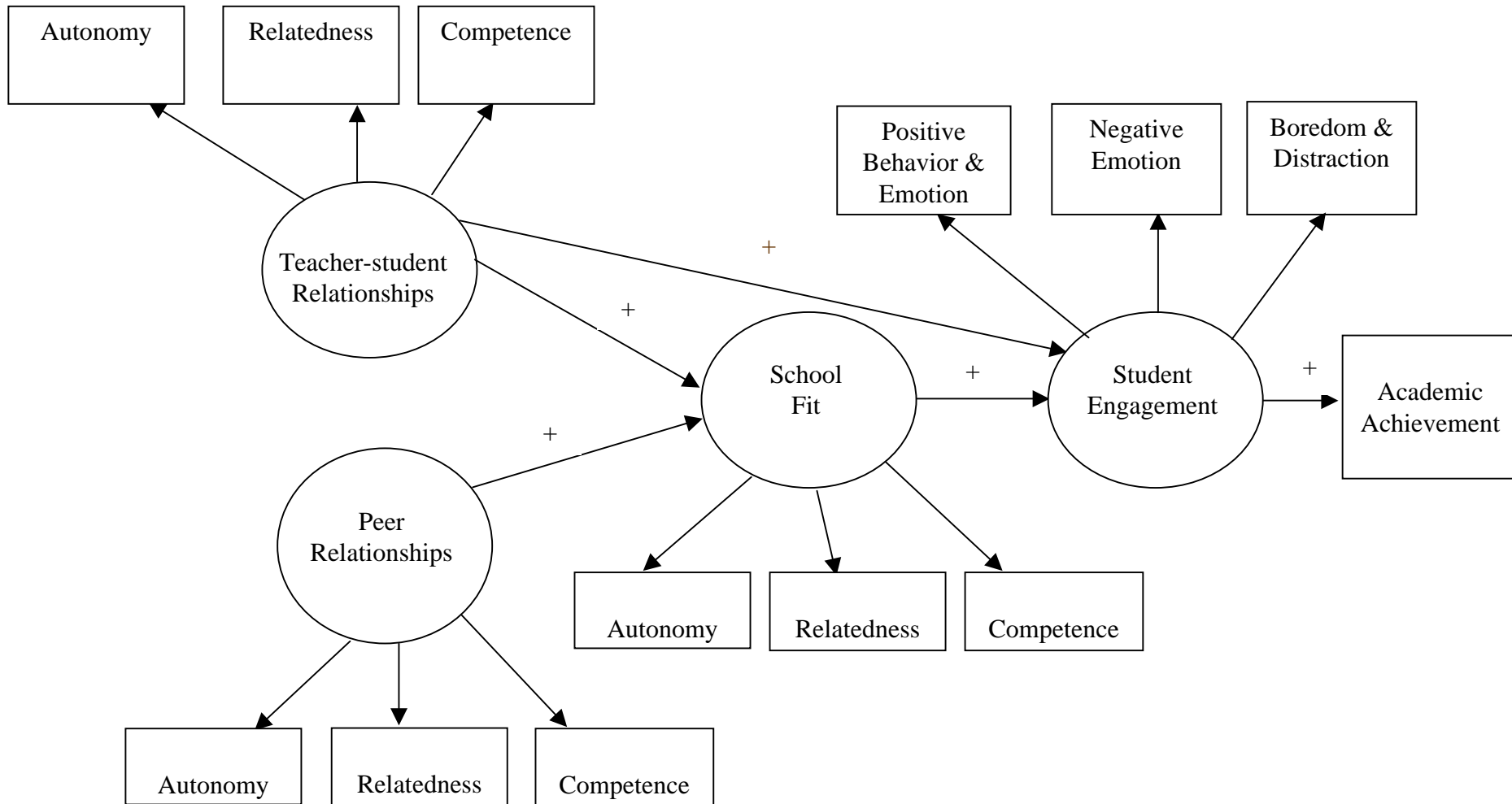


# Background

- ▶ How do environments meet these psychological needs?
  - ✦ Autonomy: Autonomy support vs. coercion
  - ✦ Relatedness: Involvement and warmth vs. hostility
  - ✦ Competence: Structure and predictability vs. chaos
- See Connell & Wellborn, 1993; Ryan & Deci, 2000; Skinner, 1995; Skinner, Zimmerman-Gembeck, & Connell, 1998



# The Hypothesized Model

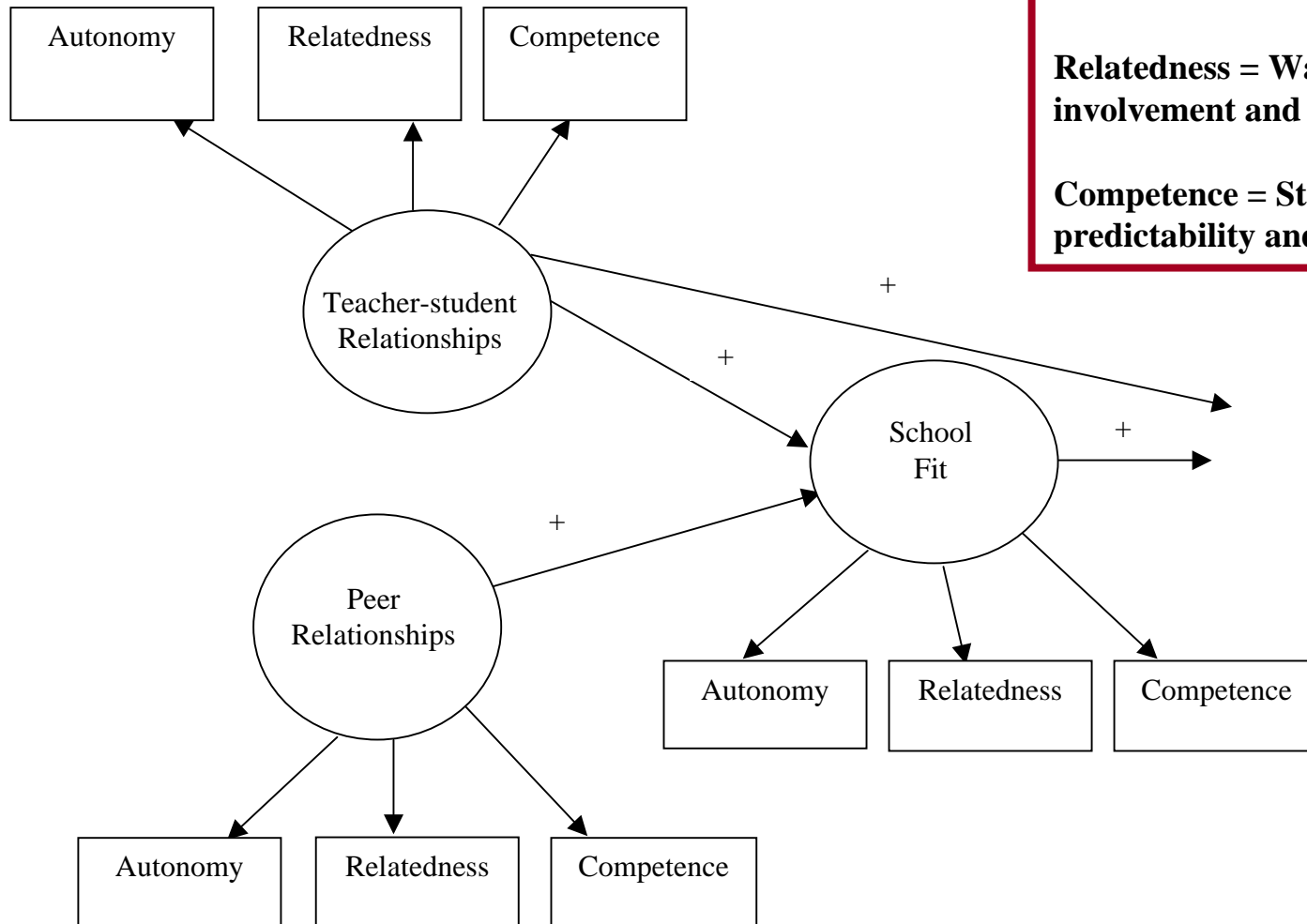


# Autonomy, relatedness and competence

**Autonomy = Autonomy support and not coercion**

**Relatedness = Warmth / involvement and not hostility**

**Competence = Structure and predictability and not chaos**



# Method: Participants

- ▶ 324 students in grades 10 and 11 at 2 high schools in SE Queensland, Australia
  - ✦ 52% female
  - ✦ Age  $M = 15.3$ ,  $SD = .74$ , 79% 15-16 years old



# Method: Measured Variables

## ✦ Engagement

- ✦ Behavioral and emotional aspects, 18-item scale (Skinner et al., 1998). Factor analysis revealed 3 subscales:

- ✦ Positive behavior and emotion,  $\alpha = .80$

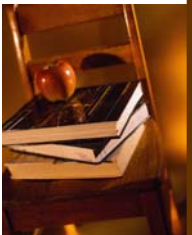
- ✦ Negative emotion,  $\alpha = .91$

- ✦ Boredom and daydreaming,  $\alpha = .74$

## ✦ Teacher-student relationships: Autonomy support, coercion, involvement, hostility, structure, and chaos

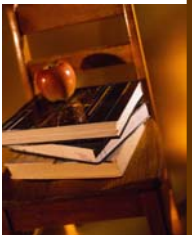
- ✦ A shortened version of the Students' Assessment of Teacher Context (Belmont, Skinner, Wellborn, & Connell, 1992),  $\alpha = .63$  to  $.65$

- ✦ Generalized reports about all teachers.



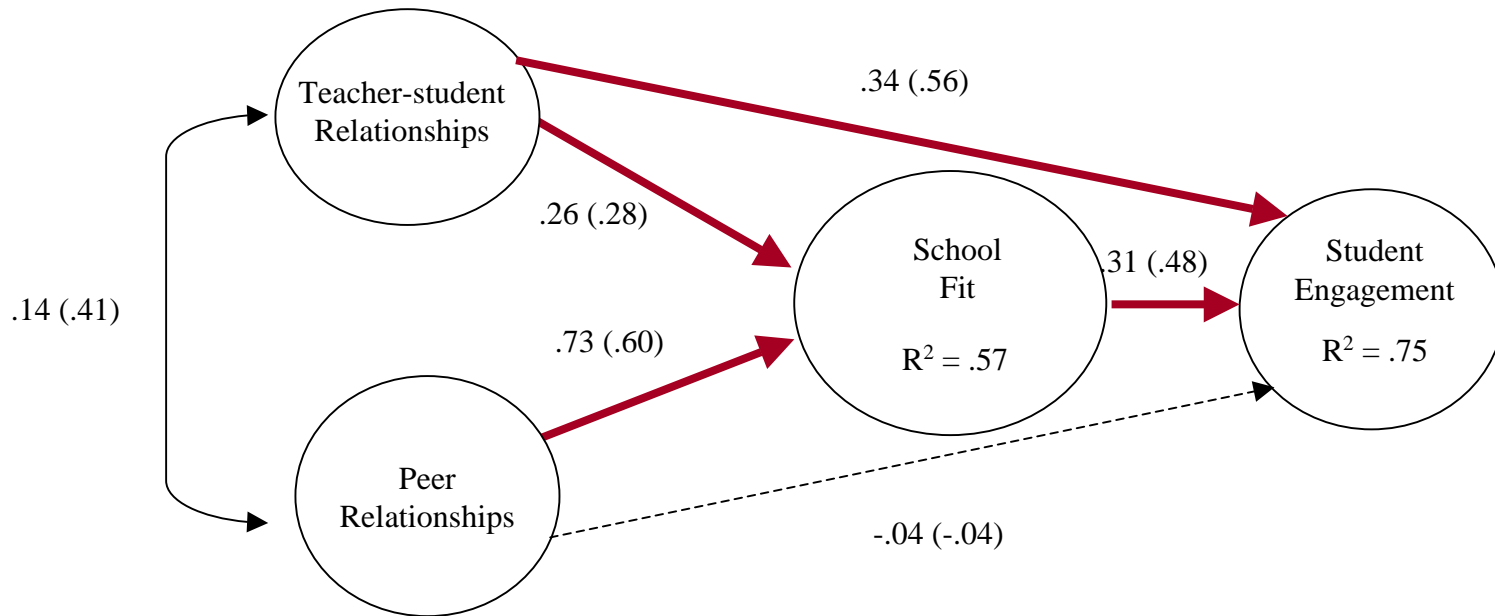
# Method: Measured Variables

- Peer relationships
  - The Basic Need Satisfaction in Relationship Scale (La Guardia, Ryan, Couchman, & Deci, 2000)
- School fit
  - The Basic Need Satisfaction in Relationship Scale (La Guardia, Ryan, Couchman, & Deci, 2000),  $\alpha = .62$  to  $.71$
- Achievement.
  - “What marks do you usually receive at school?”.
    - Response options: Usually A’s, usually B’s, usually C’s, or usually D’s and E’s/F’s.
    - Used because high school students are very accurate reporters of their own usual grades (Wigfield & Wagner, 2005)



# School Fit as a Mediator

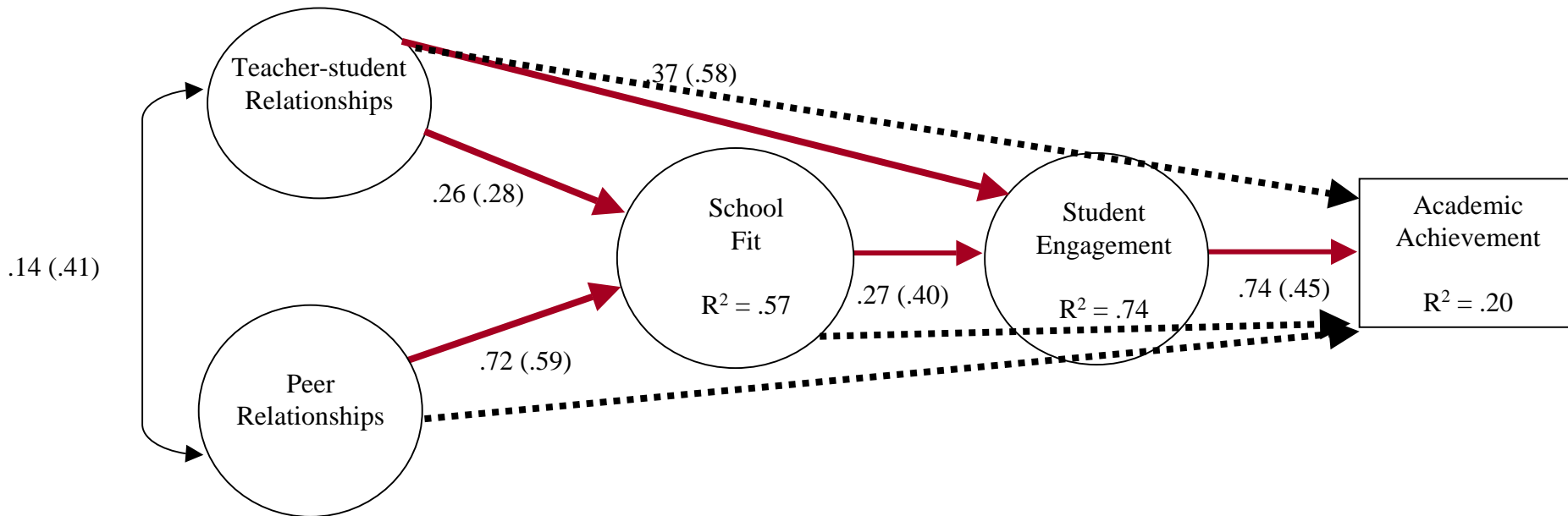
Two models were fit.



$\chi^2(45, N = 342) = 93.5, p < .01, CFI = .97,$   
 $RMSEA = .058$  (90% CI .041 to .074)

# The Hypothesized Model: School Fit and Engagement as Mediators

Two additional models were fit.



$\chi^2(57, N = 342) = 138.3, p < .01, CFI = .95,$   
 $RMSEA = .066$  (90% CI .052 to .081)

## Summary of Findings: Pathways

- Pathways to engagement and achievement were found that
  - operated via students' relationships with their teachers and their peers, and school fit.
- Adolescents' representation of school important.
- Teacher and peer relationships come together to predict this perception of school fit.
- But, teacher-student relationships also are directly associated with engagement.

