

# Faculty Still Matter to Student Engagement!

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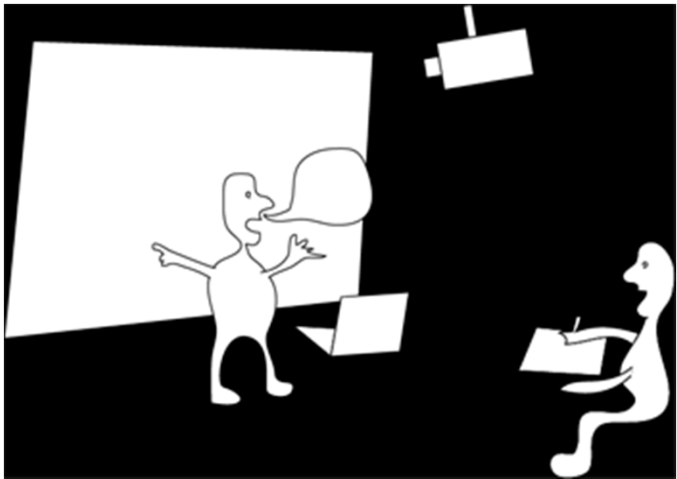


# What Are You Going To Learn?

1. Learn how faculty teaching practices, as measured on the revised FSSE instrument, are connected to student engagement in effective educational practices as measured on the NSSE
2. Understand how our results confirm, extend, and differ from those found by Kuh, Nelson Laird, and Umbach (2004) and Umbach and Wawrzynski (2005) in their often cited artic



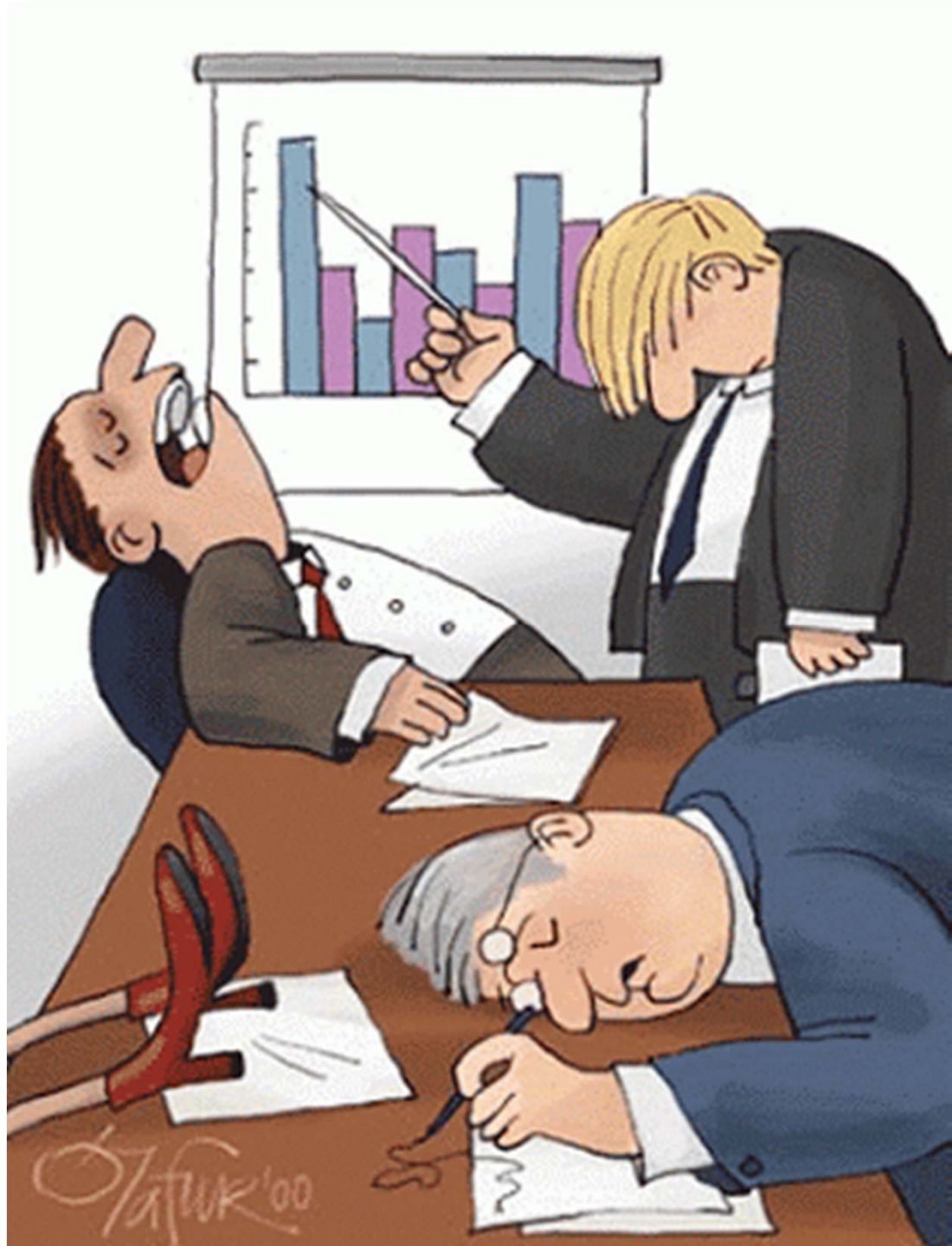
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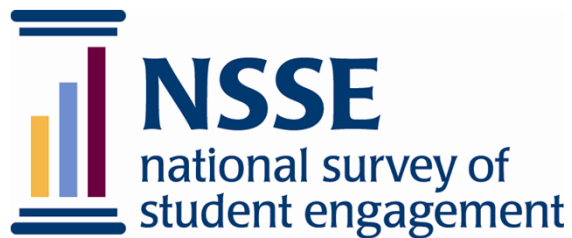
The Plan

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# INTRODUCING THE INSTRUMENTS & OUR STUDY



# Extending and Updating Kuh, Nelson Laird, & Umbach (2004)

- ❖ New trend of hiring part-time instructors
- They asked: How did this impact student-faculty interaction?
- ❖ AAC&U's 2002 *Greater Expectations* defined outcomes of a liberal education
- They asked: What was the relationship between faculty teaching practice and student engagement in these practices?
- With the updated instruments we return to these meaningful questions

# Extending and Updating Kuh, Nelson Laird, & Umbach (2004)

137 Schools: 20,226 SR; 22,033 FY; 14,336 Faculty

1. *At institutions where faculty members emphasize certain educational practices, students typically engage in those practices to a greater degree than their peers attending other colleges and universities*
2. *Good things go together*
3. *Certain types of faculty members are more likely than others to use effective educational practices.*

**Table 1: Relationships Between Student Engagement and Faculty Expectations and Behavior**

At Campuses Where Faculty Score Highly On:	Student Scores Tend to Be Higher On:			
	Academic Challenge	Active and Collab. Learning	Diversity Experiences	Student-Faculty Interaction
Emphasis on Academic Challenge	✓	✓	✓	
Active and Collaborative Practices	✓	✓	✓	✓
Emphasis on Diversity Experiences	✓	✓	✓	
Emphasis on Higher-Order Thinking	✓	✓	✓	
Importance of Enriching Ed. Exp.	✓	✓		✓

## Extending and Updating Umbach & Wawrzynski (2005)

- Same dataset, this analysis used HLM
- Findings suggest that students report higher levels of engagement and learning at institutions where faculty use *active and collaborative learning* techniques and emphasized higher levels of *academic challenge*
- “For nearly every model, faculty members at liberal arts colleges were statistically significantly more likely to engage in the behaviors” (p. 171)



## What is NSSE?

- National Survey of Student Engagement
  - Annual spring survey to first-year students and seniors at baccalaureate-granting institutions
  - About 650 institutions participate annually
  - Mostly U.S. and Canadian institutions
  - Assesses exposure to and participation in effective educational practices

Goal: To query undergraduates directly about their educational experiences

# Themes and Indicators

## *Themes*

## *Engagement Indicators*

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**Academic Challenge**

**Higher-Order Learning**  
**Reflective & Integrative Learning**  
**Learning Strategies**  
**Quantitative Reasoning**

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**Learning with Peers**

**Collaborative Learning**  
**Discussions with Diverse Others**

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**Experiences with Faculty**

**Student-Faculty Interaction**  
**Effective Teaching Practices**

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**Campus Environment**

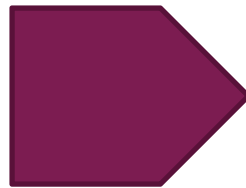
**Quality of Interactions**  
**Supportive Environment**

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# Themes and Indicators

## NSSE Benchmarks 2000 - 2012

**Level of  
Academic  
Challenge**



## Engagement Indicators

**Higher-Order Learning**

**Reflective & Integrative Learning**

**Learning Strategies**

**Quantitative Reasoning**

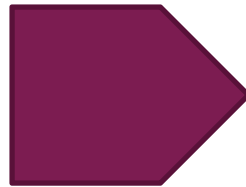
*Theme: Academic Challenge*

Expanded to focus on distinct dimensions of academic effort, including new topics of interest. In addition, key items on reading, writing, and study time are reported with this theme.

# Themes and Indicators

**NSSE  
Benchmarks  
2000 - 2012**

**Active and  
Collaborative  
Learning**



**Engagement Indicators**

**Collaborative Learning**

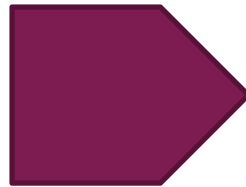
**Discussions with Diverse Others**

*Theme: Learning with Peers*

Modified to emphasize student-to-student collaboration. Updated diversity items from Enriching Educational Experiences have been moved here.

# Themes and Indicators

**NSSE  
Benchmarks  
2000 - 2012**



**Engagement Indicators**

**Student-Faculty Interaction**

**Effective Teaching Practices**

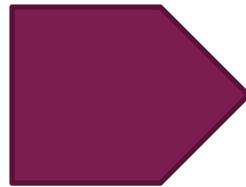
*Theme: Experiences with Faculty*

The updated Student-Faculty Interaction indicator is joined by a second measure about effective teaching practices.

# Themes and Indicators

**NSSE  
Benchmarks  
2000 - 2012**

**Supportive  
Campus  
Environment**



**Engagement Indicators**

**Quality of Interactions**

**Supportive Environment**

*Theme: Campus Environment*

Expanded to focus separately on interactions with key people at the institution and perceptions of the institution's learning environment.

# Faculty Survey of Student Engagement

- Designed to complement the National Survey of Student Engagement (NSSE)
- Gives a snapshot of
  - Faculty perceptions of how often students engage in different activities
  - The importance faculty place on various areas of learning and development
  - The nature and frequency of student-faculty interactions
  - How faculty organize their time in and out of class
- 2014: 143 institutions

# Faculty Survey of Student Engagement

## 9 Engagement Indicators

### **Engagement with:**

Student-faculty interactions (SF)

### **Perceptions of:**

Quality of student interactions  
with others (QI)

Supportive environment (SE)

### **Importance of EI in selected course:**

Reflective and integrative  
learning (RI)

Quantitative reasoning (QR)

### **Emphasis on EI in selected course:**

Higher-order learning (HL)

Learning strategies (LS)

Collaborative learning (CL)

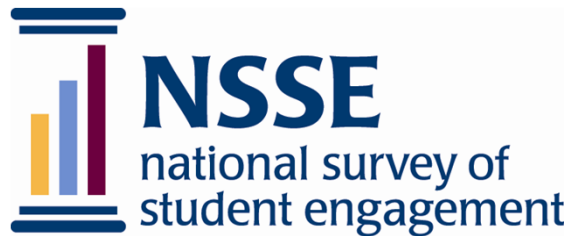
Discussions with diverse others (DD)



# Research Questions

1. On campuses where faculty place greater emphasis on certain effective educational practices, do first-year and senior students participate in those effective educational practices more?
2. By whom and in what contexts are effective educational practices being emphasized?

# METHODS



# Data Source

- 121 four-year colleges and universities administered both NSSE and FSSE in 2013
  - 39,135 undergraduate respondents
    - 13,816 first-year students
    - 25,319 seniors students
  - 9,370 faculty respondents

# Sample Statistics

## Institutions (n=121)

- 41% public
- Locale
  - 31% city
  - 20% suburban
  - 20% town
  - 12% rural
- Selectivity
  - 38% less/non competitive
  - 39% competitive
  - 12% very competitive
  - 11% highly competitive

- Enrollment size
  - 16% Less than 1,000
  - 55% 1,000 to 4,999
  - 21% 5,000 to 9,999
  - 8% 10,000+
- Carnegie Type
  - 42% Master's level
  - 26% Baccalaureate Other
  - 17% Baccalaureate A&S
  - 16% Research/Doctoral

# Sample Statistics

## Students (n= 39,135)

- 66% women
- Race/ethnicity
  - 65% White
  - 11% African American
  - 4% Asian
  - 8% Hispanic or Latino
- Enrollment status
  - 83% Full time
  - 17% Not full time
- First-generation status
  - 51% First-generation
  - 49% Not first-generation

- Disciplinary area
  - 11% A&H
  - 18% STEM
  - 14% SOCS
  - 42% PROF
- Transfer status
  - 62% Started at current inst.
  - 38% Started elsewhere
- International status
  - 6% International Student
  - 94% Not international

# Sample Statistics

## Faculty (n=9,370)

- 50% women
- Race/ethnicity
  - 76% White
  - 5% African American
  - 4% Asian
  - 3% Hispanic or Latino
- Rank
  - 24% full professor
  - 23% associate
  - 25% assistant
  - 12% full-time lecturer
  - 17% part-time lecturer

- Disciplinary area
  - 25% A&H
  - 21% STEM
  - 12% SOCS
  - 28% PROF
- Selected course
  - 49% taught upper division
  - 50% general education
  - 32% small class (1 - 20)
  - 50% medium class (21 - 40)

# RESULTS



# Data Analyses – RQ 1

On campuses where faculty place greater emphasis on certain effective educational practices, do first-year and senior students participate in those effective educational practices more?

- HLM analysis
  - Level 1: Students
  - Level 2: Institutions  
(with aggregated faculty variable)
- Grand mean centering
- Standardized continuous independent and dependent variables



# Data Analyses – RQ 1

Dependent Variables:  
NSSE Engagement Indicators

## **Level of engagement in:**

Collaborative learning (CL)  
Reflective and integrative  
learning (RI)  
Student-faculty interactions (SF)  
Quantitative reasoning (QR)  
Discussions with diverse others (DD)  
Learning strategies (LS)

## **Coursework emphasizes:**

Higher-order learning (HL)

## **Perceptions of:**

Quality of student interactions  
with others (QI)  
Supportive environment (SE)

# Data Analyses – RQ 1

## Level 1: Independent Variables

### **Student Characteristics**

- Gender
- Race/ethnicity
- US citizen
- Age
- Enrollment status
- Whether student is taking all classes online
- First-generation status
- Membership in social fraternity or sorority
- Living on campus
- Student-athlete
- Discipline
- Grades
- Transfer status

# Data Analyses – RQ 1

## Level 2: Independent Variables

### **Institutional Context**

- Control
- Locale
- Selectivity
- Enrollment size
- Carnegie type

### **Variable of Interest**

- Emphasis faculty place on the corresponding engagement indicator (aggregated to the institution level)

# RQ 1. Results

<b>ICC</b>	<b>FY</b>	<b>SR</b>
Discussions with diverse others	4.6%	3.8%
Quality of interactions	3.5%	3.6%
Supportive environments	3.3%	4.9%
Student faculty interactions	5.3%	11.8%
Quantitative reasoning	2.2%	1.9%
Collaborative learning	6.8%	8.4%
Reflective and integrative learning	2.8%	2.8%
Learning strategies	2.2%	3.8%
Higher-order learning	2.2%	2.1%

# RQ 1. Results: Impact of Faculty Emphasis on Student Engagement

	HL	RI	QR	LS	CL	DD	SF	QI	SE
First-year			++	++	++	++	++	++	
Senior			+	++	++	+++	++	+++	

Note: full model summary of significant effect sizes after controlling for student and institution characteristics Key: +  $p < .001$ , ++  $p < .001$  and  $B > .2$ , +++  $p < .001$  and  $B > .4$

# Data Analyses – RQ 2

By whom and in what contexts are effective educational practices being emphasized?

- FSSE only
- HLM analysis
- Grand mean centering
- Standardized continuous independent and dependent variables

# Data Analyses – RQ 2

Dependent Variables:  
FSSE Engagement Indicators

**Importance of EI in selected course:**

Reflective and integrative  
learning (RI)

Quantitative reasoning (QR)

**Emphasis on EI in selected course:**

Higher-order learning (HL)

Learning strategies (LS)

Collaborative learning (CL)

Discussions with diverse others (DD)

**Engagement with:**

Student-faculty interactions (SF)

**Perceptions of:**

Quality of student interactions  
with others (QI)

Supportive environment (SE)

# Data Analyses – RQ 2

## Level 1 IVs

### **Faculty Characteristics**

- Gender
- Race/ethnicity
- US citizen
- Age
- Rank/employment status
- Number of years taught

### **Course Context**

- Course level
- General education requirement
- Course size
- Disciplinary area

## Level 2 IVs

### **Institutional Context**

- Control
- Locale
- Selectivity
- Enrollment size
- Carnegie type



# RQ 2. Results

	<b>ICC</b>
Discussions with diverse others	11.7%
Quality of interactions	8.2%
Supportive environments	6.4%
Student faculty interactions	4.8%
Quantitative reasoning	4.0%
Collaborative learning	3.9%
Reflective and integrative learning	3.3%
Learning strategies	2.9%
Higher-order learning	2.5%

## Institutional Context

HL

RI

QR

LS

CL

DD

SF

QI

SE

**Private** (vs. public)

**Locale** (vs. city)

Suburban

Town

Rural

**Selectivity** (vs. comp.)

Less/noncompetitive

Very competitive

Highly competitive

**Enrollment size** (1ks)

**Carnegie type** (vs. Master's)

Research/Doctoral

Bac – A&S

Bac - Other

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Key: +  $p < .05$ , ++  $p < .05$  and  $B > .2$ , +++  $p < .05$  and  $B > .4$

Institutional Context	HL	RI	QR	LS	CL	DD	SF	QI	SE
<b>Private</b> (vs. public)	+					+		--	
<b>Locale</b> (vs. city)									
Suburban									
Town	-					-			
Rural	-							+	
<b>Selectivity</b> (vs. comp.)									
Less/noncompetitive									
Very competitive									-
Highly competitive				-				++	--
<b>Enrollment size</b> (1ks)		-			-		-		-
<b>Carnegie type</b> (vs. Master's)									
Research/Doctoral							-		
Bac – A&S		-							
Bac - Other									

Key: + p<.05, ++ p < .05 and B >.2, +++ p<.05 and B > .4

**Faculty characteristics****HL****RI****QR****LS****CL****DD****SF****QI****SE****Women****Race or ethnicity (vs. White)**

Asian

African American

Hispanic or Latino

Other race specified

**US citizen****Age****Earned doctorate****Number of years taught****Rank/employ status (vs. full)**

Associate

Assistant

FT lecturer

PT lecturer

Key: + p<.001, ++ p < .001 and B >.2, +++ p<.001 and B > .4

Faculty characteristics	HL	RI	QR	LS	CL	DD	SF	QI	SE
Women	+	++	-	+	+	+	+	+	+
<b>Race or ethnicity (vs. White)</b>									
Asian	+		++	++					+++
African American	++	++	++	++	+		++		+++
Hispanic or Latino	+	++	++	++	+++		+++		+++
Other race specified	+			+	+++		+++	-	
US citizen				--					-
Age	+	+					-		+
<b>Earned doctorate</b>									
Number of years taught	--	-	-			-		-	
<b>Rank/employ status (vs. full)</b>									
Associate									
Assistant									
FT lecturer									
PT lecturer							---		

Key: + p<.001, ++ p < .001 and B >.2, +++ p<.001 and B > .4

Selected course context	HL	RI	QR	LS	CL	DD	SF	QI	SE
<b>Disciplinary area (vs. A&amp;H)</b>									
STEM									
Social Sciences									
Professions									
Other discipline									
<b>Course level (vs. LD)</b>									
Upper division									
Other level									
<b>General education course</b>									
<b>Course size (vs. large 40+)</b>									
Small (1 – 20)									
Medium (21-40)									

Note: full model summary of significant effect sizes after controlling for faculty and institution characteristics Key: + p<.001, ++ p < .001 and B >.2, +++ p<.001 and B > .4

Selected course context	HL	RI	QR	LS	CL	DD	SF	QI	SE
<b>Disciplinary area (vs. A&amp;H)</b>									
STEM	---	---	+++		++	--		+	---
Social Sciences			+++						
Professions		-	+++		+			++	
Other discipline			+++				+	+	
<b>Course level (vs. LD)</b>									
Upper division	++	++	++			+	+		
Other level	+	+				+	+		
<b>General education course</b>	+	++	+	+		+			+
<b>Course size (vs. large 40+)</b>									
Small (1 – 20)	+				--				
Medium (21-40)					-		-		

Note: full model summary of significant effect sizes after controlling for faculty and institution characteristics Key: + p<.001, ++ p < .001 and B >.2, +++ p<.001 and B > .4

# DISCUSSION



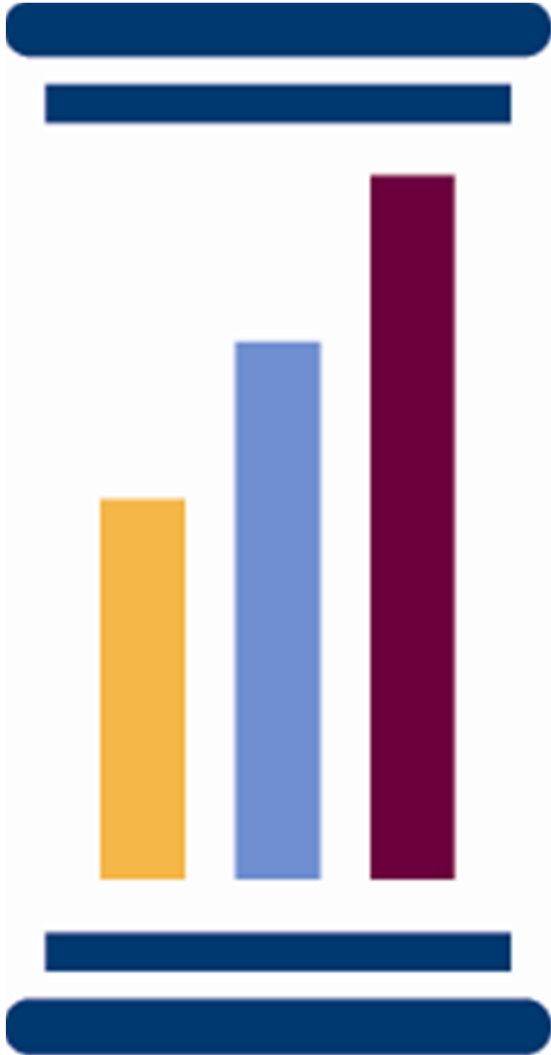


# Discussion

- Faculty still matter
- Faculty promoting higher-order and reflective and integrative learning did not influence students' level of engagement in the same areas
- Faculty perceptions of a supportive campus environment were not related to students' perceptions of a supportive campus environment
- However, on campuses where faculty promoted collaborative learning and discussions with diverse others, students tend to engage in these activities more

# Discussion

- Faculty at liberal arts colleges tend to promote effective educational practices at similar levels as faculty at other institutional types
- Unexplained variability, particularly with faculty promoting discussions with diverse others
- Course context matters



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[fsse.iub.edu](http://fsse.iub.edu)

# References

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Umbach, P. D., & Wawrzynski, M. R. (2004). Faculty do matter: The role of college faculty in student learning and engagement. *Research in Higher Education*, 46(2), 153-184.