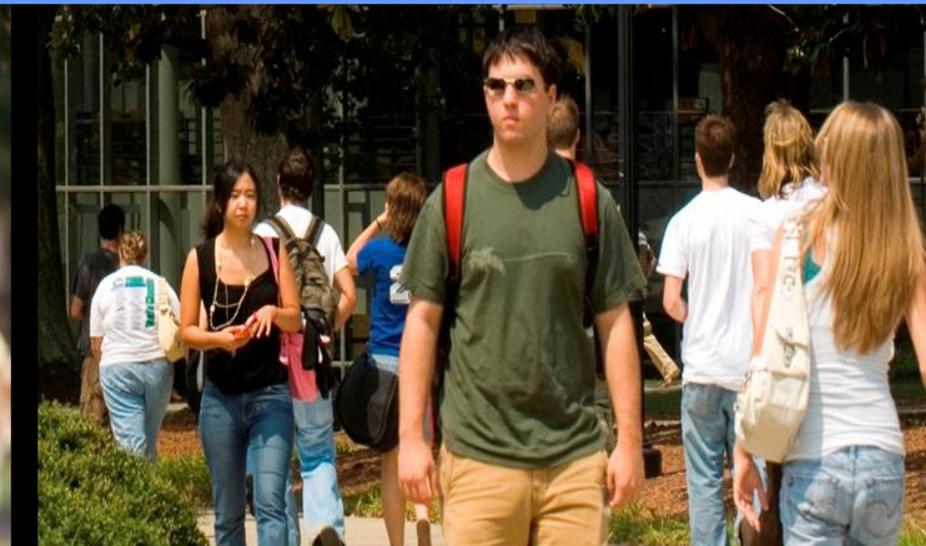


Does College Environment Have the Same Effect on All Students?
Relationship among High School Engagement, College Environment, and First-year
Engagement

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Overview

Today we will cover:

- ❖ A distinction of engagement behaviors:
 - completely externally regulated engagement (CERE)
 - internally regulated engagement (IRE)

- ❖ How consistent are CERE and IRE behaviors between high school and the first year of college?

- ❖ How social factors influence college CERE and IRE behaviors, when controlling behavior consistency?



Introduction

Student engagement

The amount of time and effort students put into their studies and other educationally purposeful activities.

- *Completely externally regulated engagement (CERE)* are those behaviors that are required academic activities.
→ External regulation
- *Internally regulated engagement (IRE)* are those behaviors that are still externally required, but where the student has varying levels of autonomy as to how they engage in that activity.
→ Introjected, identified, or integrated regulation.



Introduction

How much of the level of engagement observed among students at a given institution should be attributed to institutional policies and practices, and how much should be attributed to the characteristics of the students when they enroll?

Student characteristics when they enroll	Institutional policies and practices
<ul style="list-style-type: none">•Gender•SAT/ACT score•High school CERE/IRE level	<ul style="list-style-type: none">•Private/Public•Enrollment size•Average SAT/ACT score•Institution environmental emphasis•On campus quality of relationship



Method – Data Sources

Beginning College Survey of Student Engagement (BCSSE) in summer 2009.
National Survey of Student Engagement (NSSE) in 2010, end of spring semester.

What is BCSSE?

BCSSE collects data about entering college students' high school academic and co-curricular experiences, as well as their expectations for participating in educationally purposeful activities during the first college year.

What is NSSE?

NSSE annually collects information at hundreds of four-year colleges and universities about student participation in programs and activities that institutions provide for their learning and personal development. The results provide an estimate of how undergraduates spend their time and what they gain from attending college

BCSSE and NSSE

BCSSE administration usually takes place prior to start of fall classes and is designed to be paired with a NSSE administration at the end of the first college year, providing an in-depth understanding of first-year student engagement on your campus.



Method – Sample

Category		Number	Percentage
<i>Institutions</i>		78	-
Control	Private	36	46%
	Public	42	54%
Institution type	Doctoral University	13	17%
	Master's college	17	22%
	Masters medium or small	16	20%
	Baccalaureate	12	16%
	Other	20	25%
<i>Students</i>		17222	-
Gender	Female	11686	68%
	Male	5536	32%



Method – Variables

❖ *Internally Regulated Engagement (IRE)*

- *Pre-college IRE* – 9 questions in BCSSE (alpha=0.70)
- *First-year IRE* – 9 questions in NSSE (alpha=0.68)

e.g. About how many hours do you spend in a typical 7-day week preparing for class (studying, reading, writing, doing homework or lab work, analyzing data, rehearsing, and other academic activities)?

❖ *Completely Externally Regulated Engagement (CERE)*

- *Pre-college CERE* – 5 questions in BCSSE (alpha=0.63)
- *First-year IRE* – 9 questions in NSSE (alpha=0.59)

e.g. During the current school year, about how often have you made a class presentation?



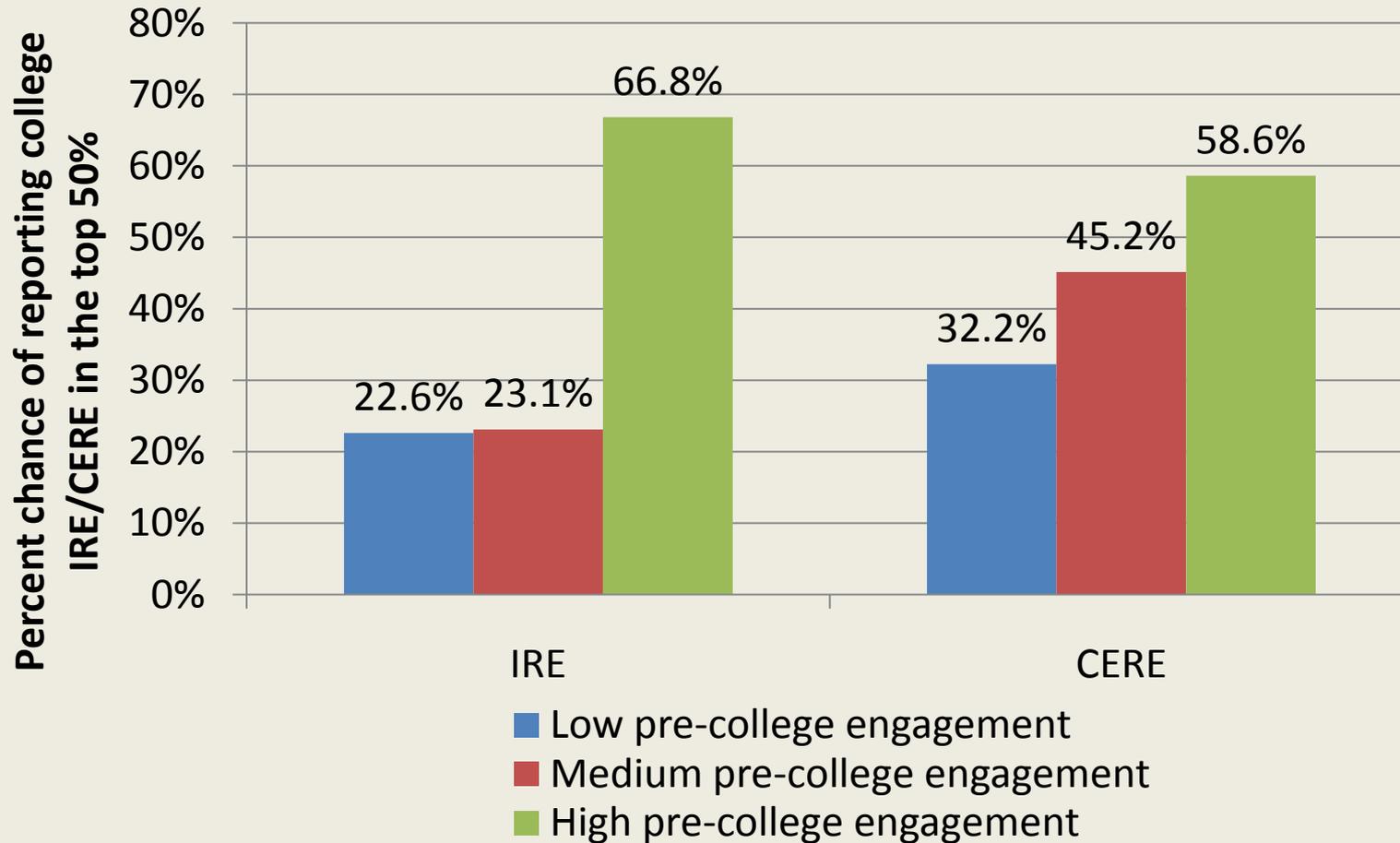
Method – Variables(2)

- ❖ *College environment* – 7 NSSE environmental items (alpha=0.81)
e.g. To what extent does your institution emphasize spending significant amounts of time studying and on academic work?
- ❖ *Quality of Relationship* – 3 NSSE relationship items (alpha=0.71)
e.g. Mark the box that best represents the quality of your relationships with people at your institution.
 - a. Relationship with other students
 - b. Relationship with faculty members
 - c. Relationship with administrative personnel and offices
- ❖ *Student background information*
 - Gender
 - SAT/ACT score
- ❖ *Institution information*
 - Private/Public
 - Enrollment size
 - Average SAT/ACT score



Results

How consistent are the IRE and CERE behaviors?



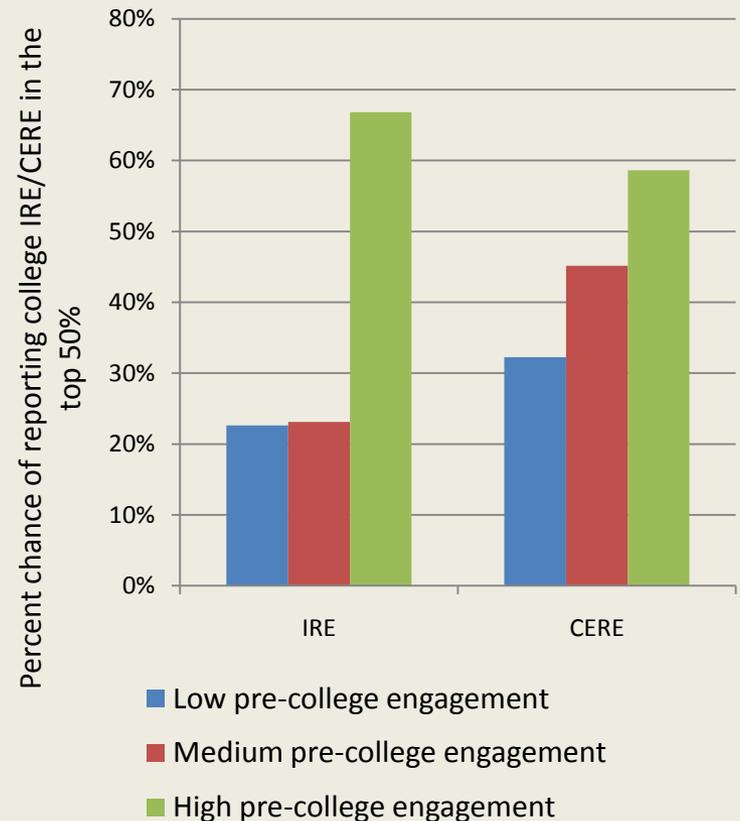


Results

How consistent are the IRE and CERE behaviors?

Overall, both IRE and CERE behaviors show some consistency between high school and college.

- ❖ Higher pre-college IRE/CERE level leads to higher chance of being in the top 50% of college IRE/CERE.
- ❖ Students with high level of pre-college IRE are very likely to be highly internally engaged in college. Students with medium or low pre-college IRE have the same chance to be highly engaged in college.
- ❖ Even students of low IRE/CERE at high school have considerable chance of highly engaged.



Results – Predicting college IRE

Independent Variables	Base Model	Step 1 Inst Chars	Step 2 Student Chars & pre- college engagement	Step 3 Environment and quality of relationship
Intercept				
Intercept 2	.05	-0.12**	-0.12***	-0.08**
Private		0.23***	0.17**	0.10*
Size(FY enrollment)		-0.05	-0.04	-0.03
SAT/ACT Average		-0.02	-0.02	-0.04*
Gender(Male)			0.07***	0.08***
SAT/ACT score			-0.04***	-0.03***
Pre-college IRE			0.49***	0.44***
Environment				0.23***
Quality of relationship				0.16***
<i>Variance Component</i>				
Total Variance	1	0.98	0.74	0.62
Variance within institutions	0.96***	0.96***	0.72***	0.61**
Variance between institutions	0.05	0.03	0.02	0.01
Variance between explained		40.6%	55.4%	76.8%
Variance within explained		0.0%	24.5%	35.8%



Results – Predicting college IRE

The above results indicate

- ❖ The final model explained 33.8% variance at the student level and 72% variance at the institution level.
- ❖ Behavior consistency: the effect of pre-college IRE drops slightly but still is the most significant factor after adding additional social variables.
- ❖ Institution environment has the second largest positive effect, followed by quality of relationship. The cumulative effect of students' college experience is of the same importance as pre-college behavior.
- ❖ At the institution level, private schools were more advantageous than their peers in their students' IRE level.



Results – Predicting college CERE

Independent Variables	Base Model	Step 1 Inst Chars	Step 2 Student Chars & pre- college engagement	Step 3 Environment and quality of relationship
Intercept				
Intercept 2	0.05	-0.20***	-0.19***	-0.16**
Private		0.39***	0.37***	0.30***
Size(FY enrollment)		0.01	0.01	0.01
SAT/ACT Average		-0.08**	-0.04	-0.05*
Gender(Male)			-0.02	-0.0001
SAT/ACT score			-0.09***	-0.08***
Pre-college CERE			0.27***	0.23***
Environment				0.23***
Quality of relationship				0.09***
<i>Variance Component</i>				
Total Variance	1	0.96	0.86	0.77
Variance within institutions	0.92***	0.92***	0.82***	0.73***
Variance between institutions	0.08	0.05	0.04	0.04
Variance between explained		40.5%	44.0%	46.4%
Variance within explained		0.0%	10.5%	20.1%



Results – Predicting college IRE

The above results indicate

- ❖ All the variables explained 20.1% variance of college CERE at student level and 46.4% of the variance at the institution level.
- ❖ The most influential factor on first-year CERE is the school type (PRIVATE vs. Public). Students in private institutions have higher CERE level than students in public institutions.
- ❖ Pre-college CERE is the second significant factor.
- ❖ The cumulative effect of students' college experience (perceived environment and quality of relationship) is even more important than school type and pre-college CERE.



Discussion

Overall findings

- ❖ Both CERE and IRE behaviors are consistent between high school and first year of college. Internally regulated engagement is more stable than completely externally regulated engagement.
- ❖ Campus environment has similar (and important) impact on both behavior types.
- ❖ Quality of relationship is more predictive of internally regulated engagement than completely regulated engagement.
- ❖ Being enrolled at a private institution has stronger relationship for external engagement than for internal engagement.
- ❖ In our model, IRE behaviors is more predictable than CERE behaviors.



Discussion

Implications

- ❖ Despite behavior consistency, institutions have the opportunity to shape their students behaviors in many ways.
- ❖ Our results demonstrate the important inhibitory or facilitatory role school environment plays in influencing engagement behavior.
- ❖ To facilitate internal engagement (studying, working with groups outside of class, etc), institutions should focus on improving the quality of relationships on campus.

Future research

- ❖ Find other factors that may influence first year CERE behaviors.
- ❖ Explain institution type's different effects on college IRE and CERE behaviors.

Any discussion, questions, or comments?





Thank you!

Updated NSSE to Launch in 2013 nsse.iub.edu/nsse2013

NSSE 2.0: Item testing and pilots 2011-2012

- ✓ Refinements of existing measures, including benchmarks
- ✓ New measures
- ✓ Improved clarity and applicability of survey language, including terms related to online instruction
- ✓ Updated terminology, primarily related to technology

Feel free to contact us with any questions.

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