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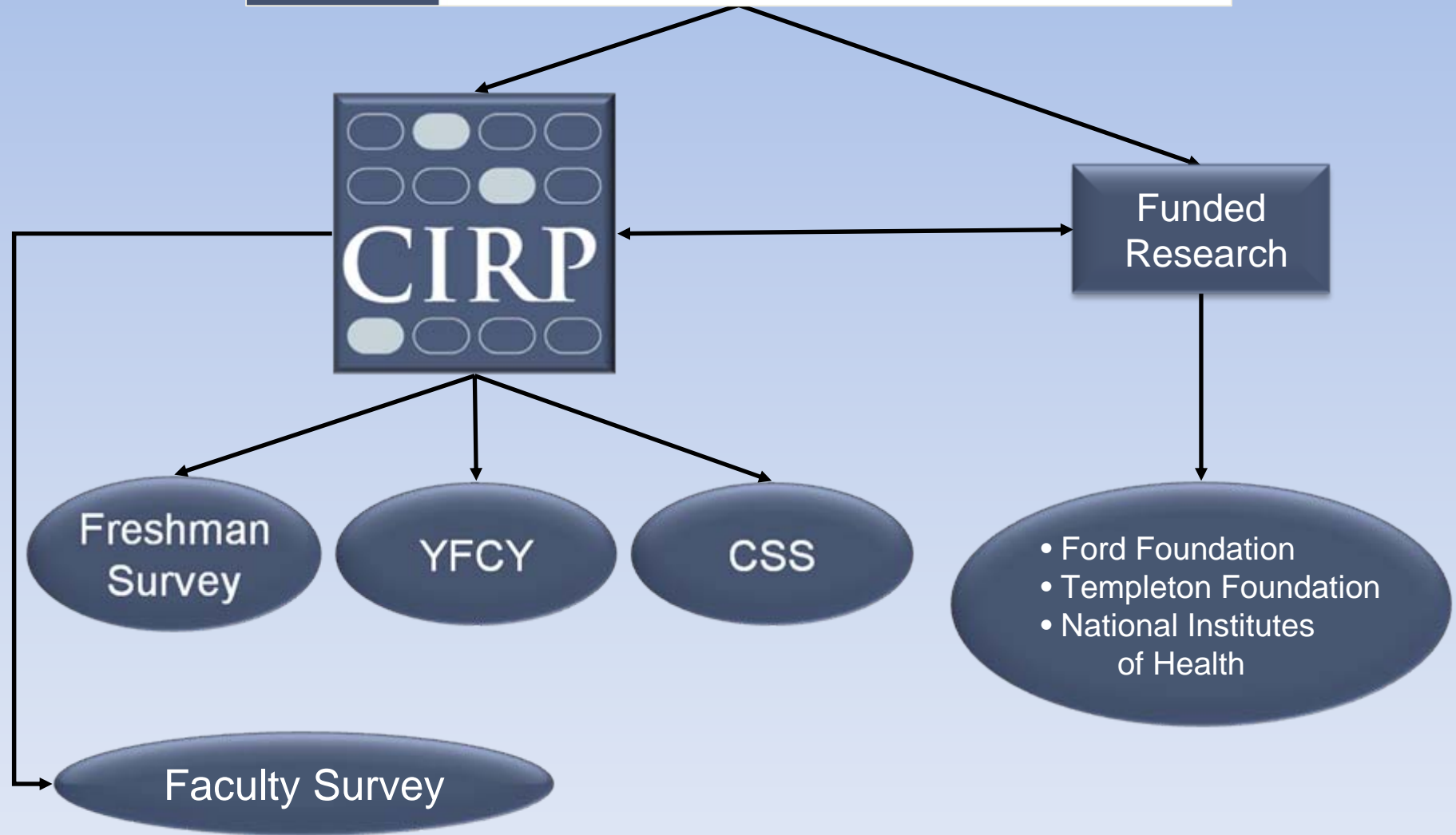
Creating Engaged Learning in the First Year of College

Linda DeAngelo, CIRP Assistant Director for Research

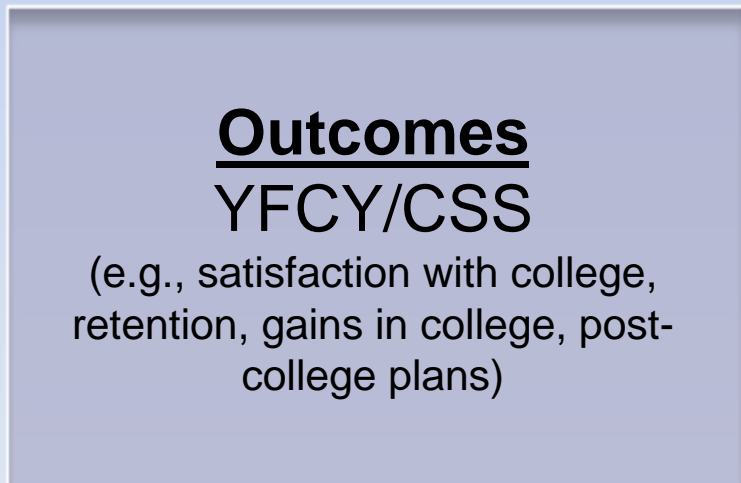
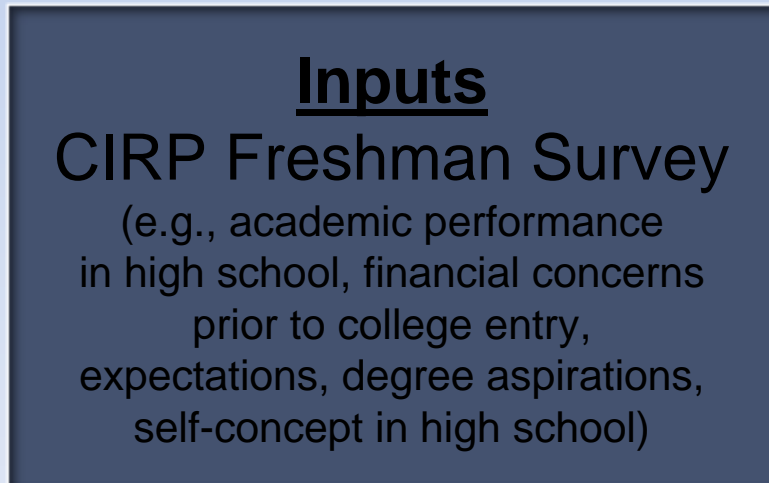
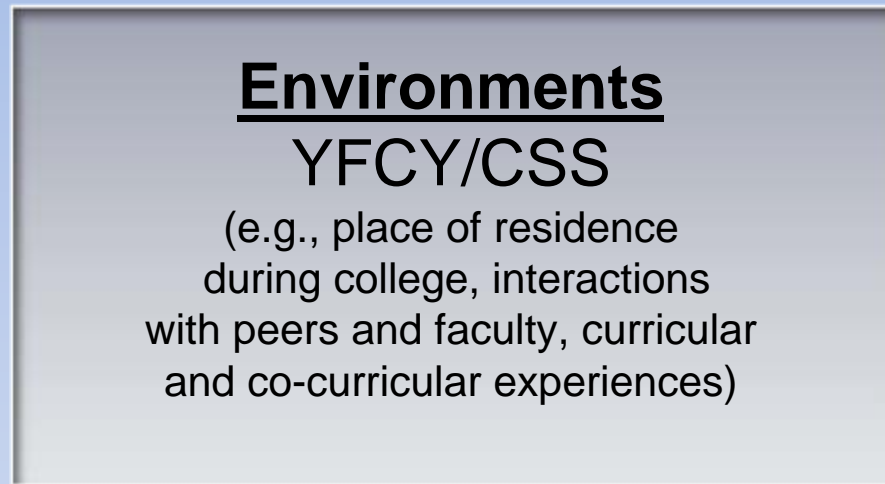
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Astin's I-E-O Model



Purpose of the Study

- In this study I examine how the learning experiences students have in the first year of college affect the development of the behaviors and traits needed for academic success
- Past studies have most often looked at the effect of different college learning experiences on college GPA
- Studies have yet to examine how different learning experiences affect the usage and development of the very skills and behaviors students need to succeed over the course of college and as lifelong learners

Habits of Mind and Academic Disengagement

- Habits of mind are learning behaviors that college faculty have identified as essential for success in college coursework (Conley, 2005)
- Academic disengagement measures the extent to which students engage in behaviors that are inconsistent with academic success
- One consideration – do learning experiences have different (opposite) effects on habits of mind and academic disengagement?



Educationally Purposeful Activities

- AAC&U (2007) publication “College Learning for a New Global Century” outlined 10 promising teaching and learning practices
 - First-year seminars and experiences; common intellectual experiences; learning communities; writing intensive courses; collaborative assignments and projects; undergraduate research/ diversity/global learning; service and community based learning; internships; and capstone courses and projects
- Service learning, learning communities, and first-year seminars have been connected to learning gains in the first year



Educationally Purposeful Activities Outside of the Classroom

- Outside of the classroom experiences in study that fall in other AAC&U promising practice areas include:
 - Discussing course with other students outside of class; studying with other students
 - Having meaningful and honest discussions about race/ethnic relations outside of class with students from a racial/ethnic group other than your own
 - Having intellectual discussions outside of class with students from a racial/ethnic group other than your own

Data Source and Sample

- Longitudinal data on college students gathered from two CIRP surveys
 - 2007 The Freshman Survey (TFS)
 - 2008 Your First College Year (YFCY) survey
- Over 26,000 students at 487 institutions completed both surveys
- This dataset has been weighted to represent the national population of first-year students who are retained through the end of year one

Weighting of YFCY Dataset

- Weights were based on data from IPEDS on fall to fall first-time, full-time retention rates at 4-year institutions
- The weighting technique adjusts the sample upwards to the population, taking into account individual as well as institutional response bias (Babbie, 2001; Dey, 1997)



Research Design

- Variables
 - Demographic characteristics
 - Institutional characteristics
 - Educationally purposeful activities in the classroom
 - Educationally purposeful activities outside of the classroom
 - Academic integration during the first year of college
- Analysis
 - Blocked linear regression with forced entry of variables

Building the CIRP Constructs with IRT

- IRT provided an “optimal scaling” of survey data, and makes measurement of important concepts more accurate
 - More accurate scoring leads to more accurate inferences about programs and policies
- IRT scales exist independently of items, the meaning and scale of IRT measures exist before items are selected, many different items can tap into a trait
 - Removing or adding an item does not change the scale or meaning, changes only precision of measurement

Building the CIRP Constructs with IRT, Cont

- IRT scales can be more flexibly interpreted, scores can have meaning in comparison to items, fixed standards, and or norms
 - Item properties and scale properties are explicitly related in IRT – a person's score can be interpreted in terms of item responses
 - i.e. A score of 50 indicates that respondents will most likely answer question X with Y response
 - Allows more kinds of interpretations in addition to norms

CIRP Constructs

TFS	YFCY	CSS
Habits of Mind	Habits of Mind	Habits of Mind (2010)
Academic Disengagement (2010)	Academic Disengagement	Academic Disengagement
	Faculty Interaction	Faculty Interaction
	Satisfaction with Courses (2010)	Satisfaction with Courses
	Overall Satisfaction	Overall Satisfaction
	Sense of Belonging (2010)	Sense of Belonging
Academic Self-Concept	Academic Self-Concept (2010)	Academic Self-Concept (2010)
Social Self-Concept	Social Self-Concept (2010)	Social Self-Concept (2010)
Pluralistic Orientation	Pluralistic Orientation	Pluralistic Orientation (2010)
	Positive Cross-Racial Interaction	Positive Cross-Racial Interaction
	Negative Cross-Racial Interaction	Negative Cross-Racial Interaction
Social Agency	Social Agency	Social Agency
	Civic Awareness	Civic Awareness
College Reputation Orientation		
Likelihood of College Involvement		

Habits of Mind – most likely response pattern

	Very Low	Average	High
Ask questions in class	Occasionally	Occasionally	Frequently
Support your opinions with a logical argument	Occasionally	Frequently	Frequently
Seek solutions to problems and explain them to others	Occasionally	Occasionally	Frequently
Revise your papers to improve your writing	Occasionally	Frequently	Frequently
Evaluate the quality or reliability of information you received	Occasionally	Occasionally	Frequently
Take a risk because you feel you have more to gain	Occasionally	Occasionally	Frequently
Seek alternative solutions to a problem	Occasionally	Occasionally	Frequently
Look up scientific research articles and resources	Occasionally	Occasionally	Occasionally
Explore topics on your own, even though it was not required for class	Never	Occasionally	Frequently
Accept mistakes as part of the learning process	Never	Occasionally	Frequently
Seek feedback on your academic work	Occasionally	Occasionally	Frequently

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Academic Disengagement most likely response pattern

	Very Low	Average	High
Came late to class	Not at all	Occasionally	Occasionally
Fell asleep in class	Not at all	Not at all	Occasionally
Turned in course assignment(s) late	Not at all	Not at all	Occasionally
Skipped class	Not at all	Occasionally	Occasionally
Turned in course assignments that did not reflect your best work	Not at all	Occasionally	Occasionally

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Ease of Academic Adjustment

most likely response pattern

	Very Low	Average	High
Understand what your professors expect of you academically	Somewhat Difficult	Somewhat Easy	Somewhat Easy
Develop effective study skills	Very Difficult	Somewhat Easy	Somewhat Easy
Adjust to the academic demands of college	Very Difficult	Somewhat Easy	Very Easy
Manage your time effectively	Very Difficult	Somewhat Easy	Somewhat Easy

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Student/Faculty Interaction most likely response pattern

	Very Low	Average	High
Communicated regularly with professors	No	Yes	Yes
Asked professor for advice after class	Never	Occasionally	Occasionally
Received advice/guidance about your educational program from your professor	Never	Occasionally	Occasionally
Meet with faculty during office hours	Yes	Yes	Yes
Satisfaction amount of faculty contact	Dissatisfied	Neutral	Satisfied
Meet with faculty outside of class or office hours	Never	1-2x/term	1-2x/term

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Regression Summary: Block 1

	Habits of Mind $R^2 = .436$	Academic Disengagement $R^2 = .146$
<i>Block 1: Background and predispositions</i>		
Gender: Female	-	-
Native American	+	-
African American	-	+
Latino/a		+
Multi-Racial		+
Other Race		
SAT score		++
TFS habits of mind score	++	+

Regression Summary: Blocks 2 and 3

	Habits of Mind $R^2 = .436$	Academic Disengagement $R^2 = .146$
<i>Block 2: Institutional Type</i>		
Medium selectivity	+	+
High selectivity	+	+
Institutional control (private)	-	-
Institutional type (4-year college)		
<i>Block 3: Educationally purposeful activities – classroom</i>		
Service learning	+	+
Learning community		+
First-year seminar for student success		

Regression Summary: Blocks 4 and 5

	Habits of Mind $R^2 = .436$	Academic Disengagement $R^2 = .146$
<i>Block 4: Educationally purposeful activities – outside of class</i>		
Discussed course content with students	++	+
Studied with other students	+	-
Had meaningful and honest discussions about race/ethnic relations outside of class	+	+
Had intellectual discussions outside of class	+	+
<i>Block 5: Academic Integration</i>		
Ease of academic adjustment	++	---
Faculty interaction	++	-
Current GPA	+	---

Regression Summary: Engaged Learning Consistencies

- Background characteristics
 - African American students are less likely to have strong academic habits of mind and more likely to have academic disengagement behaviors (*Beta weights small*)
- Educationally purposeful activities *outside the class*
 - Students who study with other students have stronger academic habits of mind and fewer academic disengagement behaviors (*Beta weights small*)

Regression Summary: Engaged Learning Consistencies

- Academic integration
 - Students with easier academic adjustments have stronger academic habits of mind and fewer academic disengagement behaviors (*habits of mind medium Beta weight, academic disengagement large Beta weight*)
 - Students who interact with faculty outside of the classroom have stronger habits of mind and fewer academic disengagement behaviors (*habits of mind large Beta weight, academic disengagement small Beta weight*)
 - Students with higher 1st year GPAs have stronger habits of mind and fewer academic disengagement behaviors (*habits of mind small Beta weight, academic disengagement medium Beta weight*)

Regression Summary:

Engaged Learning Inconsistencies

- Background Characteristics
 - Female students are less likely to have strong habits of mind, and less likely to have academic disengagement behaviors
(habits of mind small Beta weight, academic disengagement medium Beta weight)
- Educationally purposeful activities *inside the classroom*
 - Students who participate in service learning have stronger habits of mind and more academic disengagement behaviors
(Beta weights small)

Regression Summary:

Engaged Learning Inconsistencies

- Educationally purposeful activities *outside the classroom*
 - Students who discuss course content outside of class with other students have stronger habits of mind and more academic disengagement behaviors (*habits of mind medium Beta weight, academic disengagement small Beta weight*)
 - Students who have meaningful and honest discussions about race/ethnicity with students of other races/ethnicities have stronger habits of mind and more academic disengagement behaviors (*Beta weights small*)
 - Students who have intellectual discussions outside of class with students of other races/ethnicities have stronger habits of mind and more academic disengagement behaviors (*Beta weights small*)

Conclusions

- Students who are well integrated into the college academic environment are developing the skills and behaviors they need to succeed
- Women and underrepresented racial minority students, especially African American students, are not as successful in the first year of college in developing the skills and behaviors they need to succeed
- Building skills for success and life long learning is complicated, what contributes building strong habits of mind can also contribute to academic disengagement

Implications

- We need to do more intentional in developing knowledge seeking (academic habits of mind) among all students, but especially women and African American students
- We also need to be more intentional in developing successful academic behaviors (academic engagement instead of disengagement) among all students, but especially underrepresented racial minority students and high achieving students who are likely easily bored
- Efforts to increase both the amount and quality of faculty interaction and to assist student to successfully adjust to college will contribute to knowledge seeking and successful academic behaviors

Questions/Discussion

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