

# A Mixed Methods Approach to Assessing Student Engagement

Preliminary Findings from the New England  
Consortium on Assessment and Student Learning

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# Outline of the Presentation

- Background on the New England Consortium on Assessment and Student Learning
- Using survey data to measure student engagement
  - A discrete typology of student engagement
  - Scales of student engagement
- Using interview data to measure student engagement
- Comparing methodological approaches: Reading interviews against the survey measures
- The benefits and challenges of mixed methods assessment

# New England Consortium on Assessment and Student Learning

([www.wellesley.edu/NECASL](http://www.wellesley.edu/NECASL))

# New England Consortium on Assessment and Student Learning

- Participating institutions
  - Bates College
  - Bowdoin College
  - Colby College
  - Middlebury College
  - Smith College
  - Trinity College
  - Wellesley College
  - New England Association of Schools and Colleges
- Funding sources
  - Andrew W. Mellon Foundation
  - Teagle Foundation
  - Spencer Foundation

# New England Consortium on Assessment and Student Learning

## General goals of the project

- Explore student learning in relation to institutional policies and practices
- Better understand students' transition from high school to college
- Better understand how students make important academic and social decisions
- Involve faculty and students more directly in assessment
- Share institutional research findings

# New England Consortium on Assessment and Student Learning

- Quantitative collaborations
  - Comparative CIRP analysis
  - **Sophomore survey administration and analysis**
  - Planned junior and senior surveys
- Qualitative collaborations
  - Pilot studies (e.g., focus groups, capstone experiences, course transcript analyses)
  - **Panel study of the Class of 2010**

# Sophomore Survey

- Administered in the fall of 2007
- 56% response rate (Lo=43%, Hi=71%)
- N on which this analysis is based = 2048
- Retrospective information about the first year
- Academic, social and personal experiences

# Panel Study of the Class of 2010

- 36 students at each college ( $N = 252$ )
- Race-stratified random sample (African American, Asian American, Latino/a, International, and domestic white students)
- Equal numbers of women and men at coed schools
- Three interviews in first year, then two each year
- Student interviewers at all but one college
- Interviews in fall of 2007 from four colleges ( $n=85$ )

# Using Survey Data to Measure Student Engagement

A Typology of Student Engagement

# Three Dimensions of Student Experience

## Academic engagement

How often this semester did you feel excited by a class?

(not at all, occasionally, often, very often)

How often this semester did you discuss course contents outside of class?

(not at all, occasionally, often, very often)

## Social engagement

I have developed close friendships with students.

(strongly disagree, disagree, agree, strongly agree)

Have you found people here with whom you can discuss personal issues?

(never, rarely, sometimes, usually)

## Coping skills

I have managed my time successfully.

(strongly disagree, disagree, agree, strongly agree)

I have successfully managed stress.

(strongly disagree, disagree, agree, strongly agree)

# Student Typology of Engagement

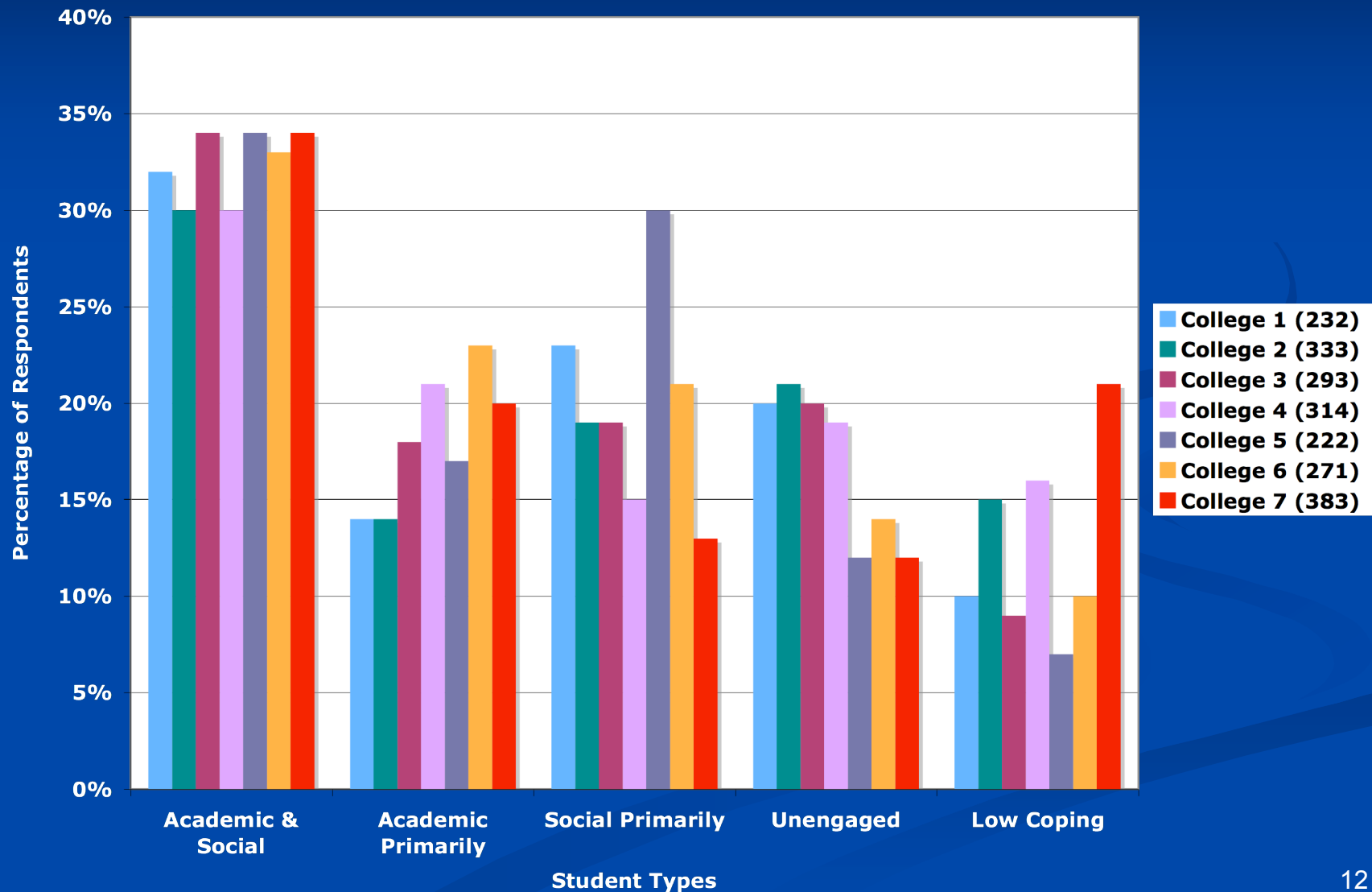
## Cross-classification of academic and social engagement

		Academic Engagement		
		low	moderate	high
Social Engagement	low	<i>U</i>	<i>U</i>	<i>A</i>
	moderate	<i>U</i>	<i>A &amp; S</i>	<i>A</i>
	high	<i>S</i>	<i>S</i>	<i>A &amp; S</i>

## Low copers removed from engagement typology

Coping Skills				
Low	Moderate or High			
<b><i>Low Coping</i></b> (13%)			Social Engagement	
			Low	High
	Academic Engagement	Low	<b><i>Unengaged</i></b> (17%)	<b><i>Primarily Social</i></b> (19%)
		High	<b><i>Primarily Academic</i></b> (18%)	<b><i>Academic and Social</i></b> (32%)

# Distribution of Types in the Sophomore Survey by College



## Unengaged and Low Coping Student are far less likely to:

- Understand faculty expectations
- Develop effective study skills
- Contribute to class discussion
- Study with other students
- Assess their writing as “good” or “excellent”
- Be comfortable with the college’s social climate
- Balance academic and extracurricular activities

# Sophomore Survey – Panel Study Comparisons

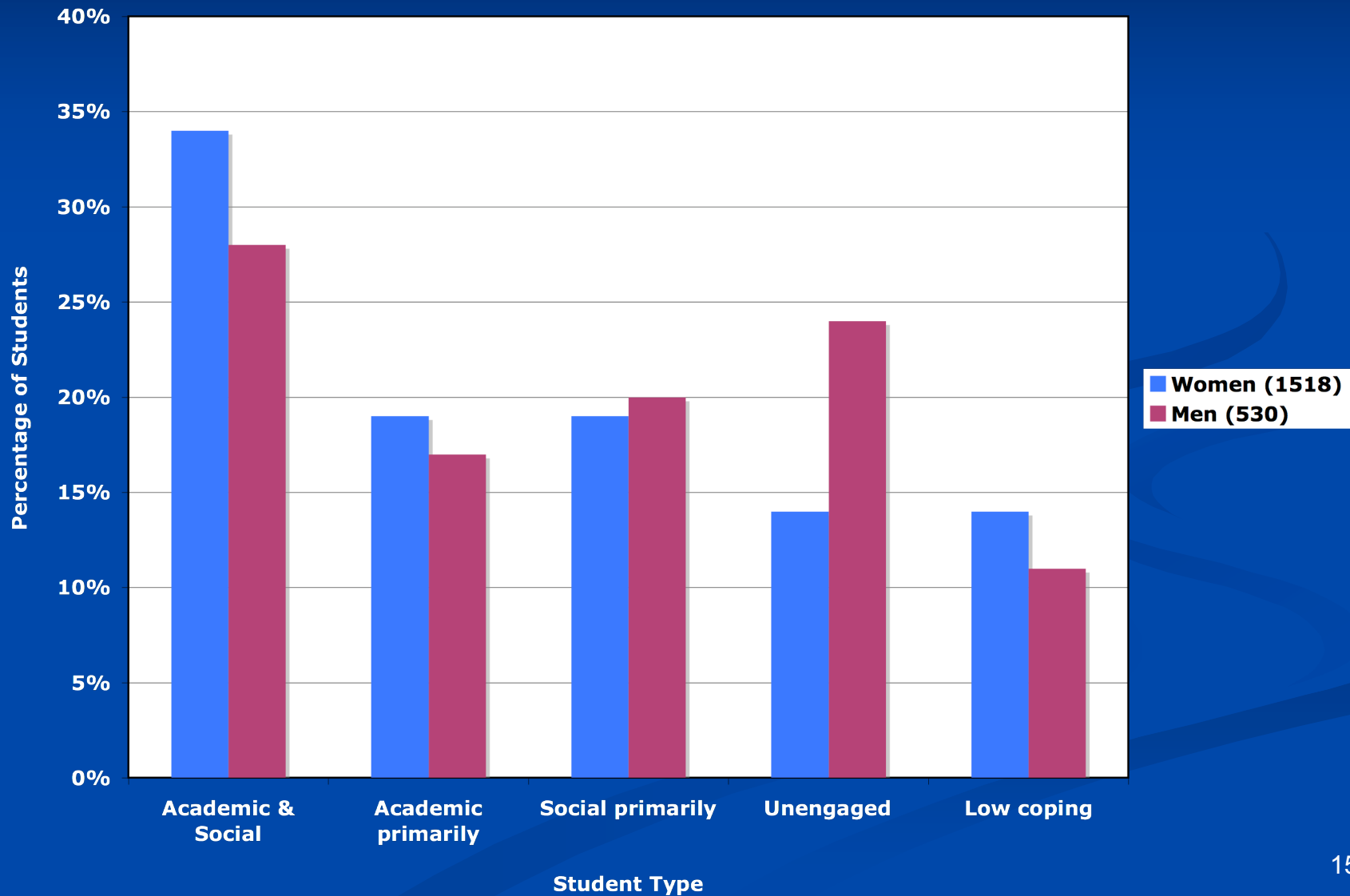
## ■ Percentage “unengaged”

- In sophomore survey (348/2048) 17%
- In panel sample (28/167) 17%

## ■ Percentage “low coping”

- In sophomore survey (266/2048) 13%
- In panel sample (20/167) 12%

# Distribution of Types in the Sophomore Survey by Gender

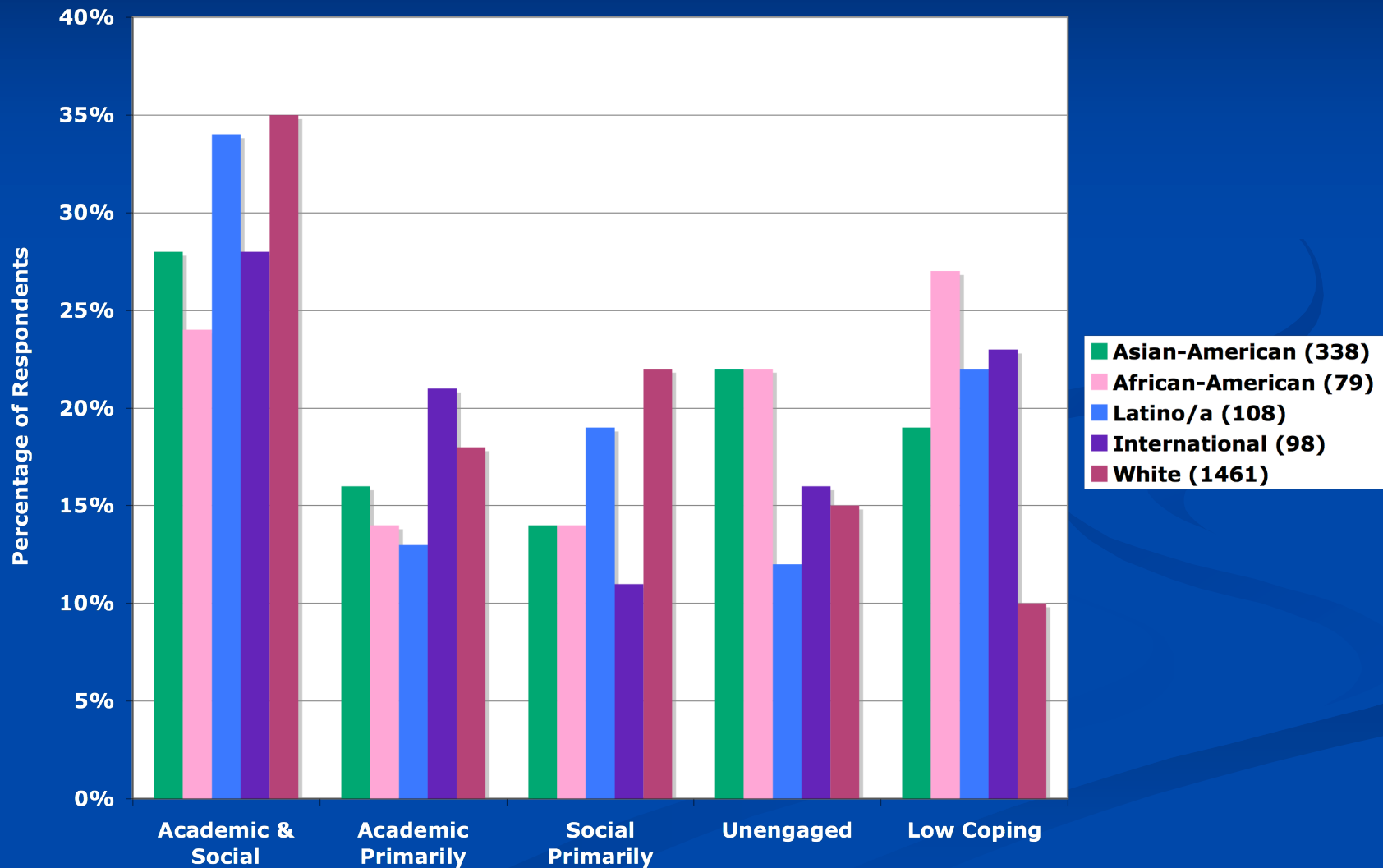


# Sophomore Survey – Panel Study Comparisons by Gender

Percentage either “unengaged” or “low coping”  
(sophomore survey vs panel sample)

- Women (28% vs 27%)
- Men (24% vs 34%)

# Distribution of Types in the Sophomore Survey by Race/Ethnicity



Students marked all that applied. Therefore, students who identified with more than one racial/ethnic identity appear more than once in the graph.

# Sophomore Survey – Panel Study Comparisons by Race/Ethnicity

Percentage either “unengaged” or “low coping”  
(sophomore survey vs panel sample)

- Asian American (41% vs 25%)
- African American (49% vs 50%)
- Latino/a (34% vs 25%)
- International (39% vs 36%)
- White (25% vs 25%)

# Using Survey Data to Measure Student Engagement

Scales of Student Engagement

# Engagement and Coping Scales

- Academic Engagement (Lo=3, Hi=8)
  - Mean=5.99, SD=1.29
- Social Engagement (Lo=4, Hi=8)
  - Mean=6.95, SD=1.02
- Academic and Social Engagement (Lo=9, Hi=16)
  - Mean=12.94, SD=1.71
- Coping (Lo=3, Hi=8)
  - Mean=5.58, SD=1.16

# Sophomore Survey Engagement Scales Comparisons by Gender

- Women are more academically engaged than men ( $p < .001$ )
  - No difference between women at coed and single sex
- Women are more socially engaged than men ( $p < .001$ )
  - More so for women at coed schools ( $p < .001$ )
- Men do a better job coping than do women ( $p < .01$ )
  - No difference between women and men at coed schools
  - Women at coed colleges cope better than women at single sex colleges ( $p < .01$ )

# Panel Study Engagement Scales Comparisons by Gender

- Women are more academically engaged than men ( $p < .05$ )
  - No difference between women at coed and single sex
- No difference in social engagement between women and men
  - But at coed schools, women are more socially engaged ( $p < .05$ )
- No difference in coping between women and men

# Sophomore Survey Engagement Scales Comparisons by Race/Ethnicity

- White and international students are more academically engaged than Asian-American, African-American or Latino/a students ( $p < .001$ )
- White students are more socially engaged than international students; both groups are more socially engaged than Asian-American, African-American or Latino/a students ( $p < .001$ )
- White students have higher coping scores than international students; both groups have higher scores than Asian-American, African-American or Latino/a students ( $p < .001$ )

## Panel Study Engagement Scales Comparisons by Race/Ethnicity

- Only marginally significant differences between groups ( $p=.053$ ) between groups in terms of academic engagement
- No significant difference between groups in terms of social engagement
- White students have significantly higher coping scores than African-American students ( $p<.001$ )

# Engagement Scales and GPA

- Academic engagement is positively correlated with GPA
  - Fall 2007 only ( $r=.326$ ,  $p<.01$ )
  - Sophomore cumulative ( $r=.279$ ,  $p<.01$ )
- Coping is positively correlated with GPA
  - Fall 2007 only ( $r=.320$ ,  $p<.01$ )
  - Sophomore cumulative ( $r=.342$ ,  $p<.001$ )
- Taken together, academic engagement and coping explain a good deal of variation in GPA
  - Fall 2007 only ( $R^2=.175$ ,  $p<.001$ )
  - Sophomore cumulative ( $R^2=.165$ ,  $p<.001$ )
- Social engagement is not significantly correlated with GPA

# Using Interviews to Measure Student Engagement

# Panel Study of the Class of 2010

- Interviews attempt to capture immediacy of experience
- **Academic experiences:** best/worst courses, choice of major, study habits, interactions with faculty, self-assessment of knowledge and skills
- **Social experiences:** interactions with friends, residential life, extracurricular activities, social life
- **“Personal” experiences:** managing time and life, being away from home, balancing competing demands
- **Aspirations, expectations, and self-reflection:** definitions of success, perceptions of change, hopes and fears

# Academic Engagement

- Courses (“interesting,” “like”/“love” them)
- Academic disciplines/subjects (“interesting,” “like”/“love” them, “passionate”)
- Course selection (more deliberate, focused on major)
- Grades important (b/c of interest in subject or effort devoted to class)
- Faculty (“interesting,” “like”/“love” them, “challenging”)
- Faculty interaction outside of class

# Academically Engaged Student #1

**So what is your best class this semester for you?**

“Best in terms of enjoyment, or how I'm doing?”

**Both.**

“Enjoyment I'd say, I don't know, it's kind of hard. I feel I guess my gov class and my education class, just because some of the discussions we've had have been really interesting, and *I usually don't talk a lot in class but even I've engaged a lot in conversation. But I feel my music class is going to get really interesting because right now we're just getting down the fundamentals but our next assignment is write an invention in the style of Bach. It's going to be really hard but it's going to be really fun too.* And in terms of the best, I don't really have that many, we've had some assignments but they haven't really been returned yet.”

**African American Male**

# Academically Engaged Student #2

## What's the course you enjoy the most?

*“I would say, I can't really pick between education, economics and math. But if I had to choose, I'd pick the education one because I get to spend three hours a week in a kindergarten class and it's just really great. And the class itself is great, and there's a ton of stuff I'm learning. And it's really difficult, I mean Economics of the Life Cycle is difficult, but not very. We have a lot of reading and stuff. Math is difficult because we have problem sets and they're tough. But education you just really have to apply and you have to think in very different ways, because there's so many different perspectives on one issue, and what's the right and what's the wrong. There is no right/wrong. There's so many, it's very eye opening I guess. It just shows you different perspectives, and it's just learning a lot and applying myself a lot.”*

**Asian American Male**

# Academically Engaged Student #3

## **Speaking about her major:**

“I love chemistry. If you asked me at any minute of a day I could speak about chemistry for hours. So I think, I think chemistry it just helps you to look at the world differently and it’s not because of the things you are, the specific chemistry things you are learning but because the way you’re learning to solve problems. And I think that really changes your views and helps you to look at situations and real life problems differently. And I think chemistry comprises everything math, philosophy, logic, it’s beautiful, it just.”

**International Female**

# Social Engagement

- Friendship networks
  - Group of close friends
  - Choosing friends as roommates
  - Size of network
  - Continuing to make new friends
  - Tied to participation in extracurricular activities
- Activities with friends (salience and frequency)
- Maintaining contact with friends when away from school

# Socially Engaged Student #1

## **On how and where he's met new friends:**

“Some through class, some through Frisbee team. I try to meet people as much as I can. I try to take every opportunity to introduce myself to that person in the elevator where I have about fifteen seconds of just you and that person, whoever it is. And that’s been useful. Just introducing myself to people at the most random of times has helped me to meet some really cool people.”

**African American Male**

# Socially Engaged Student #2

**So did you stay in contact – I was going to say touch and contact at the same time – but did you stay in contact with college friends over the summer?**

“They would never forgive me if I didn’t. These core seven girls that I’m always with, we actually call ourselves the Crazy Eight, and we would have weekly phone conference calls just to check up.”

**African American Female**

# Socially Engaged Student #3

## What's it like being back on campus as a sophomore?

*“It’s actually wonderful. This year I’m living in [name of dorm] which is one of the social houses on campus, and I actually got really, really lucky in that basically all of my friends blocked together. And so we, and we ended up all getting into [name of dorm], so it’s basically my closest friends living in a house. And it’s nice also because instead of having a roommate we actually have singles within the house. So you have your own room and you’re next to your friends, whereas last year there were three people living in a room for my situation. So I have a lot more space and it’s nice kind of having my own room but also having other people around me all the time. So it’s been very good so far.”*

**Latina Female**

# Coping

- Reports of being “stressed,” “overwhelmed,” “short on time”
- Lack of success in dealing with stress or time management
- No evidence of plan to deal with stress or time management
- Difficulty balancing academics and extra-curricular activities

# Low Coping Student #1

**Now as a sophomore,** “I don’t notice anything about [name of College] anymore. I could be anywhere. I could be like in a hole with a tutor basically. Like I just do my work.”

**White Female**

# Low Coping Student #2

## **On choosing a major and the stress it's causing her:**

“Like I have no idea about the major thing. It's like I'm trying not to let it stress me out because you know, even though it's coming up really quickly, it's still kind of like far away and so like I need to like put things in perspective and stop stressing so much. Well I try not to stress myself out. Like that's my goal. Like sometimes I get like really intense and stressed. But for the most part I try not to because that, that actually makes you do worse.”

**African American Female**

# Low Coping Student #3

## On whether she's found a good balance:

*“I would like to answer yes but I’m going to say no, just because it’s so hard and no matter how many weekends I stay in an like furiously try to study for organic chemistry, it’s really hard once the week starts to make sure that I go to my club meetings as well as House Council and do my homework. It’s really hard. Yeah. I think it’s mostly because my afternoons are taken so I don’t have that time to sit down and do my homework because I usually get out around 4:00 and then I’m going to like relax for an hour before dinner and then I have to go to a meeting so it’s really hard to fit in time to balance academics. And when I do there’s, it’s not a very focused study of it. It’s more of like oh my god. This is due and it has to be done.”*

**African American Female**

# Comparing Methodological Approaches

Reading Interviews Against  
the Survey Measures

## Survey Typology Code by Interview Reader Code Cross-tabulation

			Interview Reader Code					
			Low Coping	Unengaged	Primarily Social	Primarily Academic	Academic and Social	Total
<b>Survey Typology Code</b>	Low Coping	Count	4	2	1	2	2	11
		Expected Count	.8	.9	.9	2.8	5.6	11.0
	Unengaged	Count	1	3	1	4	4	13
		Expected Count	.9	1.1	1.1	3.4	6.6	13.0
	Primarily Social	Count	0	0	3	1	3	7
		Expected Count	.5	.6	.6	1.8	3.5	7.0
	Primarily Academic	Count	1	0	0	11	11	23
		Expected Count	1.6	1.9	1.9	6.0	11.6	23.0
	Academic and Social	Count	0	2	2	4	23	31
		Expected Count	2.2	2.6	2.6	8.0	15.7	31.0
	Total	Count	6	7	7	22	43	85
		Expected Count	6.0	7.0	7.0	22.0	43.0	85.0

# Typing Student Engagement: Interviews versus the Typology

- Agreement in type for about half the students
- Interviews provide evidence of greater engagement (especially social) compared to the typology
- Most agreement in interviews and survey types for the most engaged students

# The Benefits and Challenges of Mixed Methods Assessment

# Benefits

- Interviews allowed for a more nuanced and complicated understanding of student engagement
- Semi-structured interviews vs. forced choice survey responses
- Collaboration provided better understanding of differences and similarities of student experience across campuses

# Challenges

- Analyzing interviews
  - Cultural differences among respondents
  - Gender differences between respondents
  - Length versus brevity of interview
  - Familiarity with interviewees by reading previous interviews
  - Inter-rater reliability
- Methodological issues
  - Alignment of survey and interview questions
  - Effects of respondent's mood on responses at time of interview or survey

# Next Steps

- Develop more nuanced measures
  - Qualitatively (rubric for low, moderate and high levels of engagement and coping)
  - Quantitatively (additional factor analyses of surveys)
- Examine engagement and coping across time
  - Qualitatively (by reading earlier and later interviews)
  - Quantitatively (by comparing sophomore, junior and senior surveys)
- Continue to use interviews to inform surveys (and vice versa)
- Analyze outcome measures (e.g. GPA, writing samples)