

ENGAGEMENT ACTIVITIES AND ACADEMIC SUCCESS FOR ENGINEERING UNDERGRADUATE STUDENTS: A CASE STUDY

Southern Association for Institutional Research

Annual Conference

September 25, 2012



University of Central Florida

AGENDA FOR THIS DISCUSSION

- Background on UCF and the College of Engineering and Computer Science (CECS)
- Inspiration for our research
- Research questions and methodology
- Findings from our study
- Impacts on CECS
- Future work

UNIVERSITY OF CENTRAL FLORIDA

- Large public metropolitan university with almost 60,000 enrolled students
- Carnegie Classification – Research University with Very High Research Activity (RU/VH)
- 12 colleges
- Approximately 45% of UCF students are transfer students

UCF COLLEGE OF ENGINEERING AND COMPUTER SCIENCE (CECS)

- 10 undergraduate programs, 14 master degree programs, and 9 doctoral degree programs
- Degrees available in the fields of Civil, Environmental, Electrical, Mechanical, Industrial Engineering and Computer Science
- Roughly 800 undergraduate degrees awarded per year for the past 7 years
- Approximately 42% of CECS students are transfer students

COLLABORATION WITH CECS

- Worked closely with CECS Academic Affairs office staff to formulate some research questions regarding transfers students and their social connections to campus
- CECS interests and objectives :
 - Emphasis placed on co- and extra-curricular activities that will connect their students to the campus
 - Focus on the transfer student population since their presence has increased over the last few years and they tend to be at higher risk for attrition
 - Identify strategies that will increase retention and graduation rates

INSPIRATION FOR OUR RESEARCH

- It is generally accepted that differences exist between transfer students and First Time in College (FTIC) students ; Transfers students tend to:
 - be older
 - have responsibilities outside academics (family, work, etc.)
 - participate less in co- or extra-curricular activities
- Literature has suggested that highly engaged students tend to be more academically successful
 - Astin's¹ theory of student involvement and its role in student development
 - Tinto's² emphasis on the importance of academic and social integration on student persistence

RESEARCH QUESTIONS

- What are the participation rates in co- and extra-curricular activities for transfer students at UCF?
- In which activities are transfer students more likely to engage compared to FTICs?
- How does participation in these activities relate to a student's sense of belonging and social integration on their campus?
- Can we use participation in co- and extra-curricular activities as a proxy to measure a student's sense of belonging and social integration on their campus?

**Social
Integration/
Connection to
Campus**



**Participation
in co- and
extra-
curricular
Activities**



**Student
Academic
Success**

METHODOLOGY

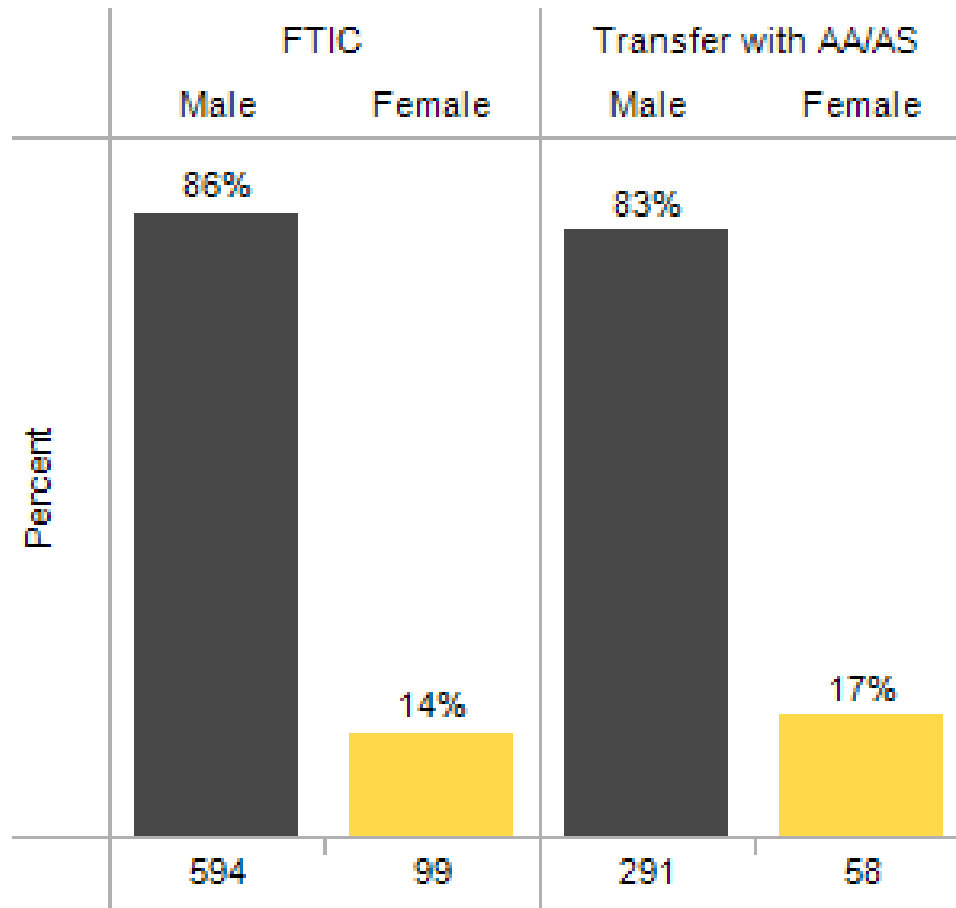
- Conducted a retrospective study that integrates survey data with student records
- All UCF graduates are asked to complete the Graduating Senior Survey (roughly 90% response rate)
- 1,042 survey responses from CECS graduates from 2009-10 and 2010-11
 - FTIC and Transfer students who entered with an AA or AS degree
- Twelve survey items of interest for this study:
 - Co- and extra-curricular participation (*10 questions*)
 - Social Integration (*2 questions*)

CECS GRADUATE CHARACTERISTICS (2009-10 AND 2010-11)

FTIC and Transfer Student Survey Respondents

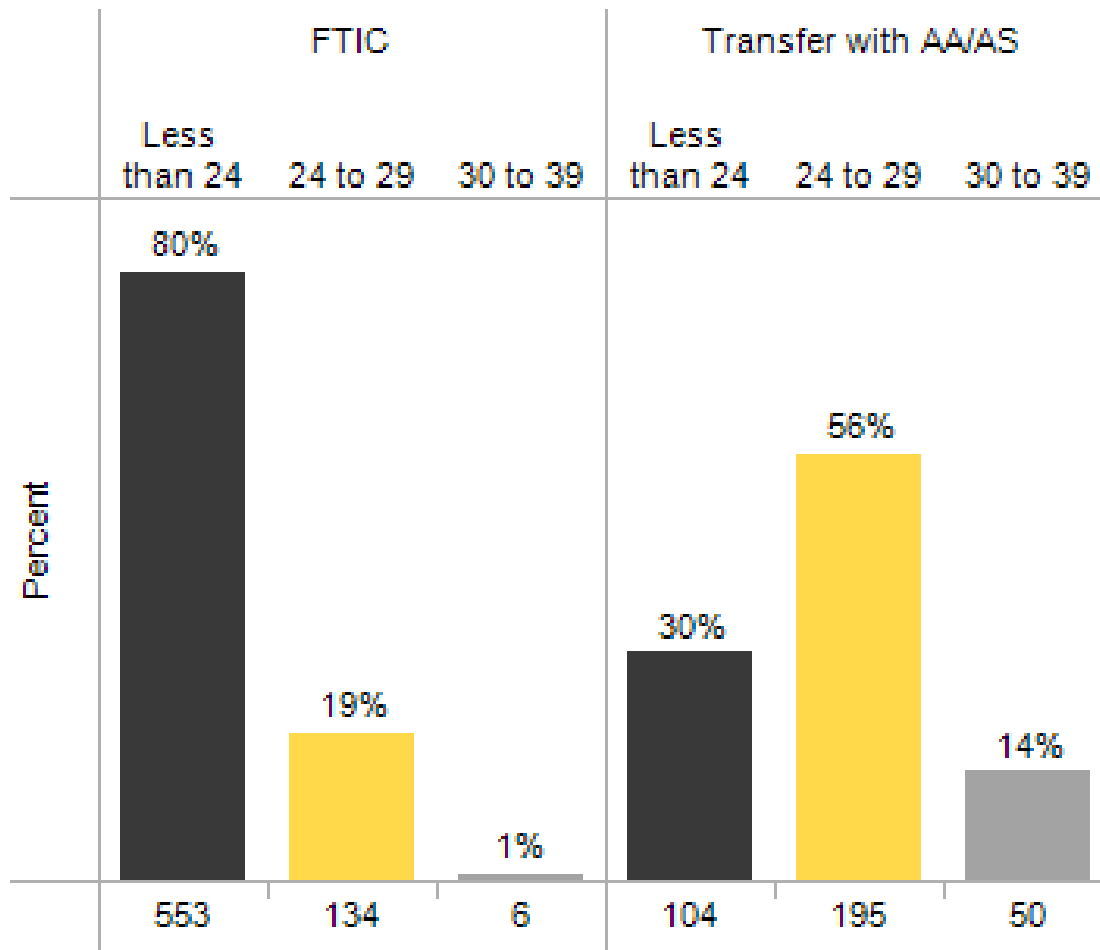
	2009-2010	2010-2011
FTIC	313	380
Transfer with AA/AS	164	185
	Student Count	Student Count

CECS GRADUATE CHARACTERISTICS (2009-10 AND 2010-11)



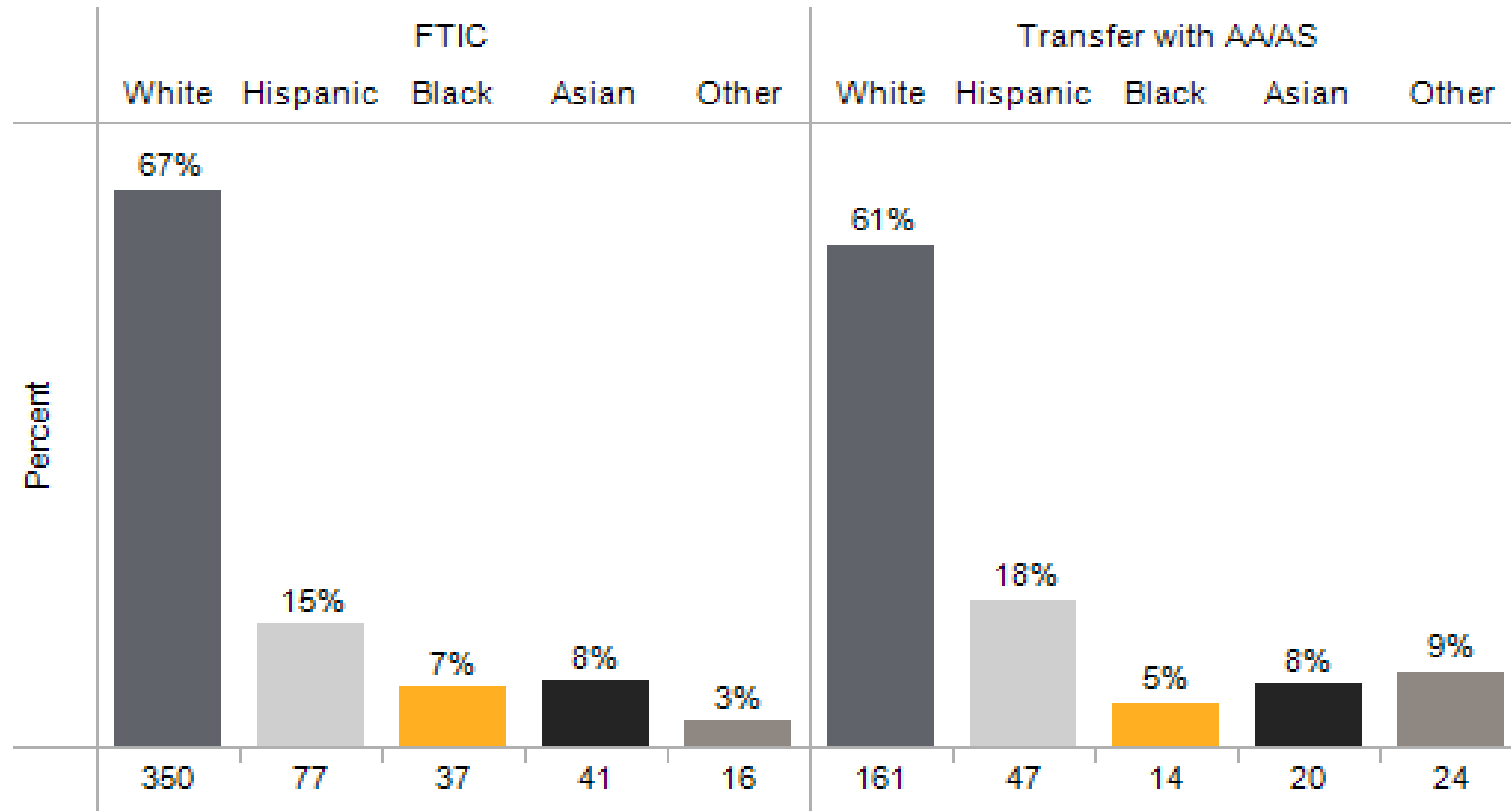
- Male students are the overwhelming majority
- Proportions of male and female graduates are relatively the same for FTIC and Transfer students

CECS GRADUATE CHARACTERISTICS (2009-10 AND 2010-11)



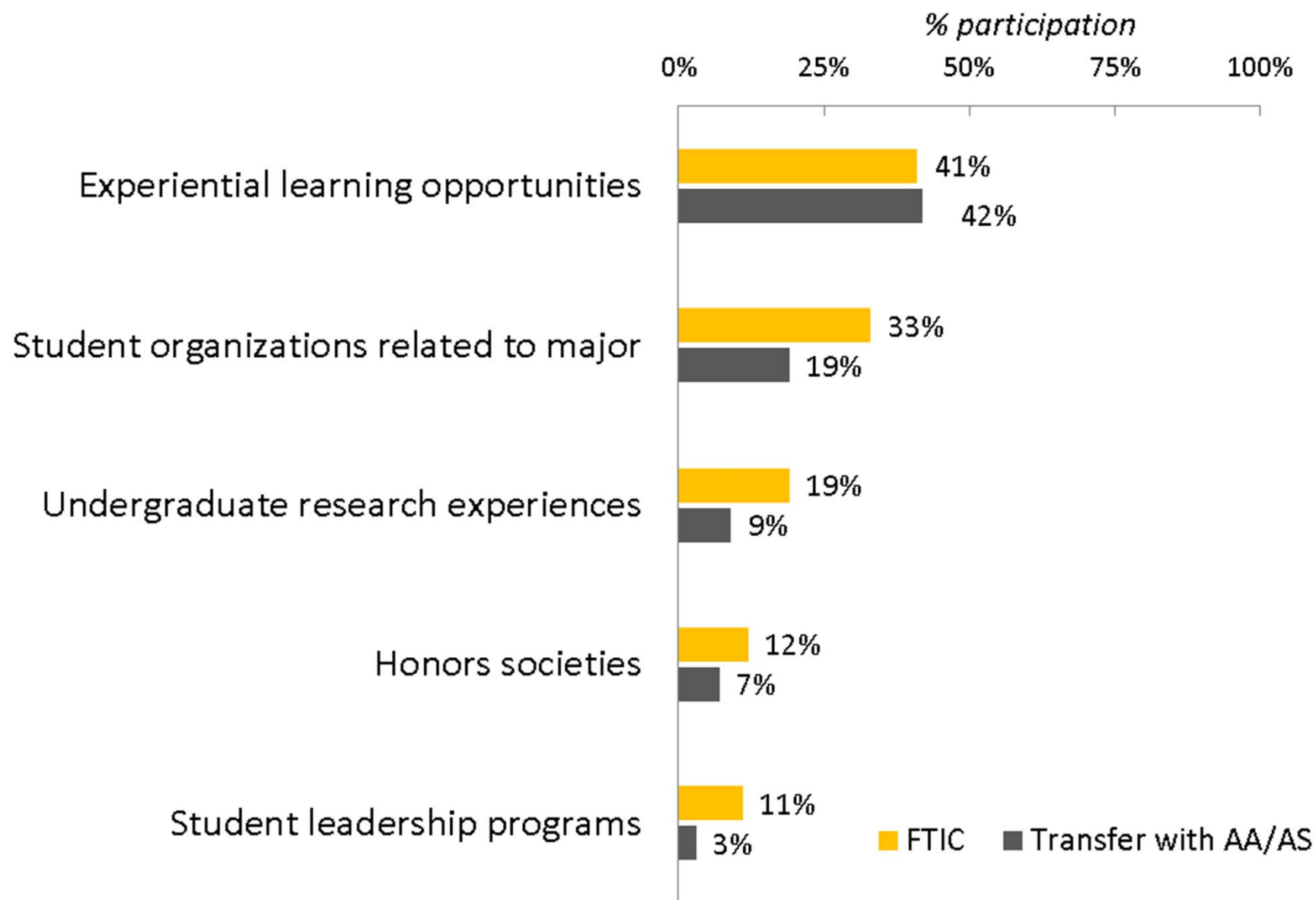
- Students who began at UCF as transfers were older at the time of graduation compared to their FTIC counterparts

CECS GRADUATE CHARACTERISTICS (2009-10 AND 2010-11)

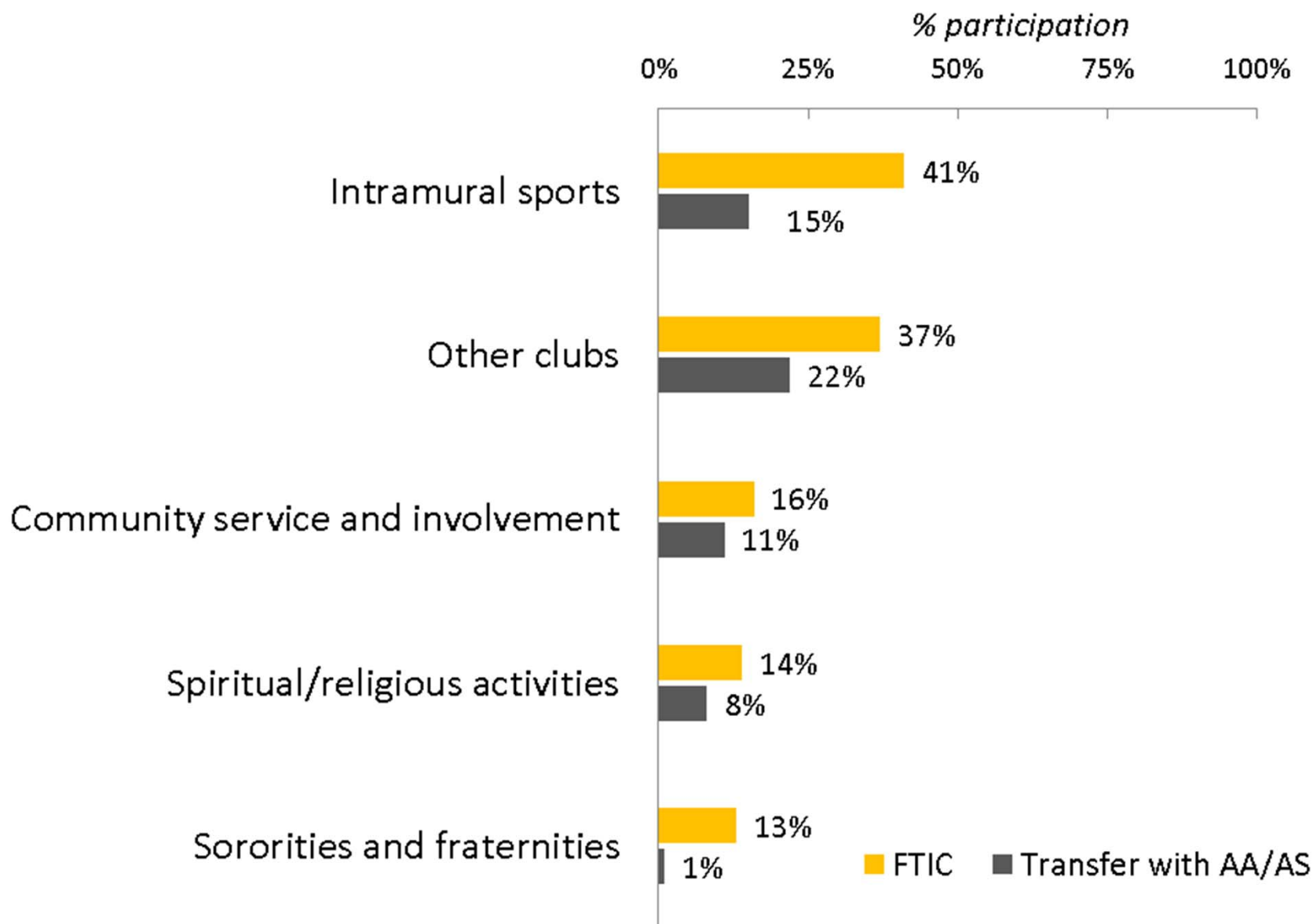


- Higher proportions of ethnic minorities were present among graduates who began as transfers

Participation in Academic Engagement Activities for FTIC and Transfer Students



Participation in Social Engagement Activities for FTIC and Transfer Students



DEFINING SOCIAL INTEGRATION

- FTIC and Transfer students responded similarly when asked about their overall social experience but differently when asked about forming close friendships

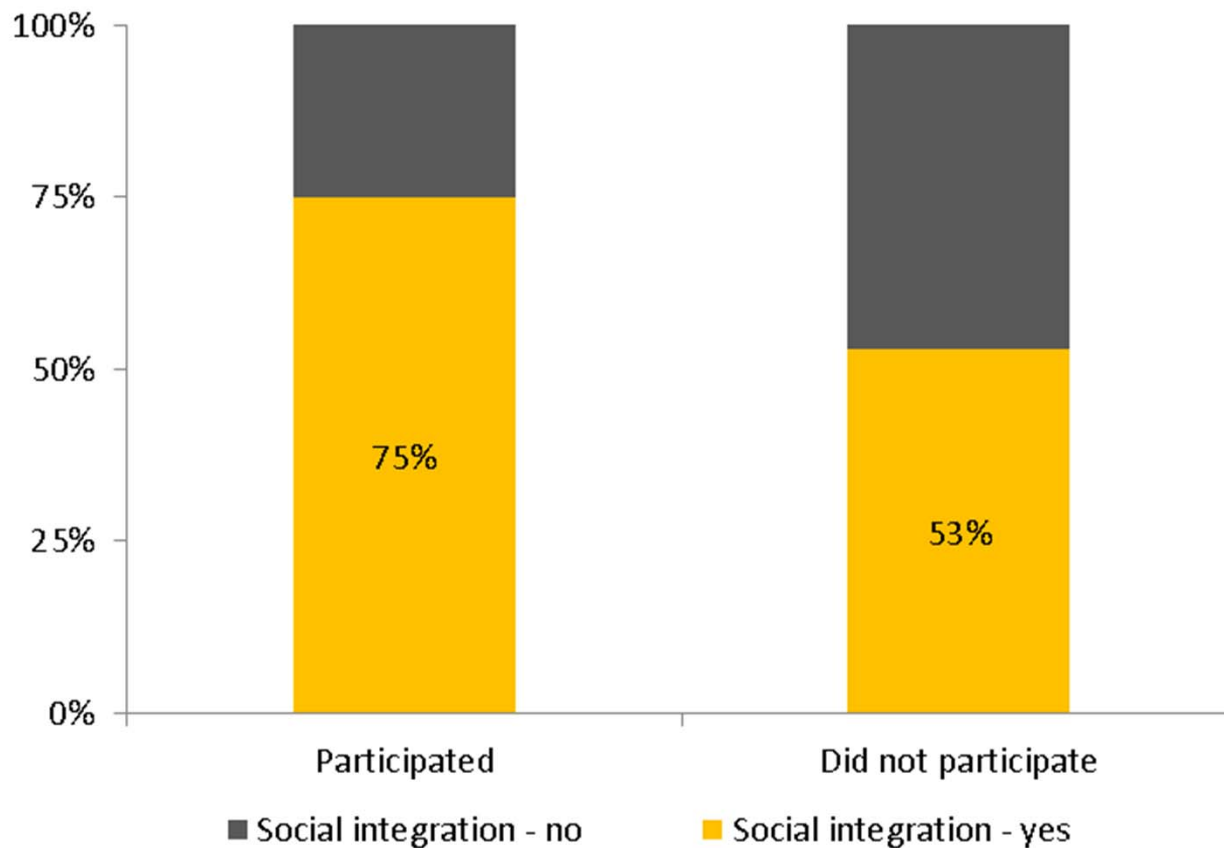
	% Positive Responses	
	FTIC	Transfer with AA/AS
a. To what extent would you say you developed close personal friendships at UCF?	55%	29%
b. How would you rate your social experience at UCF?	93%	90%

Positive responses for a. – “almost all my friends are from UCF” or “most my friends are from UCF”

Positive responses for b. – “excellent”, “very good” or “good”

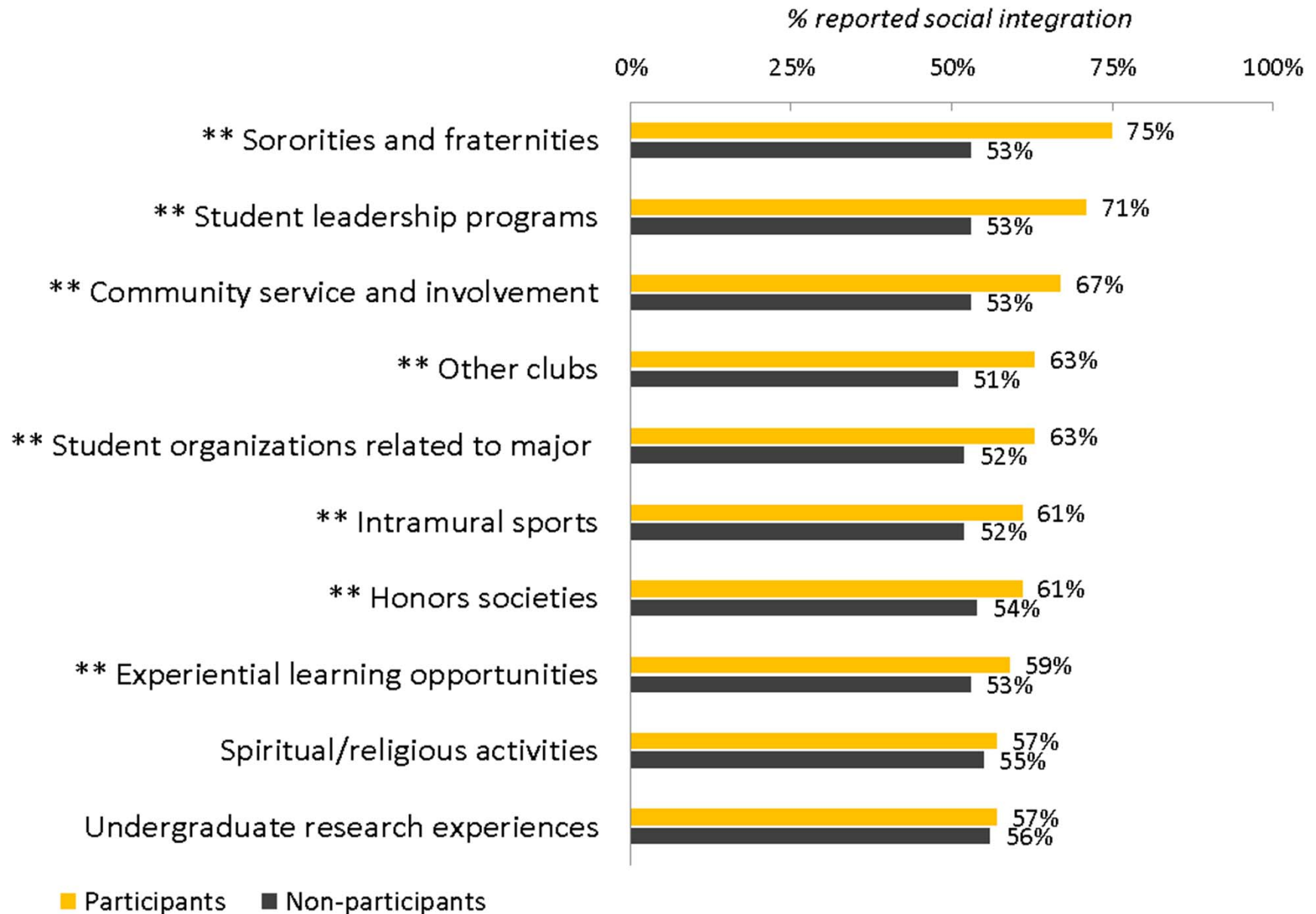
SOCIAL INTEGRATION AND PARTICIPATION IN VARIOUS ENGAGEMENT ACTIVITIES

FTIC Reports of Social Integration by Participation in Sororities or Fraternities



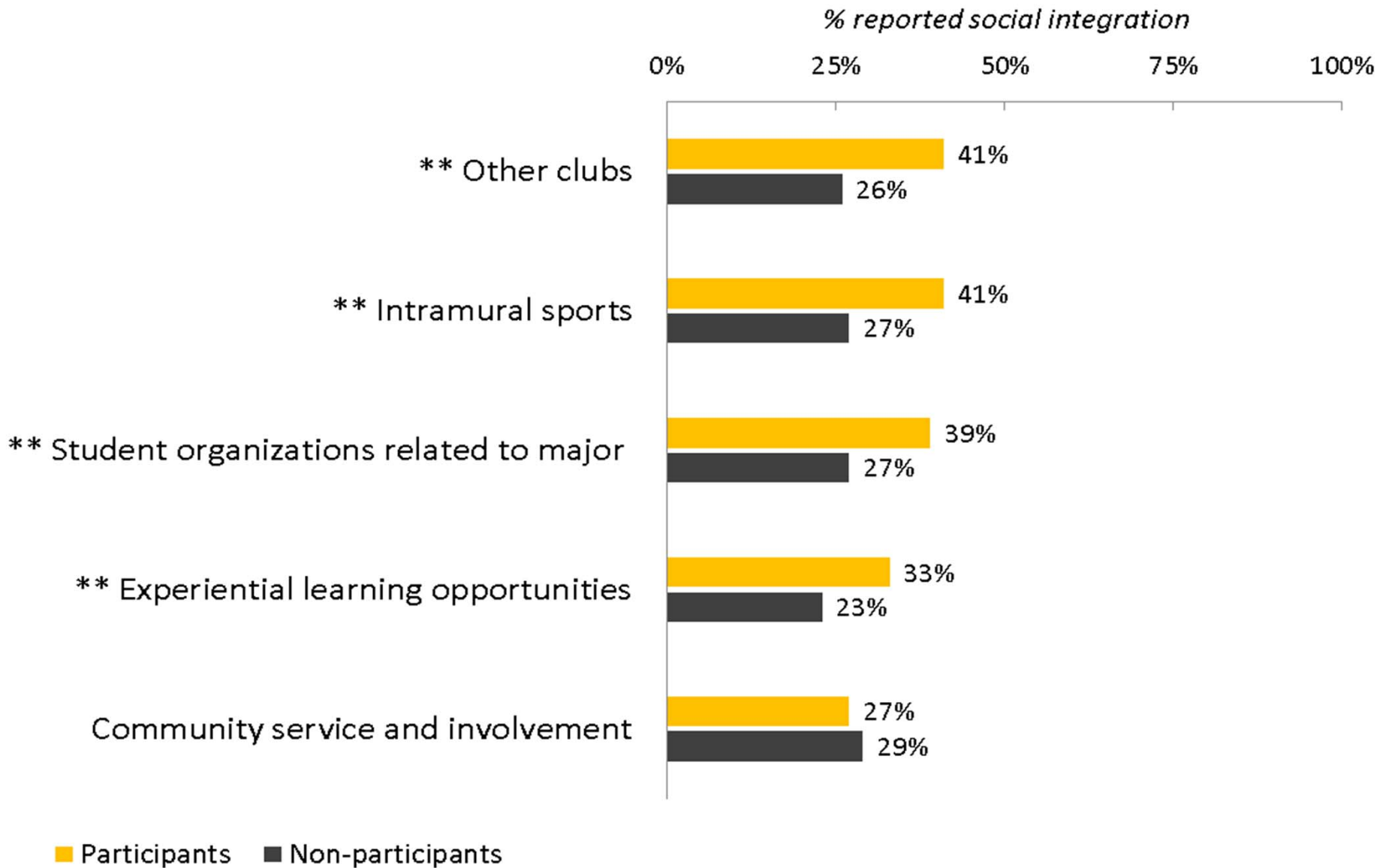
- Used inferential statistics to assess whether students participating in certain activities report higher levels of social integration

FTIC Reports of Social Integration by Participation in Engagement Activities



*** Statistical differences in social integration based on participation*

Transfer Reports of Social Integration by Participation in Engagement Activities



*** Statistical differences in social integration based on participation*

NOTE: Not all activities tested due to small sample sizes

SUMMARY OF FINDINGS

- CECS FTIC graduates were more likely than transfer graduates to participate in a variety of co- and extra-curricular activities during their undergraduate careers
- Highest participation for both FTIC and transfer students:
 - organizations in their major
 - experiential learning
 - intramural sports

SUMMARY OF FINDINGS (CONT.)

- All activities were strongly associated with social integration for FTIC graduates except for spiritual/religious organizations and undergraduate research
- Activities strongly associated with social integration for transfer graduates were:
 - Organizations in their major
 - Experiential learning
 - Intramural sports
 - Other clubs

IMPACTS ON CECS STUDENTS

- The results of this study and future work can:
 - Inform program coordinators which extra- or co-curricular activities best serve the needs of FTIC and transfer students
 - Aid program advisors in their recommendations to students
 - Promote partnerships between the college and administrative offices that support these co- and extra-curricular activities
 - Assist in the recruitment process of these activities and programs
- Outreach for at-risk students (both FTIC and transfers) could potentially:
 - Increase persistence and graduation rates
 - Influence student learning and development

FUTURE WORK

- A prospective approach or longitudinal study that considers retention, persistence and graduation rates based on student involvement
- Focus on causal factors rather than correlations – does participation in these activities foster social integration or are socially integrated students more likely to engage in these activities?
- Identifying other measures for social integration
 - Direct measures
 - Easily accessible to university administrators

CONTACT INFORMATION

Rachel Straney

Coordinator, Management Analysis

rstraney@ucf.edu

Uday Nair

Application Systems Analyst/Programmer

uday.nair@ucf.edu

University of Central Florida

Office of Operational Excellence and Assessment Support

www.oemas.ucf.edu

REFERENCES

1. Tinto, Vincent. Winter 1975. "Dropout from Higher Education: A Theoretical Synthesis of Recent Research." *Review of Educational Research*. Vol. 45 (1), pp. 89-125.
2. Astin, Alexander W. September/October 1999. "Student Involvement: A Developmental Theory for Higher Education." *Journal of College Student Development*. Vol. 40 (5), pp. 518-529.