



OBJECTIVES



Persistence



Affective Engagement



Learning Outcomes

TYPES OF OUT-OF-CLASS ACTIVITIES (OOCAs)

Curricular-related Co-curricular Extracurricular

OOCAs IS A MISSED OPPORTUNITY



Participants' perceived benefits of participating in OOCAs as they pertain to fun which is a missed opportunity to retain underrepresented groups in engineering

SURVEY DEVELOPMENT

PosSE Survey

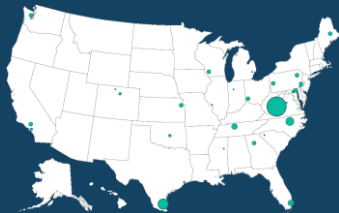
- Demographic data
- 20 types activities
- 4 levels of participation
- 6 affective engagement
- 30 learning outcomes
- 30 reasons to participate



SURVEY

N = 2032

28 institutions



VALIDATED 6 AFFECTIVE ENGAGEMENT



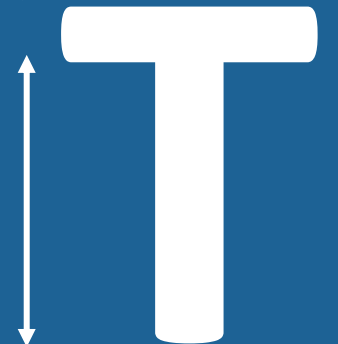
IMPLICATIONS TO DEVELOP T-COMPETENCIES

Out-of-class activities supports

Cross-Discipline Competence



Deep Discipline Expertise





POPULARITY AND INTENSITY OF ACTIVITIES



Job
Sports



Living-Learning
Community

STUDENTS SWITCH MAJORS TO ENGINEERING



Female are more likely to switch major to engineering than male



Males switched to engineering have higher Peer Interaction.

FOUND INCENTIVES AND BARRIERS TO OUT-OF-CLASS PARTICIPATION

Incentives



E.g. To fulfill personal interests; To gain experiences; To try something new

Barriers



E.g. Lack of time; Cost; Lack of Knowledge; Lack of Motivation

STRUCTURAL BARRIERS: RACISM AND SEXISM



Explored the structural barriers - specifically racism and sexism and called for mitigating these barriers

PERSISTENCE WITH LEARNING OUTCOMES AND MOTIVATIONS OF PARTICIPATION



Students with high persistence accrued more learning outcomes and having more intrinsic motivation

Persistence

FRATERNITY AND SORORITY MEMBERS PERCEIVED MORE E2020 ATTRIBUTES

Fraternity and sorority membership as a major influencer for civil engineering students



(E2) practical ingenuity; (E3) creativity; (E4) communication; (E5) business and management; (E6) leadership; (E7) ethical standards; (E8) professionalism; (E9) dynamism, agility, resilience, and flexibility

