A Multivariate Study of Graduate Student Satisfaction and Other Outcomes Within Cooperative Research Centers

Thesis Research
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Purpose of Research

• To explore current graduate students’ benefits, experiences, and satisfaction within cooperative research centers
• To identify key center mechanisms needed to achieve those educational benefits
• To develop a tool for providing centers with immediate feedback from graduate students
  – Centers would benefit by more real time feedback from graduate students, providing a better understanding of which center components may assist in a better education/training of graduate students
1. What formal center training mechanisms do center’s offer?
2. What are the main factors that define the student’s center experiences?
3. To what extent are individual and center characteristics significantly related to graduate students’ outcomes (satisfaction, perceived benefits, organizational commitment, scholarly achievements, and career goals)?
4. To what extent are the formal center training mechanisms, center experiences, interactions, and thesis or dissertation committee significantly related to graduate students’ outcomes (satisfaction, perceived benefits, organizational commitment, scholarly achievements, and career goals)?
5. After controlling for individual and center characteristics, to what extent are formal center training mechanisms, center experiences, interactions, and thesis or dissertation committee significantly related to graduate students’ outcomes (satisfaction, perceived benefits, organizational commitment, scholarly achievements, and career goals)?
Individual Center Mechanisms to Outcomes

Predictors

Individual Center

- Center Characteristics
  - Size, Operating budget, Age

- Center Mechanisms
  - Center Role
  - Formal Center Training Activities
  - Thesis/Dissertation Committee
  - Center Experiences
  - Interactions

Individual Characteristics

- Funding, Department, Degree sought, GPA, Gender, Age, Ethnicity, Citizenship

Process/Outcomes

- Satisfaction

- Perceived Benefits
  - Skills
    - Non-technical and Technical
    - Career Advantage

- Organizational Commitment

- Scholarly Achievement

- Career Goals
Methodology

- Anonymous, web-based questionnaire
  - Sent to 33 Centers early November
  - Approximately 500 graduate students
- Results for 32 out of the 33 Centers
  - Current number of responses = 162 graduate students
  - Current response rate = 32.4%
- Still in Progress
  - Reminders
  - 1 center has just recently received the survey
  - Sample size changes: old/irrelevant email addresses
- Follow Ups
  - Desire at least 200 responses
Preliminary Data: Predictors

• Individual Characteristics
  – Gender: 75% Male; 25% Female
  – Citizenship: 52.9% U.S. Citizenships; 47.1% Non-U.S. Citizenships
  – Degree Sought: 88.3% are pursuing and/or plan to pursue their PhD

• Center Mechanisms
  – Interactions
    » Over a third of the students (38%) have visited an industry or government member site for Center purposes
  – Thesis/Dissertation Committee
    » The majority (84.6%) of participants are (or plan on) doing their thesis/dissertation project on Center research
    » Mean # of departments on committee = 2.69
    » Mean # of Center industry members on committee = 1.66
Preliminary Data: Outcomes

• Career Goals
  – Almost half of the participants plan to seek a job in industry (48.1% industry; 29% academia)

• Benefits
  – Career Advantage
    » Almost two-thirds of participants (62.8%; mean = 3.74) “agree” or “strongly agree” with the statement:
      » My Center experiences will give me a competitive edge over other students seeking similar jobs or education following graduation

• Satisfaction
Satisfaction: Center management/administrative operations

Mean = 3.66

- Not Satisfied: 3.9%
- Slightly Satisfied: 4.5%
- Somewhat Satisfied: 29.0%
- Very Satisfied: 46.5%
- Extremely Satisfied: 16.1%

n=155
Satisfaction:
Degree of autonomy and independence on thesis/dissertation projects

- Not Satisfied: 1.3%
- Slightly Satisfied: 5.2%
- Somewhat Satisfied: 16.3%
- Very Satisfied: 53.6%
- Extremely Satisfied: 23.5%

Mean = 3.93

n=153
Satisfaction:
Opportunities to interact with industry and other non-academic researchers

- Not Satisfied: 6.5%
- Slightly Satisfied: 5.8%
- Somewhat Satisfied: 33.5%
- Very Satisfied: 38.7%
- Extremely Satisfied: 15.5%

Mean = 3.51

n=155

Slide 10
Satisfaction: Overall Center Experience

Mean = 3.90
n=152
Timeline

| Jan ‘06 | Feb ‘06 | March ‘06 | April-May ‘06 | June ‘06 |

Finish Data Collection

Analyses and Write Up

Thesis Defense

June Data Presentation & Center Reports