

Academic and Student Affairs Collaboration to Enhance Student Success in Engineering and Applied Sciences

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GROUNDING IN MICHIGAN
REACHING FOR THE FUTURE

Overview

- Background of WMU-CEAS
- Collaboration between Academic & Student Affairs
 - Why
 - How
- Preliminary Results
- Lessons Learned



WMU-CEAS

- Western Michigan University is a comprehensive university located in Kalamazoo, MI
- Carnegie classification - doctoral research intensive
- Classified as “Moderately Selective” in CSRDE
- WMU Fall 2009 enrollment: 19,547 undergraduate and 5,029 graduate students
- CEAS Fall 2009 enrollment: 2,091 undergraduate & 288 graduate students
- CEAS offers 16 bachelor, 10 master, & five doctoral programs
- Nine engineering, three engineering technology, and one computer science programs accredited by ABET

WMU-CEAS

- First-time first-year CEAS students come from diverse academic preparation backgrounds

1st Semester Math	2005(%)	2006(%)	2007(%)	2008(%)	2009(%)
Calculus II and higher	9.7	5.4	5.1	5.2	8.4
Calculus I	31.5	35.3	42.7	39.2	34.0
Pre-Calculus	24.9	31.0	31.1	29.8	27.6
Algebra II	23.4	17.7	13.7	18.9	22.0
Algebra I and lower*	10.5	10.6	7.5	6.9	8.0

**Includes students not taking any math in 1st semester*

WMU-CEAS

- Implemented learning community project in 2005 with support from NSF-STEP

CSDRE ¹	WMU Baseline ²	Retention	2005 (262)	2006 (303)	2007 (306)	2008 (354)
69	60.0	2 nd Year (%)	68.0	70.1	66.3	67.5
53	40.6	3 rd Year (%)	54.3	52.8	52.0	
NA	33	4 th Year (%)	44.5	48.8 ⁵		
40.7 ³	32	5 th Year (%)	44.6 ⁴			

¹For all institutions, 2005-06

²Averaged 2000-2004

³37.4% graduated in a STEM field in 6 years
+ 3.3% continued in 7th year

⁴35.1% continued in 5th year + 9.5%
graduated with CEAS degrees

⁵48.8% returned to CEAS in Year 4 +
2 graduated with CEAS degrees

Academic & Student Affairs Collaboration

- Why?
 - Students spend a significant amount of time outside the classroom
 - Student's cognitive and affective development are intertwined → attitudes and values strongly influence behavior of learning
 - Faculty can leverage the expertise of student affairs professionals to impact student's affective development

Academic & Student Affairs Collaboration

- Why?
 - Opportunities arose in 2006 in creation of special interest housing by Residence Life
 - Engineering House grew from 41 first-time first-year CEAS students in 2006 to 171 in 2009

Academic & Student Affairs Collaboration

- How?

Barriers to academic & student affairs collaboration

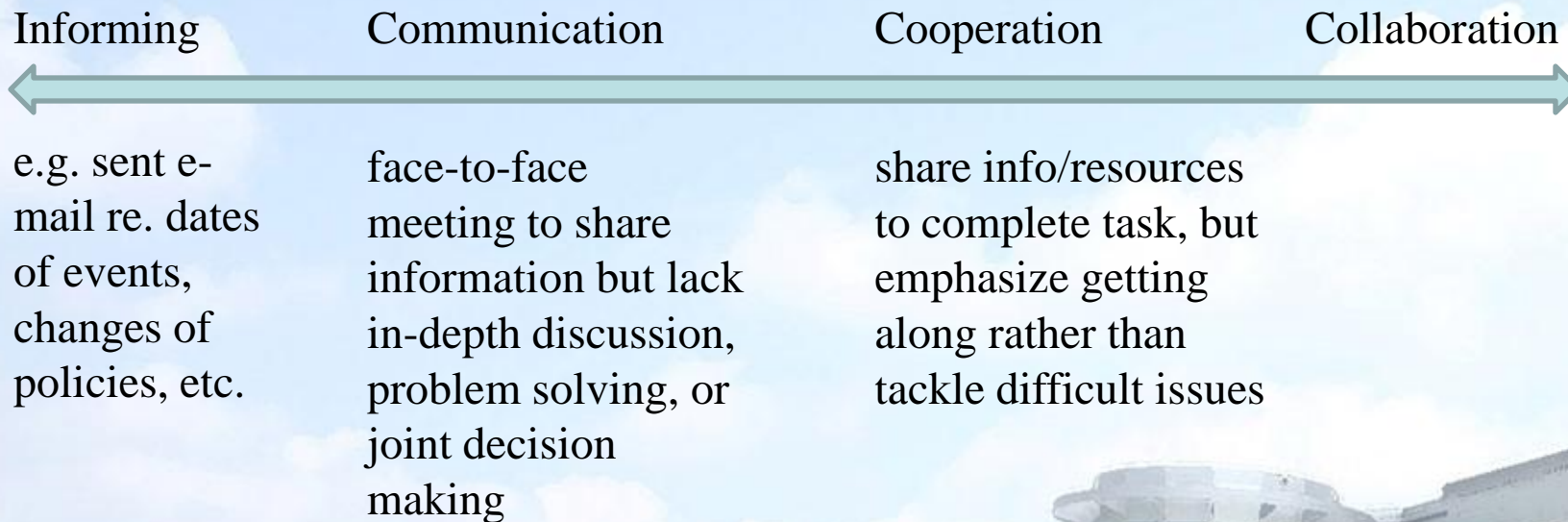
- Differences in background and training
- Differences in language, culture, and theoretical bases
- Habit of isolation
- Differences in organizational structure, goals, priorities
- Poor communication and lack of mutual understanding
- Rare between STEM and student affairs

Source: Engstrom and Tinto (2000), “Developing partnerships with academic affairs to enhance student learning,” *The Handbook of Student Affairs Administration*, Jossey-Bass, pp. 425-452.

Academic & Student Affairs Collaboration

- How?

The Continuum of Collaborative Process



Source: Cook, *et al*, (2007). "Collaboration: Definitions and Barriers," *Student and Academic Affairs Collaboration: The Devine Comity*, NASPA, pp. 17-31

Academic & Student Affairs Collaboration

- How?

True Collaboration involves

- Understand each other's culture, language, and organization characteristics and philosophical and programmatic approaches
- Mutually construct the vision, goals, and processes for student development
- Identify the roles of faculty and student affairs staff; and opportunities for collaboration
- Joint planning, implementation, and accountability; share resources

Source: Eickman, (1989). "A systematic Approach to fostering an academic and student affairs interface," *NASPA Journal*, 26 (1), pp. 64-70.

Some Examples and Preliminary Results

- 2008 Pilot: Faculty Protocol to Engage Residence Life when a student missed consecutive classes
- Nine CEAS faculty members made 21 referrals involving 17 students
- A majority of CEAS faculty felt intervention led to change in student attitude
- CEAS and Residence Life reviewed pilot to assess timeliness, responsiveness, and connecting student to appropriate campus services
- Revised tracking form for 2nd implementation in Fall 2009

Some Examples and Preliminary Results

- Establish Engineering House survey procedure
- Early indicator of value-added by Engineering House: upward trend in student responses to survey

Survey Item	2007 mean (n = 67)	2009 mean (n = 130)	t statistics	p value
The general atmosphere is open and welcome	3.88	4.29	3.19	0.002
I often study with others who live in the house	3.42	3.75	1.73	0.084
I usually prefer to study alone	3.76	3.41	2.14	0.034

Scale: 1 = strongly disagree; 5 = strongly agree

Some Examples and Preliminary Results

- Embed assessment in RA programming
- RA's submitted online retrospectives describing promotion, number in attendance, impression of program effectiveness toward objective, and recommendation for continuous improvement
- Results communicated to CEAS



CEAS Collaborate with Other Units in WMU

- Collaborate with Fall Welcome
- From communicating in 2008 to collaborating in 2009
- Two events in 2009:
 - Academic Etiquette
 - Explore CEAS



CEAS Collaborate with Other Units in WMU

- Academic Etiquette: Communication Strategies for Success
- 177 students participated to learn verbal and non-verbal communication
- Assignment: Write e-mail to introduce self to IME 1020 instructor
- Assessment:
 - 65 e-mail received by first day of class (38.4% participation)
 - 72.3% received perfect score (applied lessons learned)
 - “It helped me learn to communicate with professors.”

CEAS Collaborate with Other Units in WMU

- Explore CEAS: students given a “passport”
- Objective: become familiar with building, people, and programs
- 246 students participated
- Assessment (Scale: 1 = not at all; 5 = very much)
 - Familiar with building: 4.5
 - Faculty and staff helpful: 4.7
 - Learn out programs: 4.4
 - Find classroom and lab: 4.1
 - “I didn’t know what type of Engineering that I would like to be. The program helps me out a lot.”
 - “It got me more familiar with Parkview and its professors.”

Lessons Learned

- Relationship building takes time, effort, and patience
- CEAS has a better understanding of Residence Life, and vice versa (rhythm of semester, strengths, boundaries)
- Share and even champion other for resources



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