CSUN Title V/HSI-STEM APR: Year 5

Overview

- Background
- Overall approach and findings
- Trends in quantitative measures
- Focus areas and recommendations

Approach: Framework

- Project objectives guided the evaluation as an embedded mixed methods case study design

- Overall evaluation goal was to assess project performance measures with baseline and actual performance data at each campus

Approach: Procedures

- Data sources
  - AIMS^2 students, faculty, staff and institutional data
- Data collection procedures
  - Journal guides, surveys, and interviews
- Data analysis procedures
  - Frequency analysis and thematic data analysis

Data Collection Procedures @CSUN

- Cohort participant structured journals = 1 submission/month over 12 months (Oct. 2015-Sept. 2016) for Cohorts 4-5

- 24 student interviews (Summer/Fall 2014)
  - Final sample = Cohorts 1, 2, 3, 4
    - *Gender*: 19 male, 4 female
    - *Ethnicity*: 13 Latino, 4 Middle Eastern, 4 White, 1 Asian or Asian American, 1 other, 1 decline to state
    - *Major*: 8 ME, 7 CSCIT, 5 ECE, 3 CECM, 1 MSE

Data Collection Procedures @ COC

- Document data sources
  - Counseling appointments
  - Educational plans, events (3a)
  - MESA database/tracking system (4a/b, 6a/b)
- Student survey (5a/b)

Data Collection Procedures @ GCC

- Document data sources
  - Counseling appointments (3b), tutoring log (4a)
- Student survey (3b, 4a/b, 5a/b, 6a/b)
- Student focus group (5b, 6c)

The Big Picture: Objectives and Measures

- 3 overarching goals: build a transfer model, increase student transfer to CSUN, and increase student completion at CSUN
  - 12 objectives shape 35 performance measures
    - 35 performance measures informed by data type
      - 28 quantitative, 7 qualitative measures shape data
        - 28 quantitative measures by measure type:
          - 21 = cohorts + 7 = project/non-cohort
        - 7 qualitative: 2 @ COC + 2 @ GCC + 3 @ CSUN

Performance Measures: In-Depth

- 35 performance measures guide assessment
  - 4 project measures = across campuses
    - Transfer, articulation, completion
  - 3 non-cohort measures = campus specific
    - Counselor STEM PD, academic advisers
  - 28 cohort measures = direct cohort
    - Advising, tutoring, mentoring
      - 21 quantitative + 7 qualitative

- *Project = cohort model:*

  Evaluation = cohort approach

  – Cohort 4 (Sp14) + Cohort 5 (Fa14): assess cohort measures by cohort

    - Baseline + performance data collected, analyzed, assessed by cohort targets

  – Applied 21 quantitative cohort measures to *each* cohort (n=42) + applied 7 qualitative measures across cohort (n=7)

    - Total: 49 cohort measures

Quantitative Measures by Cohort

- Advising sessions (6)
- Peer/tutoring sessions (12)
- Online course enrollment (4)
- Student-faculty interaction (6)
- Peer mentoring (6)
- Academic workshops (2)
- Supplemental lab (2)
- Faculty research interaction (2)
- Cohort participation (2)

Final Count: Measures

	Quantitative		Qualitative	Total
Project	4		0	4
Non-Cohort	3		0	3
Cohort	21	21	7	49
Total	49		7	56

The Big Picture: Overall Findings

- Of 56 total measures, *36* measures (64%) met or exceeded project targets or demonstrated improvement in quality* for both cohorts

- Data for the quantitative measures (n=49) reveal that 22 (or 45%) measures met or exceed project targets

- Results for all qualitative measures (n=7/7) point to improvement in quality of peer-peer interaction, student-faculty interaction, research participation

*Note: GCC data cannot be verified by cohort

Overall Trends: Quantitative Measures

- All 4 project measures – transfer (1a), course articulation (2a/b), and completion (7a) met or exceeded project targets in the period

- All 3 non-cohort measures – Counselor STEM PD (3a) at GCC/COC, academic advisors at CSUN (8a) – met or exceeded project targets

- 22 of 49 (45%) cohort measures across campuses met or exceeded targets in the period

Focus: CSUN Cohort Measures

- Performance measure data suggests similarity across cohorts
  - Met or exceeded project targets:
    Cohort 4 = 11/21 (52%) vs.
    Cohort 5 = 11/21 (52%)

Transfer/Completion

- Transfer achievement exceeded target
  - 47 new CSUN transfer students entered in 2015-16 from COC/GCC in a field housed in CECS
    - 131% increase over the project target (n=36) and a 224% increase over baseline figure (n=21) from 2010-11
- Program completion exceeded target
  - 31.4% (49/156) completed a degree program for the most recent period vs. 30.9% (21/68) project target
    - Increase over first project year of 29.3% (22/75) and a decrease over the fourth project year of 36.5% (72/197) but overall headcount is up!

Strengths: Cohort Measures

- GCC/COC counselor STEM PD steady
- COC/GCC academic advising up across all cohorts
- Student-faculty interaction at all three campuses dramatically increased during the period
- COC/GCC/CSUN (Cohort 4): strong student participation in CSUN faculty research
- CSUN Cohort 5 supplemental labs increased

Focus Areas: Cohort Measures

- Academic advising mixed: generally met target for all COC/GCC cohorts
  - BUT: CSUN Cohort 4 and Cohort 5 did not meet project target
- Peer/tutoring participation at CSUN did not meet targets, but did meet targets at COC/GCC
- Academic workshops, supplemental labs at CSUN *generally* fell below targets BUT COC and GCC Cohort 4 and 5 online enrollment up!
- Cross-campus collaborative cohort measure
  - CSUN cohort peer mentoring of GCC/COC cohort *generally* fell below targets but COC Cohort 5 numbers up

Special Note: Peer Tutoring @ CSUN

- While mixed performance data, tutoring participation was distributed across majors
  - Computer science, civil engineering and construction management, and manufacturing systems engineering recorded the most students who participated in tutoring
  - More students from Cohort 4, greater percentage of Cohort 5 engaged in tutoring

Interpretation: Quantitative Measures

- Program work at COC/GCC supports tutoring, level of academic advising
- COC/GCC/CSUN faculty work with cohort participants – advising, mentoring, supervising research: *major strength*
- Events, activities tend to promote frequent student-faculty interaction and peer-peer interaction
- COC/GCC/CSUN workshops, labs: sustains involvement of select students
- Peer mentoring across campuses: needs attention/project focus
- Lower peer tutoring rates = greater percentage of Cohort 5 students/senior standing for Cohort 4 students

Special Note: iPad Use

- Cohort 4 and Cohort 5 students reported using the iPad 821 and 339 times in total during the period respectively.

- Average use by student:
  - Cohort 4 = 29 uses
  - Cohort 5 = 34 uses

- Peak months for iPad use = Oct-Nov + Jan-Feb

Limitations

- Historical nature of compliance reporting: snapshot in time

- Objectives, performance measures limit scope

- Monthly cohort participant journals: completion rates variable

Recap: Conclusions on Performance

- In general, advising, activities, workshops, and faculty research are project strengths

- Overall, frequent and consistent student-faculty interaction tends to have the strongest effects on student experiences

- Finally, peer interaction in a mix of multiple forms—formal mentoring, tutoring + informal socializing and studying appear to have strong, positive effects on student transitions, social adjustment

Overall Project Focus Area

- Increase number of advising sessions with GCC/COC/CSUN cohort participants = faculty mentor roles
  - More mature cohorts (senior-standing) = explore career-preparation/advising as focus of interaction
- Peer-mentoring seems to be central to student experiences: consider coordinated efforts for COC/GCC students to be peer mentored by CSUN students in *sustained relationships where frequent, meaningful interaction occurs*

Thank you for your work with students!

And thank you for supporting our work to document your successes!