



CSUN
SHINE

Cohort Participant Achievement Patterns

AIMS² (HSI-STEM Grant) Meeting

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Agenda

- Background: Exploring student achievement
- Understanding historical patterns by cohort and comparison groups
- Examining trends in cumulative units, grade point averages, and persistence rates
- Summary and concluding thoughts



Background: Exploring Achievement

- Descriptive statistical analyses of three key student outcomes of interest:
 - Term- and cumulative units completion
 - Term- and cumulative grade point average (GPA)
 - Next-term persistence
- Calculate difference in mean scores or rates
 - Removal of program completers



Background: Multiple Comparisons

- Longitudinal and cross-sectional dimensions of AIMS² cohort and comparison groups
 - Follow Cohorts 1-4 over time, from cohort start term/year to current IR data year (Spring 2015)
 - Comparison groups = equivalency on demographic background characteristics related to project eligibility: age, sex, race/ethnicity, Pell grant status (among transfer students in CECS)



Cohort 1 Units: Mixed Patterns

- **Cohort 1 students** took *more* units per semester than comparison group students.
 - **Cohort 1 students** took an average of 1.09 *more* units per semester than comparison group.
 - However, the **comparison group students** completed *more* cumulative units.

Fall 2011	Spring 2012	Fall 2012	Spring 2013	Fall 2013	Spring 2014	Fall 2014	Spring 2015	All years
2.9	1.39	0.67	0.94	1.3	1.91	-0.31	-0.05	-15.08



Cohort 1 GPA: Higher Averages

- **Cohort 1 students** recorded a *higher* GPA per semester and cumulative GPA than comparison group students.
 - **Cohort 1 students** witnessed an average GPA *increase* of .39 per semester and cumulative GPA than comparison group students.

Fall 2011	Spring 2012	Fall 2012	Spring 2013	Fall 2013	Spring 2014	Fall 2014	Spring 2015	All years
0.73	0.05	0.17	0.3	0.33	0.29	0.57	0.68	0.63



Cohort 2 Units: Conflicting Trends

- **Cohort 2 students** took *more* units per semester than comparison group students.
 - **Cohort 2 students** took an average of 5.26 *more* units per semester than comparison group.
 - However, the **comparison group students** completed *slightly more* cumulative units.

Fall 2012	Spring 2013	Fall 2013	Spring 2014	Fall 2014	Spring 2015	All years
14.86	13.92	0.79	0.9	0.44	0.67	-0.41



Cohort 2 GPA: Overall Higher Mean

- **Cohort 2 students** recorded a *higher* GPA per semester and a *slightly higher* GPA cumulatively than comparison group students.
- **Cohort 2 students** had an average GPA *increase* of .21 per semester and cumulative GPA than comparison group students.

Fall 2012	Spring 2013	Fall 2013	Spring 2014	Fall 2014	Spring 2015	All years
0.33	0.06	0.7	0.14	-0.13	0.17	0.03



Cohort 3 Units: More Cumulative

- **Cohort 3 students** took *more* units per semester than comparison group students for the first academic year and overall but *fewer* units in the second academic year.
 - **Cohort 3 students** took an average of 1.82 *more* units for the first semester and took an average of -0.46 *less* units for the second semester than comparison group students.

Fall 2013	Spring 2014	Fall 2014	Spring 2015	All years
2.35	1.28	-0.23	-0.69	2.79



Cohort 3 GPA: Consistently Higher

- **Cohort 3 students** obtained a *higher* GPA per semester and cumulative GPA than comparison group students.
 - **Cohort 3 students** saw an average GPA *increase* of .33 per semester and cumulative GPA than comparison group students.

Fall 2013	Spring 2014	Fall 2014	Spring 2015	All years
0.27	0.36	0.47	0.22	0.32



Cohort 4 Units: Slight Differences

- **Cohort 4 students** took *slightly more* units per semester and cumulative units than comparison group students—with one exception in Fall 2014.
- **Cohort 4 students** took an average of *.73 more* units per semester than comparison group students.

Fall 2013	Spring 2014	Fall 2014	Spring 2015	All years
1.7	1.25	-0.23	0.2	1.01



Cohort 4 GPA: Similar Outcomes

- **Cohort 4 students** logged *slightly higher* GPAs per semester and cumulative GPA than comparison group students.
 - **Cohort 4 students** filed an average GPA *increase* of .7 per semester and cumulative GPA than comparison group students.

Fall 2013	Spring 2014	Fall 2014	Spring 2015	All years
0.31	0.06	-0.09	0.01	0.03



Overall Patterns in Units

- **Students in all four cohorts** generally completed *more* units by semester and *more* cumulative units than comparison group students through the 2014-2015 academic year.
 - **Cohort 1 and 2 students** completed *fewer* units overall than their comparison group counterparts.
 - **Cohort 3 and 4 students** completed *more* units overall than comparison group students.



Overall GPA Patterns

- **Students in all four cohorts** recorded a *higher* GPA per semester and cumulative GPA than comparison group students.
 - **Students** averaged the greatest GPA difference through the 2012-2013 academic year.
 - **Students in all four cohorts** averaged the closest GPA differences through the 2014-2015 academic year.

Fall 2012	Spring 2013	Fall 2013	Spring 2014	Fall 2014	Spring 2015	All years
0.25	0.18	0.462	0.198	0.138	0.25	0.208



Overall Persistence Patterns

- **All four cohorts** had *higher* next-term persistence rates than comparison groups.
 - However, **Cohort 1** had a *lower* next-term persistence rate for the 2013-2014 and 2014-2015 academic year than their comparison group.
 - **Cohorts 3 and 4** had the same next-term persistence rate as the comparison group for the 2014-2015 academic year.



Summary: Explaining Trends

- **Students in all four cohorts** generally received *higher* comparative scores in all three student outcome dimensions (units, GPA, and persistence) than their counterparts.
 - **However, Cohort 1 and 2 students** completed *fewer* units overall than their comparison group counterparts.
 - Perhaps their comparison group counterparts completed more summer units, which we did not have access to.