



The Impact of Extracurricular Activity on Student Academic Performance

Presented by:

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Sacramento State Quick Facts-Fall 2009

➤ Student Body

29,241 Students (83% Undergraduate)

24,262 FTES

➤ Gender

17,157 Females (58.7%)

12,084 Males (41.3%)

➤ First-time Freshmen

3076 (12.7% of the Undergraduate Population)

➤ Undergraduate Transfers

3825 (15.7% of the Undergraduate Population)

➤ Graduation & Retention

Six-year Graduation Rate of First-time Freshmen (2003 Cohort): 43%

First-year Retention Rate of First-time Freshmen (Fall 2008 Cohort): 78%

Four-year Graduation Rate of Undergraduate Transfers (2005 Cohort) : 60%

First-year Retention Rate of Undergraduate Transfer (Fall 2008 Cohort): 83%

Literature Review

- Based upon a literature review and analysis of best practices, it seems almost self-evident that student engagement, including extracurricular activities, has a positive impact on student academic performance.
- One recent study on second-year retention showed that “stayers” most likely participated in more extracurricular activities and spent more time on activities such as involvement in student clubs, athletic teams, or other social activities than did “leavers”(Williford & Wadley, 2008).
- Several other ground-breaking studies on this topic (Astin, 1985; Tinto, 1993; Pascarella & Terenzini, 2005) suggest that there is a positive correlation between student engagement and student learning and persistence.

A Comprehensive Analysis

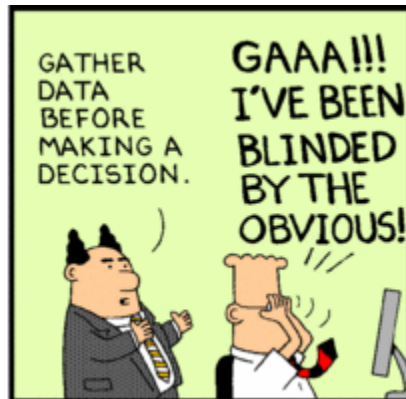
Universities invest a great deal of money and manpower in support of extracurricular activities in an effort to foster student engagement; therefore, it is also necessary to assess if such intervention actually enhances student academic performance.

The research question of this study is whether students who participated in extracurricular activities during their college career achieved higher academic performance than their peers who were not involved in such activities.

Interestingly, relatively few studies have been performed in this area due to a lack of applicable data.

Recent Data Developments

With assistance from the Division of Student Affairs, data was recently collected with regard to the extracurricular activities of Sacramento State's students. Subsequently, the Office of Institutional Research (OIR) conducted a research project derived from this data as relevant to the extracurricular activities and academic performance of these students.



Methodology: Activities

The following extracurricular activities were used for this study based upon the availability of pertinent data:

- Board Members of Associated Students, Inc. (ASI)
- Residence Hall Associates
- Orientation Leaders
- Student Club Leaders/Board Members

Methodology: Sampling & Comparison

Freshman cohorts (N=14,932) and Undergraduate transfer cohorts (N=19,115) from 2002 through 2007 were selected to insure that sufficient data was available to support retention and graduation analyses.

All students were subsequently divided into two groups: Participants and Non-participants.

To insure that the participant and non-participant groups were comparable, several subgroups were adapted to address any significant differences found between the two groups in relation to their academic backgrounds or demographic characteristics.

Freshman Cohorts

**Table 1: The Characteristics of Participants and Non-Participants
Freshman Cohorts 2002-2007**

	Participants			Non- Participants			<i>Significant Difference</i>
	Count	%	Mean	Count	%	Mean	
Gender							
Female	530	57.5%		8,395	59.9%		No
Male	392	42.5%		5,614	40.1%		No
Ethnicity							
Minority	459	49.8%		7,130	50.9%		No
White/Other	463	50.2%		6,879	49.1%		No
Age (Entering year)			18			18	No
Commuter (first term)	525	56.9%		10,094	72.1%		Yes
Full-timer (first term)	909	98.6%		13,452	96.0%		Yes
Need Remediation	578	62.7%		9,713	69.3%		Yes
HS GPA			3.3			3.2	Yes
SAT Score			995			962	Yes

Note: Data in yellow highlight are higher value based on X^2 or T-Test ($P < .001$).

Freshmen Sub-categories

In relation to freshmen, three sub-categories were adapted to conduct further comparison analyses:

- The first category was comprised of those students who had a high school GPA below 3.0. GPAs of 3.0 were used as a base measurement in this study as this is the current admission standard for entry as a “qualified” student at Sacramento State University.
- The second category was made up of students who were in need of remediation (68.9% of the cohorts).
- A third category was established to identify commuters, who make up a large portion of the freshman cohorts (71.1% of the cohorts) and were assumed to be unlikely participants of any extracurricular activities on campus.

Transfer Cohorts

**Table 2: The Characteristics of Participants and Non-Participants
Transfer Cohorts 2002-2007**

	Participants			Non- Participants			<i>Significant Difference</i>
	Count	%	Mean	Count	%	Mean	
Gender							
Female	309	49.8%		10,757	58.2%		No
Male	312	50.2%		7,737	41.8%		Yes
Ethnicity							
Minority	220	35.4%		6,467	35.0%		No
White/Other	401	64.6%		12,027	65.0%		No
Age (Entering year)			23			24	Yes
Regular Admitted	605	97.4%		18,051	97.6%		No
Transfer GPA			3.3			3.2	No

Note: Data in yellow highlight are higher value based on X^2 or T-Test ($P < .001$).

Transfers Sub-categories

In relation to undergraduate transfers, two sub-categories were adapted to conduct comparison analyses.

- The first category was comprised of those students who were male (42.1% of the 2002-2007 cohorts).
- The second category was made up of those who were under the age of 25 (78% of the combined cohorts).

Four Gauges of Academic Performance

The academic performance of both the freshmen and transfer cohorts were then examined based on four criteria:

- Retention Rate after one to three years
- Six-year and four-year Graduation Rate (2002 freshmen cohort and 2004 transfer cohort)
- GPA
- Good Standing Rate (cumulative GPA ≥ 2.0) from first term to fourth term.

Chi-Square Tests and Independent Sample T-Tests were then used to ensure that any differences, in terms of the four indicators, between the participants and non-participants did not occur by chance.

Results - First-time Freshmen

While the demographic characteristics were basically the same for participants and non-participants, the academic backgrounds and enrollment status of the two groups were quite different.

The characteristics of the freshmen participants were as follows: 922 freshmen students from within the 2002-2007 cohorts participated in at least one of the specified extra-curricular activities during their college career.

The first comparison highlights the performance and retention of freshmen with high school GPAs below 3.0 (30.7% of the freshmen from the 2002-2007 cohorts had high school GPAs which were below 3.0).

Freshmen - High School GPA < 3.0

Table 3: Comparison of Academic Performance (Freshmen - High School GPA < 3.0)

	Participants			Non-Participants			Significant Difference
	Count	% / Mean	Trend	Count	% / Mean	Trend	
Retention							
1 Year Later	228	97.9%		3,027	69.7%		Yes
2 Years later	205	94.0%	-3.8%	1,862	52.1%	-17.5%	Yes
3 Years Later	167	88.4%	-5.7%	1,240	45.3%	-6.8%	Yes
Graduation (2002 cohort only)							
Within 6 years	36	72.0%		186	25.0%		Yes
Good Standing Rate							
First Term	201	86.3%		2,811	64.7%		Yes
Second Term	192	82.8%	-3.5%	2,234	56.2%	-8.5%	Yes
Third Term	187	87.4%	4.6%	1,792	71.8%	15.6%	Yes
Fourth Term	178	85.2%	-2.2%	1,523	69.4%	-2.3%	Yes
Cumulative GPA							
First Term	233	2.7		4,346	2.2		Yes
Second Term	232	2.6	-0.1	3,975	2.0	-0.1	Yes
Third Term	214	2.6	0.0	2,497	2.3	0.3	Yes
Fourth Term	209	2.5	-0.1	2,194	2.2	-0.1	Yes

Note: Data in yellow highlight are higher value based on χ^2 or T-Test ($P < .001$).

Freshmen – Need Remediation

Table 4: Comparison of Academic Performance (Freshmen – Need Remediation)

	Participants			Non- Participants			<i>Significant Difference</i>
	Count	% / Mean	Trend	Count	% / Mean	Trend	
Retention							
1 Year Later	567	98.1%		7,273	74.9%		Yes
2 Years later	528	95.7%	-2.4%	4,837	60.1%	-14.8%	Yes
3 Years Later	452	91.3%	-4.3%	3,391	54.0%	-6.0%	Yes
Graduation (2002 cohort only)							
Within 6 years	70	70.7%		568	35.4%		Yes
Good standing rate							
First Term	522	90.3%		7,190	74.0%		Yes
Second Term	505	88.4%	-1.9%	5,980	66.5%	-7.5%	Yes
Third Term	496	91.3%	2.9%	4,893	81.2%	14.7%	Yes
Fourth Term	484	90.3%	-1.0%	4,237	77.9%	-3.3%	Yes
Cumulative GPA							
First Term	578	2.9		9,714	2.4		Yes
Second Term	571	2.7	-0.1	8,995	2.3	-0.2	Yes
Third Term	543	2.7	0.0	6,028	2.5	0.3	Yes
Fourth Term	536	2.7	0.0	5,441	2.4	-0.1	Yes

Note: Data in yellow highlight are higher value based on X^2 or T-Test ($P < .001$).

Freshmen – Commuters

Table 5: Comparison of Academic Performance (Freshmen – Commuter)

	Participants			Non- Participants			<i>Significant Difference</i>
	Count	% / Mean	Trend	Count	% / Mean	Trend	
Retention							
1 Year Later	516	98.3%		7,640	75.7%		Yes
2 Years later	485	96.0%	-2.2%	5,120	61.7%	-14.0%	Yes
3 Years Later	412	92.2%	-3.9%	3,594	55.7%	-6.0%	Yes
Graduation (2002 cohort only)							
Within 6 years	80	73.4%		633	36.0%		Yes
Good standing rate							
First Term	487	92.8%		7,729	76.6%		Yes
Second Term	474	91.0%	-1.8%	6,576	70.9%	-5.6%	Yes
Third Term	461	92.6%	1.6%	5,261	83.9%	13.0%	Yes
Fourth Term	449	91.3%	-1.3%	4,647	81.7%	-2.3%	Yes
Cumulative GPA							
First Term	525	3.0		10,095	2.5		Yes
Second Term	521	2.9	-0.1	9,273	2.4	-0.1	Yes
Third Term	498	2.8	0.0	6,268	2.6	0.2	Yes
Fourth Term	492	2.8	-0.1	5,691	2.6	-0.1	Yes

Note: Data in yellow highlight are higher value based on χ^2 or T-Test ($P < .001$).

Undergraduate Transfers

The characteristics of the undergraduate transfer participants were as follows: a total of 621 undergraduate transfer students (which correlates to a participation rate of 3.2%) from within the 2002-2007 cohorts participated in at least one of the specified extra-curricular activities during their college career.

There were no significant differences in terms of the racial/ethnic make-up, admission status, or transfer GPAs between students that participated in extra-curricular activities and their non-participant peers. There were, however, two differences that were deemed to be statistically significant. There were a higher percentage of males in the participant category (50.2%) than in the non-participant category (41.8%), and the age at the time of transfer was lower (23) for participants that it was for non-participants (24).3

The first comparison highlights the performance and retention of undergraduate transfer students that were male.

Transfers - Males

Table 6: Comparison of Academic Performance (Transfers - Males)

	Participants			Non- Participants			<i>Significant Difference</i>
	Count	% / Mean	Trend	Count	% / Mean	Trend	
Retention							
1 Year Later	298	95.5%		6,218	80.4%		Yes
2 Years later	270	92.8%	-9.4%	4,448	70.8%	-28.5%	Yes
3 Years Later	178	75.4%	-34.1%	2,477	50.9%	-44.3%	Yes
Graduation (2002 cohort only)							
Within 4 years	92	62.6%		2,079	55.9%		No
Pass Rate							
First Term	286	91.7%		6,746	88.1%		No
Second Term	299	97.4%	5.7%	6,597	95.3%	7.3%	No
Third Term	293	98.7%	1.3%	6,012	97.4%	2.1%	No
Fourth Term	281	97.1%	-1.6%	5,539	97.9%	0.5%	No
Cumulative GPA							
First Term	312	3.0		7,661	2.7		Yes
Second Term	307	3.0	0.0	6,921	2.8	0.1	Yes
Third Term	297	3.0	0.0	6,174	2.9	0.0	Yes
Fourth Term	287	3.0	0.0	5,707	2.9	0.0	Yes

Note: Data in yellow highlight are higher value based on χ^2 or T-Test ($P < .001$).

Transfers – 25 and Younger

Table 7: Comparison of Academic Performance (Transfers –25 and Younger)

	Participants			Non- Participants			<i>Significant Difference</i>
	Count	% / Mean	Trend	Count	% / Mean	Trend	
Retention							
1 Year Later	488	95.9%		11,748	81.6%		Yes
2 Years later	435	92.0%	-10.9%	8,623	73.2%	-26.6%	Yes
3 Years Later	280	75.5%	-35.6%	4,680	51.1%	-45.7%	Yes
Graduation (2002 cohort only)							
Within 4 years	165	72.1%		4,324	61.8%		Yes
Pass Rate							
First Term	470	92.5%		12,760	89.3%		Yes
Second Term	489	98.0%	5.5%	12,465	96.1%	6.8%	Yes
Third Term	485	99.6%	1.6%	11,416	97.9%	1.8%	Yes
Fourth Term	465	98.3%	-1.3%	10,520	97.0%	-0.9%	No
Cumulative GPA							
First Term	508	3.0		14,284	2.8		Yes
Second Term	499	3.1	0.1	12,972	2.9	0.1	Yes
Third Term	487	3.1	0.0	11,665	2.9	0.0	Yes
Fourth Term	473	3.0	0.0	10,848	2.9	0.0	Yes

Note: χ^2 or T-Test, $P < .001$ (in yellow highlight); $P < .01$ or $< .05$ (in green highlight)

Analysis and Discussion

Based upon the findings of this study it is quite apparent that extracurricular activities have a very positive impact on the academic performance of students at Sacramento State.

Students achieved much higher rates of retention and graduation, better GPAs, and higher good standing rates when they engaged in any of the activities included in this study, such as; serving as a Board Member of ASI, becoming an Orientation Leader, taking a job as Residence Hall Associate, or serving in a leadership position in an on-campus student club.

Levels of Activity

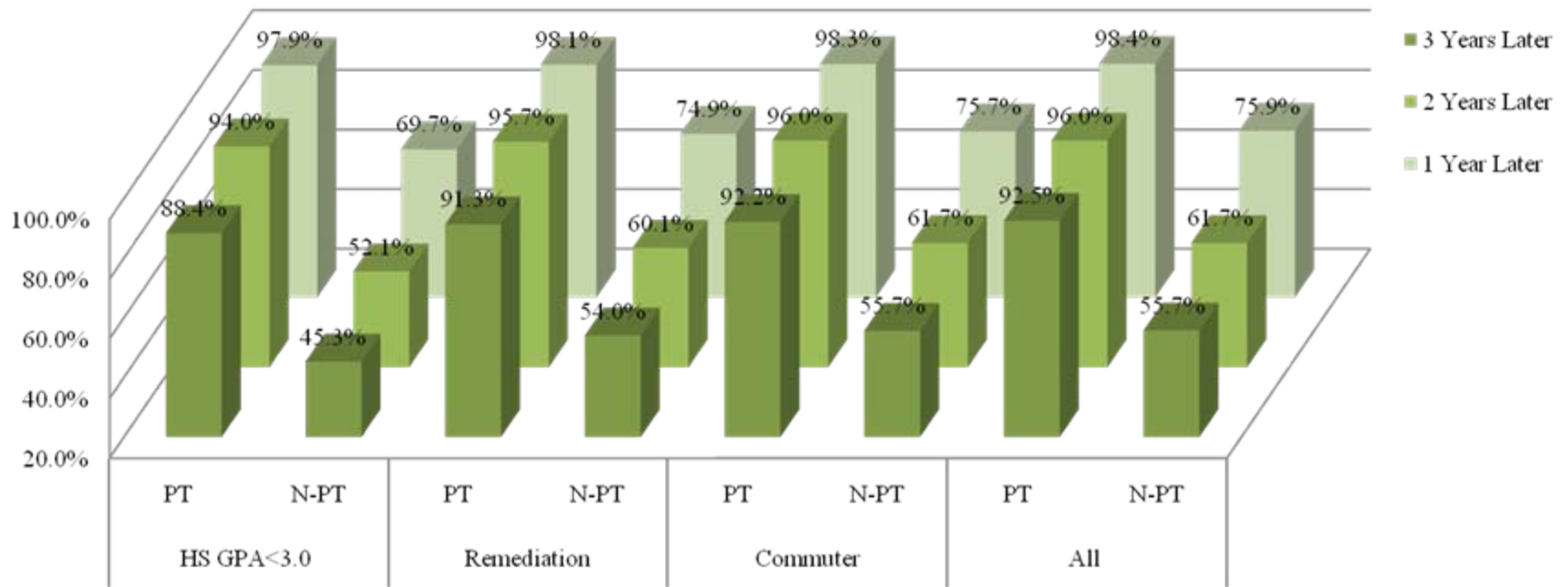
Among the 922 freshmen participants, 64.0% were involved in one activity, 24.8% in two activities, and 11.2% in 3 to 8 activities.

In relation to the 621 undergraduate transfer participants, 72.1% were involved in one activity, 21.1% in two activities, and 6.8% in 3 to 8 activities.

Obviously, participation in extracurricular activities did not lower the academic performance of participants, but instead helped them to persist in college and bolstered their progress toward graduation.

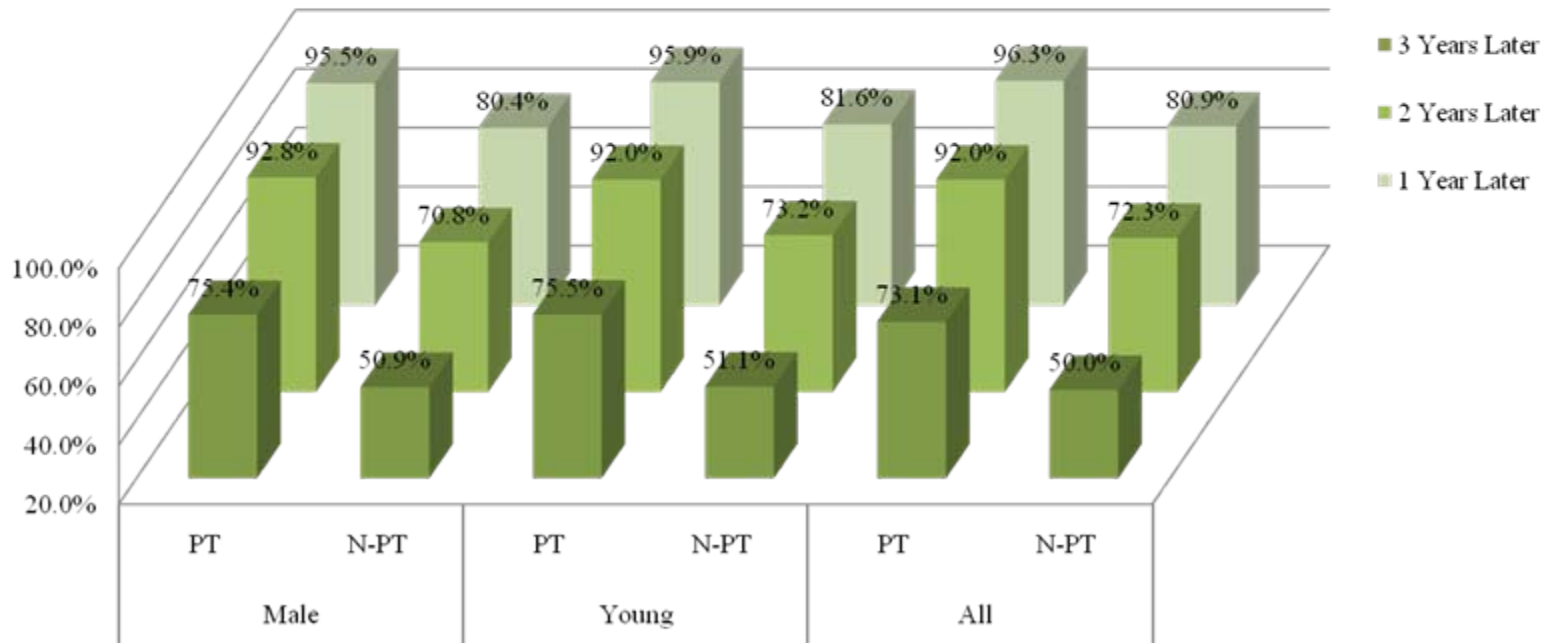
Retention Rates - Freshmen

Figure 1: Freshmen Cohorts - Retention Rates of Participants and Non-participants in Extracurricular Activities



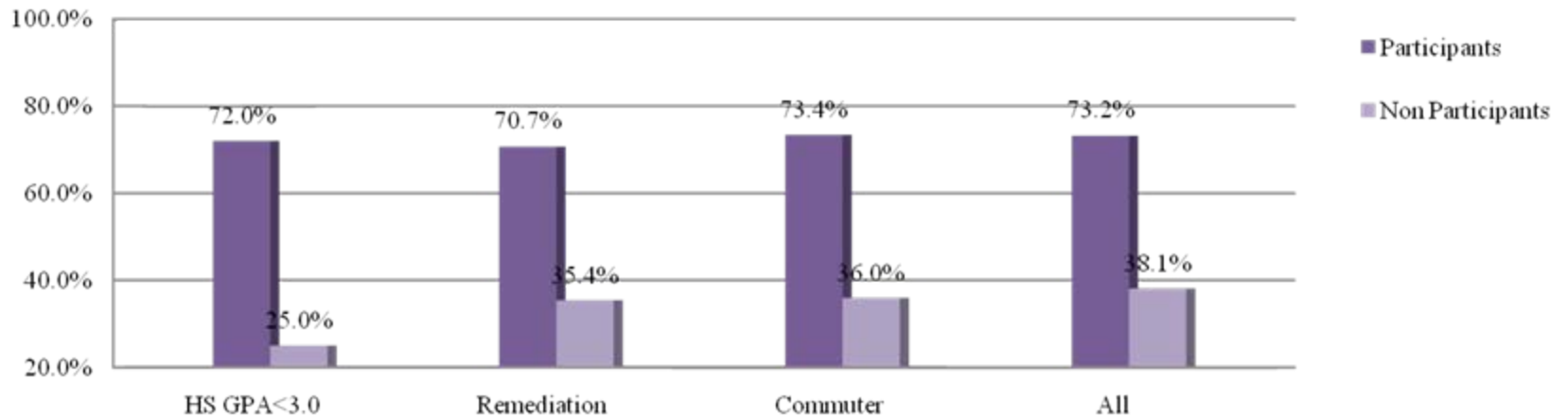
Retention Rates - Transfers

Figure 2: Undergraduate Transfer Cohorts - Retention Rates of Participants and Non-participants in Extracurricular Activities



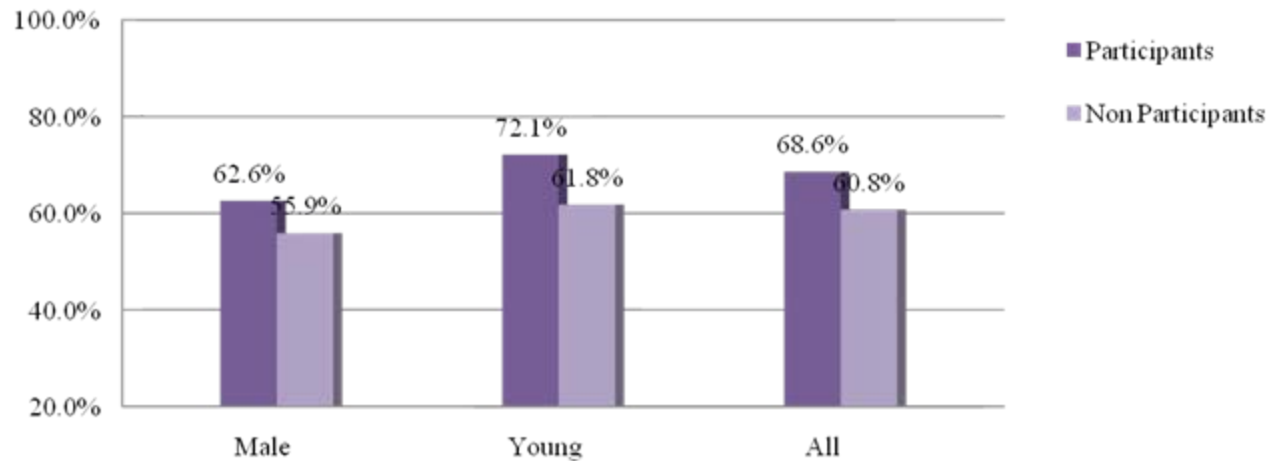
Six-year Graduation Rates - Freshmen

Figure 3: Freshmen Cohorts - Six-year Graduation Rates of Participants and Non-participants in Extracurricular Activities



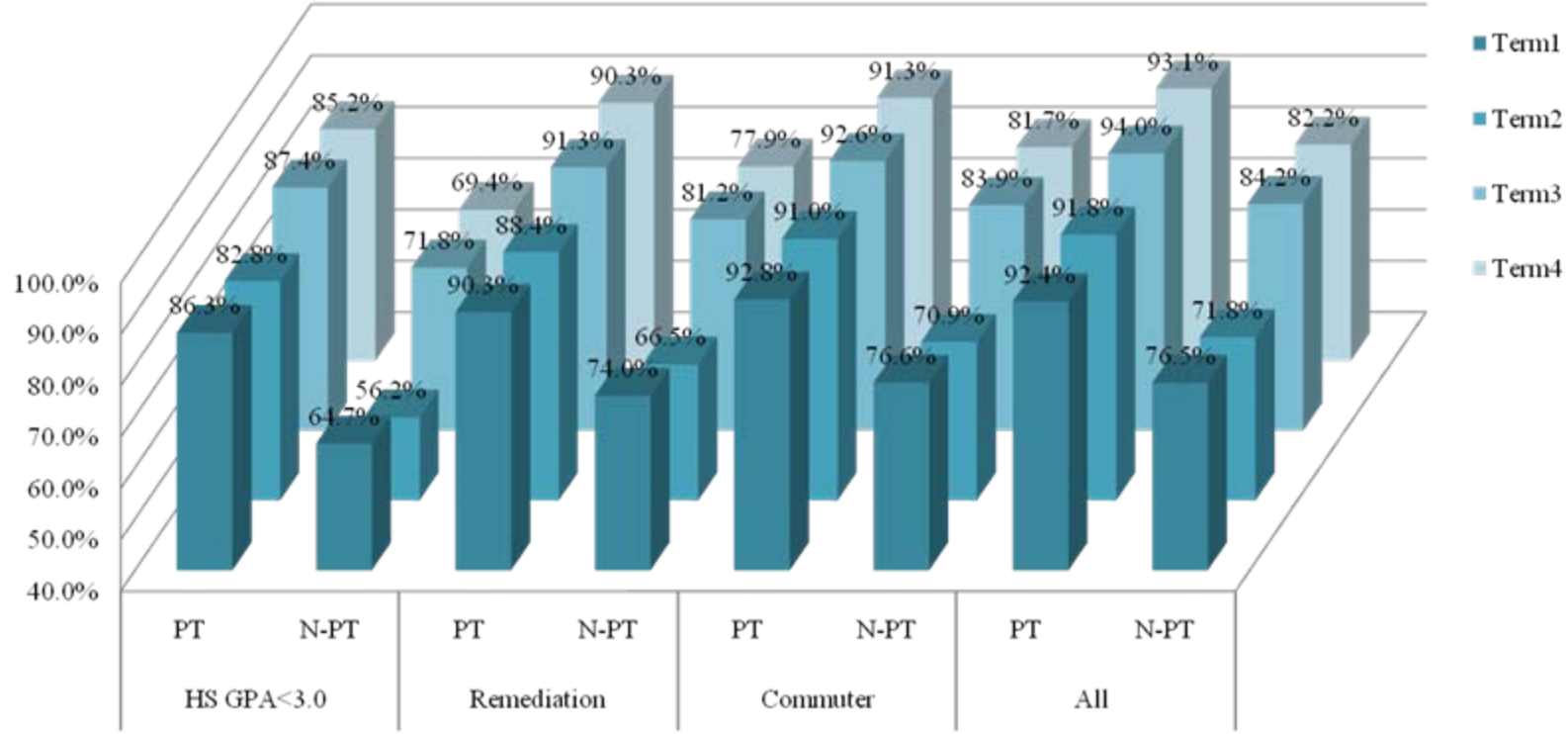
Four-year Graduation Rates - Transfers

Figure 4: Undergraduate Transfer Cohorts - Four-year Graduation Rates of Participants and Non-participants in Extracurricular Activities



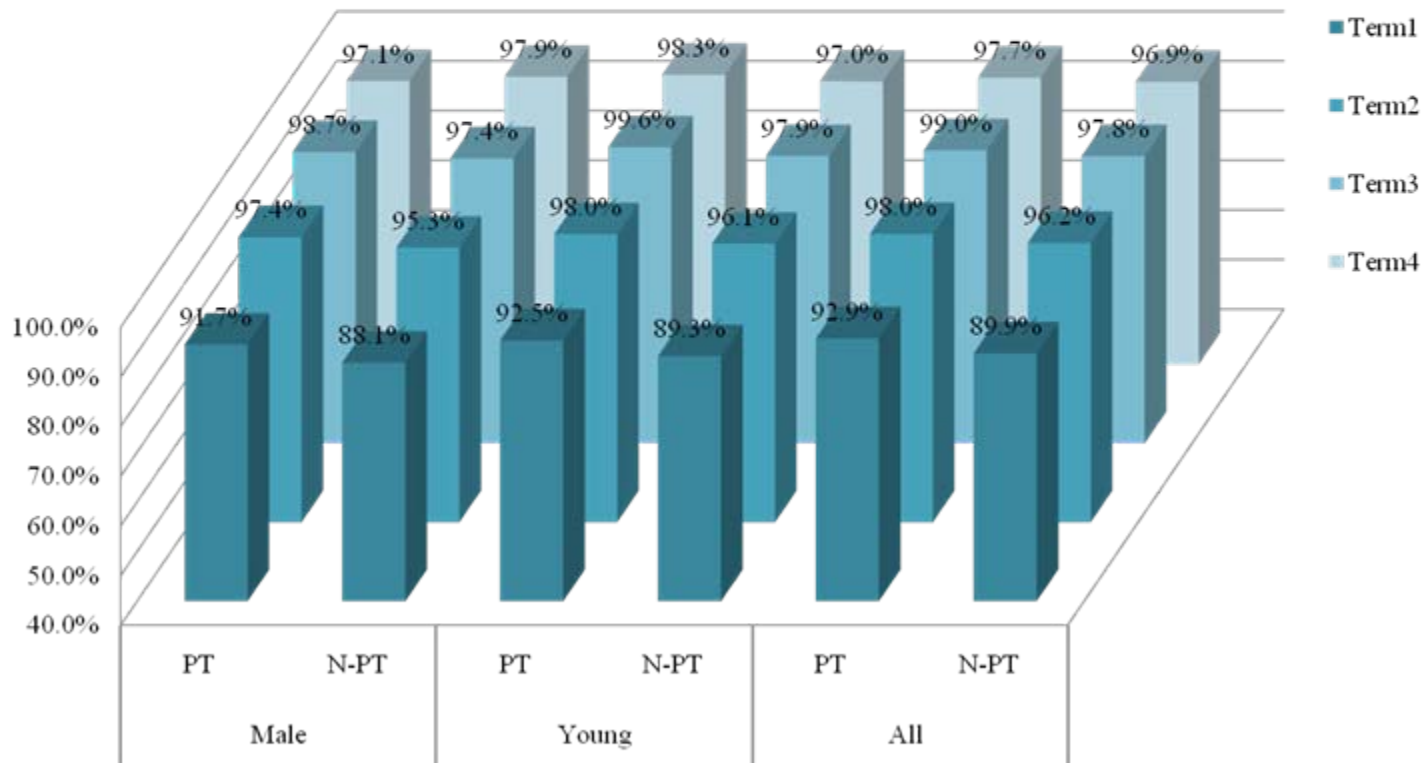
Good Standing Rates - Freshmen

Figure 5: Freshmen Cohorts – Good Standing rates of Participants and Non-participants in Extracurricular Activities



Good Standing Rates - Transfers

Figure 6: Undergraduate Transfer Cohorts – Good Standing rates of Participants and Non-participants in Extracurricular Activities



Activity Start Year – Freshmen Cohort

Table 8: Starting Year of Extracurricular Activity by Freshmen Cohort

Start Year	Cohort							% of Participants
	2002	2003	2004	2005	2006	2007	Total	
2004-2005	1	0	0	0	0	0	1	
2005-2006	91	97	64	20	1	0	273	
2006-2007	56	63	71	68	28	1	287	
2007-2008	20	57	71	91	76	22	337	
2008-2009	0	0	3	1	4	16	24	
Total	168	217	209	180	109	39	922	
Start in First Year	NA	NA	NA	20	28	22	70	21.3%
Start in Second Year	NA	NA	64	68	76	16	224	41.7%
Start in Third Year	NA	97	71	91	4	NA	263	34.9%

Note: Yellow highlight designates the participants first year of extracurricular activity, blue the second year of participation, and pink the 3rd year of participation.

Activity Start Year - Transfer Cohort

Table 9: Start Year of Extracurricular Activity by Transfer Cohort

Start Year	Cohort							% of Participants
	2002	2003	2004	2005	2006	2007	Total	
2003-2004	1	0					1	
2004-2005	0	1	0				1	
2005-2006	32	60	67	27			186	
2006-2007	7	26	44	91	30	2	200	
2007-2008	3	10	29	55	92	34	223	
2008-2009	0	0	0	0	2	8	10	
Total	43	97	140	173	124	44	621	
Start in First Year	NA	NA	NA	27	30	34	91	26.7%
Start in Second Year	1	1	67	91	92	8	260	54.1%
Start in Third Year	0	60	44	55	2	0	161	27.9%

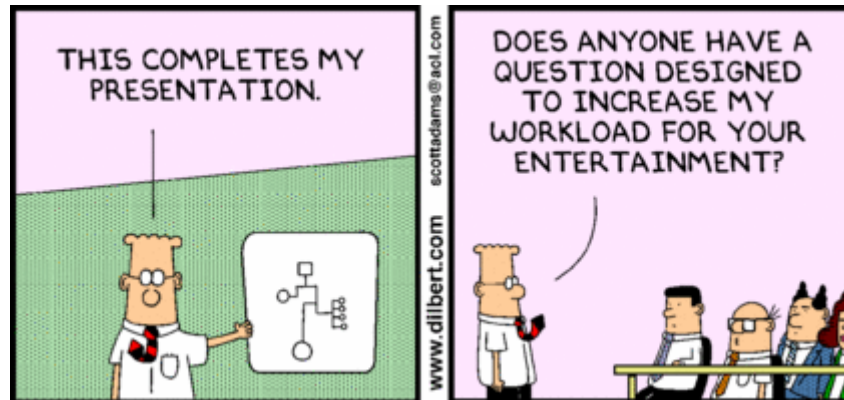
Note: Yellow highlight designates the participants first year of extracurricular activity, blue the second year of participation, and pink the 3rd year of participation.

Limitations of the Data Utilized

- It was necessary to track the academic performance of students beyond their first year since it appears as though a majority of the students began participating in extra-curricular activities during their second year in college or later.
- However, data relevant to the starting year of activities has only been available since 2005, thus the starting years for Cohort 2002-2004 are unknown. Therefore, the percentages relevant to the starting year of those cohorts might be slightly different than if more data had been available.



Questions/Comments



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<http://www.csus.edu/oir/Reports/Retention and Graduation/Retention Task Force/Final Report 2009 edited.pdf>

<http://www.csus.edu/oir/>