



Research Brief from the
Office of Research &
Planning

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Percent of Students who Withdraw after the 10th Week by Term from Fall 2009 to Spring 2011

Purpose: The Faculty Chairs Council requested that the Office of Research and Planning compare Fall and Spring withdrawal rates after spring break in both the fall and spring semesters. The Faculty Chairs are concerned that there is a statistically significantly and substantially higher dropout rate after Spring Break then at the same point in time in the fall semester. Accordingly, the purpose of this brief is to explore whether or not students are more likely to drop after spring break when compared to the same time period in the fall semester. The purpose of exploring this topic is to determine if any additional student interventions are needed in the spring during, prior to, and after Spring Break (i.e. 10th week).

Summary of Findings:

Sections

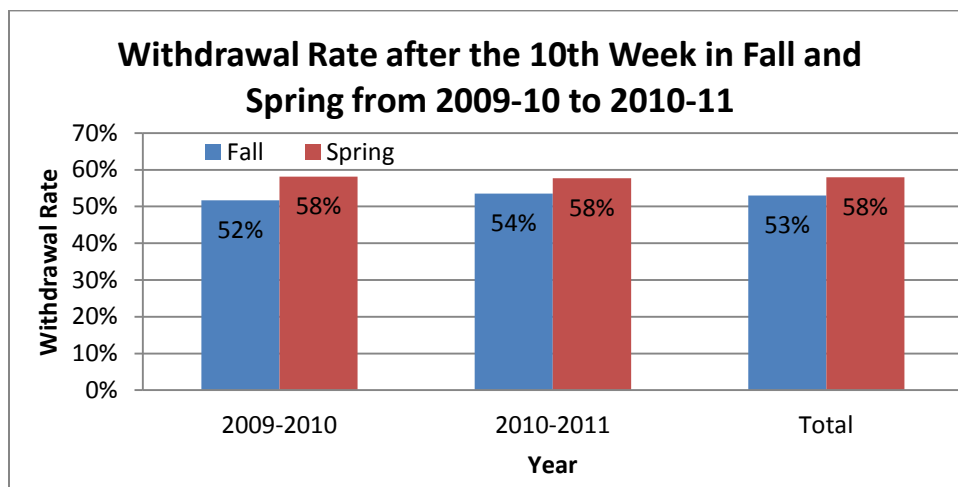
- 79% of the sections from Fall 2009 to Spring 2011 were weekly census sections that were offered for the entire length of the semester

9th, 10th, and 11th weeks only

- Overall, students were slightly more likely to withdraw from a section in the 11th week (8%) than in the 9th (7%), or 10th week (6%)
- Students were more likely to withdrawal in the 9th – 11th weeks in the fall semesters combined (24%) then in the spring semesters combined (20%)

Prior to and After Spring Break (10th week)

- In Spring 2010 students had a statistically significantly ($p < .001$) higher withdrawal rate after the 10th week (58%) than students in the Fall 2009 semester (52%)
- In Spring 2011 students had a statistically significantly ($p = .010$) higher withdrawal rate after the 10th week (58%) than students in the Fall 2010 semester (54%)
- The spring students (2010 and 2011) had a statistically significantly ($p < .001$) higher withdrawal rate after the 10th week (58%) than students in the fall semesters (2009 and 2010, 53%)
- None of the withdrawal rates were substantially different from each other (i.e. approximately 10% or more)



Findings: Table 1 compares the withdrawal rates for fall and spring for the 9th, 10th, and 11th weeks only. In Spring 2010 and Spring 2011, Spring Break was in the 10th week. Overall, students were slightly more likely to withdraw from a section in the 11th week (8%) than in the 9th (7%), or 10th week (6%). Moreover, students were more likely to withdraw in the 9th – 11th weeks in the fall semesters combined (24%) than in the spring semesters combined (20%).

Table 2 compares the withdrawal rate of students who dropped at the start of the 11th week or later in the fall semesters to the withdrawal rate of students who dropped at the start of the 11th week or later in the spring semesters. In Spring 2010 students had a statistically significantly ($p < .001$) higher withdrawal rate after the 10th week (58%) than students in the Fall 2009 semester (52%). Moreover, in Spring 2011 students had a statistically significantly ($p = .010$) higher withdrawal rate after the 10th week (58%) than students in the Fall 2010 semester (54%). When combining the two fall and spring semesters, the relationship is similar, the spring students had a statistically significantly ($p < .001$) higher withdrawal rate after the 10th week (58%) than students in the fall semesters (53%).

A limitation to the results is that none of the differences were substantial, according to Cohen (see Methodology section for explanation of substantial, Rosenthal & Rosnow, 1984). In addition, there does appear to be a slightly higher withdrawal rate in the spring semester (13.6%) than in the fall semester (12.5%), suggesting the possibility that the higher withdrawal rates may be influenced by other factors.

Table 1: Number and Percent of Withdrawals in the 9th, 10th, and 11th Weeks in Weekly Census Sections Only in the Primary Terms from Fall 2009 to Spring 2011.

Term	9 th Week			10 th Week (Spring Break)			11 th Week			Total (9 th – 11 th Week)		
	#	N	%	#	N	%	#	N	%	#	N	%
Fall 2009	114	1,849	6.2	170	1,849	9.2	134	1,849	7.2	418	1,849	22.6
Fall 2010	127	1,923	6.6	188	1,923	9.8	153	1,923	8.0	468	1,923	24.3
Fall Total	241	3,772	6.4	358	3,772	9.5	287	3,772	7.6	886	3,772	23.5
Spring 2010	124	1,796	6.9	42	1,796	2.3	141	1,796	7.9	307	1,796	17.1
Spring 2011	178	1,934	9.2	49	1,934	2.5	197	1,934	10.2	424	1,934	21.9
Spring Total	302	3,730	8.1	91	3,730	2.4	338	3,730	9.1	731	3,730	19.6
Overall Total	543	7,502	7.2	449	7,502	6.0	625	7,502	8.3	1617	7,502	21.6

Note: “#” refers to the number of students who dropped with a “W” grade in the week specified, “N” refers to the number of “W” grades earned in the term specified, and “%” is the percent of drops in the week specified.

Table 2: Number and Percent of Withdrawals in the 11th Week or Later (i.e. after Spring Break) in Weekly Census Sections from Fall 2009 to Spring 2011 by Term and Year.

Year	Fall			Spring			Effect Size & 95% CI Lower & Upper ES			p- Value
	#	N	%	#	N	%	ES	Lower	Upper	
2009-2010	956	1,849	51.7	1,043	1,796	58.1	-.13	-.19	-.06	< .001
2010-2011	1,029	1,923	53.5	1,115	1,934	57.7	-.08	-.15	-.02	.010
Total	1,985	3,772	52.6	2,158	3,730	57.9	-.11	-.15	-.06	< .001

Note: “#” refers to the number of students who dropped with a “W” grade in the 11th week or later, “N” refers to the total number of “W” grades earned in the term specified, and “%” is the percent of drops after the 10th week (i.e. Spring Break).

Methodology: Records from Fall 2009, Spring 2010, Fall 2010, and Spring 2011, the two most recent complete years, were used to examine the relationship between withdrawing

from a course after Spring break in the spring term and withdrawing from the course in the same week in the fall term. In order to be included in the study, students had to earn a grade on record of a "W". Weekly census sections were the only sections included in the study because they represented most of the enrollments at Crafton and because the weekly census sections provided a more methodologically sound process for comparing student performance by week. Seventy-nine percent of the sections offered in Fall 2009, Spring 2010, Fall 2010, and Spring 2011 were weekly census full-term regularly scheduled sections. The sections excluded from the study included positive attendance sections, daily census sections, and independent study sections. Positive attendance sections do not have regularly scheduled meeting times. Daily census sections have at least five regularly scheduled meeting times and do not run the entire length of the semester. Independent study sections include cooperative education, work experience, and online sections and allow students to meet the requirements of the course in their own unique way.

Section Type	Fall 2009		Spring 2010		Fall 2010		Spring 2011		Total	
	#	%	#	%	#	%	#	%	#	%
Daily Census	90	14.7	80	14.4	66	11.5	69	11.9	305	13.1
Independent Study	19	3.1	11	2.0	8	1.4	6	1.0	44	1.9
Positive Attendance	25	4.1	30	5.4	33	5.7	41	7.1	129	5.6
Weekly Census	477	78.1	436	78.3	469	81.4	464	80.0	1,846	79.4
Total	611	100.0	557	100.0	576	100.0	580	100.0	2,324	100.0

Note: "#" refers to the number of sections, and "%" is the column percent and represents the type of sections offered each semester. Honors sections are included in the counts.

A limitation to the study was that data was only available for when student's registered for a course not for when they first attended a course session. For example, a student may attend class one or more times prior to enrolling for the course.

The **p-value** represents the probability that the difference when the student withdrew from a section is due to chance. A p-value less than .05 indicates that the difference is less likely to occur randomly in the population (i.e. statistically significant). It is important to keep in mind that when interpreting statistical significance statistically significant differences can occur even when the difference between two groups is very small (Serlin & Lapsley, 1985). Accordingly, it is also important to not only look at statistical significance, but to also examine how large the difference is between the comparison groups, and to consider the size of the difference in order for it to be meaningful. Therefore, the results presented here also include an effect size.

The **effect size** statistic is used in meta-analyses. A meta-analysis uses quantitative techniques to summarize the findings from a number of studies on a particular topic to determine the average effect of a given technique (Marzano, Pickering, & Pollock, 2001; Marzano, Marzano, & Pickering, 2003). One method of interpreting effect size was developed by Jacob Cohen (Marzano et al.). Jacob Cohen defined "small," "medium," and "large" effect sizes (Rosenthal & Rosnow, 1984). He explained that an effect size of .20 can be considered small, an effect size of .50 can be considered medium, and an effect size of .80 can be considered large (Marzano et al., and Rosenthal & Rosnow, 1984). Equally important, if the lower end of the effect size confidence interval (CI) is above .20 it indicates that there is a 95% probability that the program or characteristic has a meaningful impact on the outcome. As mentioned previously, the number of students in each group does not influence Effect Size; whereas, when statistical significance is calculated, the number of students in each group does influence the significance level (i.e. "p" value being lower than .05).

References:

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