



The Relationship between Average Census and Maximum Class Size by Face-to-Face and Online Sections from 2014-2015 to 2016-2017

Prepared by Keith Wurtz

Purpose of Brief

Provide the average class size at census and for the maximum enrollment in online and face-to-face sections from 2014-2015 to 2016-2017 to identify student demand.

Summary of Findings

Average Census Enrollments

- In Fall 2016 students in online sections had a statistically significant ($p < .05$) and substantially ($ES = .24$) higher census class size (27.0) than in face-to-face sections (24.4)
- The average census enrollment in the summer semesters was statistically significantly ($p < .001$) and substantially ($ES = .40$) higher in online sections (27.7) than in face-to-face sections (23.9)

Average Maximum Enrollments

- In Spring 2017 students in online sections had a statistically significant ($p < .05$) and substantially ($ES = .20$) higher maximum class size (30.9) than in face-to-face sections (27.4)
- The average maximum enrollment in the summer semesters was statistically significantly ($p < .001$) and substantially ($ES = .55$) higher in online sections (30.6) than in face-to-face sections (25.2)

Possible Implications

- Results suggest that Crafton needs to increase online section offerings in the summer

Overview

The Office of Instruction requested that the Office of Institutional Effectiveness, Research, and Planning provide the average class size at census and maximum enrollment for online and face-to-face classes from 2014-2015 to 2016-2017. The Office of Instruction is seeking to identify student demand to inform enrollment management planning.

Findings

Table 1 illustrates the average class size at census for face-to-face and online sections from 2014-2015 to 2016-2017. Overall, the results indicate that for the fall and spring semesters there was not a substantial or statistically significant difference in the average census class size except for the Fall 2016 semester. Namely, in Fall 2016 students in online sections had a statistically significant ($p < .05$) and substantially ($ES = .24$) higher census class size (27.0) than in face-to-face sections (24.4). Similarly, the average census enrollment in the summer semesters was statistically significantly ($p < .001$) and substantially ($ES = .40$) higher in online sections (27.7) than in face-to-face sections (23.9) indicating that there is a higher demand for online sections in the summer semesters.

The relationship between the maximum enrollment in face-to-face and online sections from 2014-2015 to 2016-2017 is illustrated in Table 2. The results for the maximum enrollment mirror the relationship identified at census enrollment. Overall, the results indicate that for the fall and spring semesters there was not a substantial or statistically significant difference in the average maximum enrollment except for the Spring 2017 semester. Namely, in Spring 2017 students in online sections had a statistically significant ($p < .05$) and substantially ($ES = .20$) higher maximum class size (30.9) than in face-to-face sections (27.4). Likewise, the average maximum enrollment in the summer semesters was statistically significantly ($p < .001$) and substantially ($ES = .55$) higher in online sections (30.6) than in face-to-face sections (25.2) indicating that there is a higher demand for online sections in the summer semesters.

Possible Implications

The results indicate that there is a consistently higher student demand for online sections in the summer than in the primary terms. Suggesting that Crafton needs to offer more online sections in the summer. In addition, it appears that the demand for online sections was higher in 2016-2017 than in previous years, suggesting that student demand for online sections in the primary terms may be increasing.

Table I: Average *Enrollments at Census* by Face-to-Face and Online sections.

Term	Face-to-Face			Online			ES	Statistically Significant
	Count	Mean	Standard Deviation	Count	Mean	Standard Deviation		
2014SM	93	23.76	11.50	29	28.28	6.78	.43	Yes
2015SM	84	23.89	10.42	33	27.91	7.53	.41	Yes
2016SM	83	23.96	9.58	54	27.24	7.52	.37	Yes
Overall	260	23.87	10.53	116	27.69	7.29	.40	Yes
2014FA	594	28.97	57.86	40	29.93	11.57	.02	No
2015FA	607	27.86	64.82	65	27.34	6.98	-.01	No
2016FA	587	24.35	11.05	74	26.95	6.72	.24	Yes
Overall	1,788	27.08	50.79	179	27.75	8.17	.01	No
2015SP	593	26.78	47.80	50	26.78	7.92	.00	No
2016SP	590	26.25	57.25	74	26.24	7.28	.00	No
2017SP	594	25.01	15.02	76	26.12	7.19	.08	No
Overall	1,777	26.01	43.87	200	26.33	7.38	.01	No

Table II: Average *Maximum Enrollments* by Face-to-Face and Online sections.

Term	Face-to-Face			Online			ES	Statistically Significant
	Count	Mean	Standard Deviation	Count	Mean	Standard Deviation		
2014SM	93	25.11	11.84	29	31.28	7.41	.56	Yes
2015SM	84	25.13	10.53	33	30.58	7.25	.56	Yes
2016SM	83	25.42	9.54	54	30.24	7.30	.55	Yes
Overall	260	25.22	10.68	116	30.59	7.26	.55	Yes
2014FA	594	31.14	58.31	40	34.60	13.91	.06	No
2015FA	607	30.09	65.15	65	31.43	7.27	.02	No
2016FA	587	28.99	63.58	74	31.28	7.14	.04	No
Overall	1,788	30.08	62.40	179	32.08	9.17	.03	No
2015SP	593	29.14	48.66	50	30.82	8.10	.04	No
2016SP	590	28.32	57.62	74	30.61	7.58	.04	No
2017SP	594	27.44	17.94	76	30.86	7.29	.20	Yes
Overall	1,777	28.30	44.70	200	30.76	7.57	.06	No

Methodology

One challenge in calculating average class size is that Crafton has honors classes, stacked classes, and cross-listed classes. Honors classes have a maximum enrollment of 5 and enrollment in Honors sections needs to be combined with the parent section. Stacked classes occur in Art and Kinesiology, among other disciplines. As an illustration, Kinesiology, might offer the following two sections at the same time and in the same room, KIN/D-143A, Funk/Hip Hop Dance I and KIN/D-143B, Fund/Hip Hop Dance II. The enrollments for both of these sections need to be aggregated and the section should only be counted once. Finally, cross-listed sections occur when students are given a choice to enroll in one of two courses that are taught by the same instructor in the same room. An example is COMMST-145, Business Communication, and BUSAD-145, Business Communication. As with stacked sections, cross-listed section enrollments need to be aggregated and only counted once for each cross-listing of the section.

Honors sections were identified by the “H” at the end of the course number. As an illustration, ENGL-101H-01 and ENGL-101-01 were counted as one section, ENGL-101-01, and the enrollments were aggregated. Stacked sections were reduced to one section for each group of stacked section by aggregating by Term, Subject, Room, Meeting Day, Time and Instructor. Cross-listed sections were first isolated by whether or not they were primary (XP) or secondary (XS) sections, and then aggregated by Term, Room, Meeting Day, Time, and Instructor.