

# SARreport

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Volume 1, Issue 2



## Introduction

This SARreport examines student success and retention based on course completions occurring between the fall 2010 and fall 2013 academic terms (inclusive). Student success can be measured in many ways (qualitatively and quantitatively). Where large numbers of both students and courses are involved, however, the grade earned by the student in the course is often used to calculate and compare student success and retention in various interesting and useful ways. Success and retention calculations are based upon course grades with student (enrollee) success defined as a grade of “C or better” and retention defined as a grade other than “W” (withdrawal).<sup>1</sup>

## Student Grade Data

The focus of this SARreport is on a subset of student grade data for the top-five highest enrollment credit types.<sup>2</sup> The larger data set (from which the top-five subset was taken) includes 732,064 student grades for 1,785 different courses<sup>3</sup> in 11 different credit types for fall 2010 through fall 2013. **Table 1** shows a breakdown from the larger data set for the top-five highest enrollment credit types. Arranged in descending order by grade count, the top-five credit types represent over 98% of the total.<sup>4</sup> The top-five credit type subset includes courses required for all commonly recognized certificates and degrees such as A.A., A.S, and Baccalaureate.

Table 1. Grade Counts and Percentages by Credit Type (descending order)\*

Credit Type	Count	Percent	Cumulative Percent
Advanced & Professional [01]	457,541	62.50%	62.50%
Postsecondary Vocational (PSV) [02]	136,912	18.70%	81.20%
College Preparatory [03]	53,139	7.26%	88.46%
Postsecondary Adult Vocational (PSAV) [05]	36,386	4.97%	93.43%
Baccalaureate (3000/4000 level) [14]	33,966	4.64%	98.07%**
<i>total</i>	<i>717,944</i>		

\*totals for academic terms fall 2010 through fall 2013

\*\*the remaining 1.93% includes credit types for Adult High School [08] Continuing Workforce Ed. (CWE) [06] Adult Basic Ed. (ABE) [07] Educator Preparation Institute (EPI) [15] GED/HS Equivalency [09] Vocational Preparatory Instruction (VPI) [10]

Success and retention comparisons made across credit types and the courses within them can be used to answer broad questions such as “Is the average student success and/or retention the same across credit types?” and “How well does student success in Course A, predict success in Course B?” at a more specific level of inquiry. Such information can be valuable to support a range of decisions related to academic planning and development, student advising, course sequencing, prerequisite requirements, and others. The balance of this SARreport examines several such success/retention comparisons using credit type, course delivery method, and longitudinal comparisons across academic terms.

# Success and Retention Comparisons and Differences

## Credit Type

The top-five credit types include 717,944 grades earned by students in 1,577 distinct courses (88.3% of all 1,785 courses across all credit types). **Figure 1** compares success and retention across the top-five credit types for academic terms fall 2010 through fall 2013. As shown, Postsecondary Adult Vocational Education courses have the highest average student success and retention. This means that, on average, nearly 93% of students receive a course grade of C or higher, and that over 99% complete the course.<sup>5</sup> In contrast, College Preparatory (credit type 03) courses have, on average, the lowest relative success rate (67%), and Advanced and Professional (credit type 01) courses have the lowest relative retention rate (94%). The average retention rate exceeds 94% for all credit type categories.

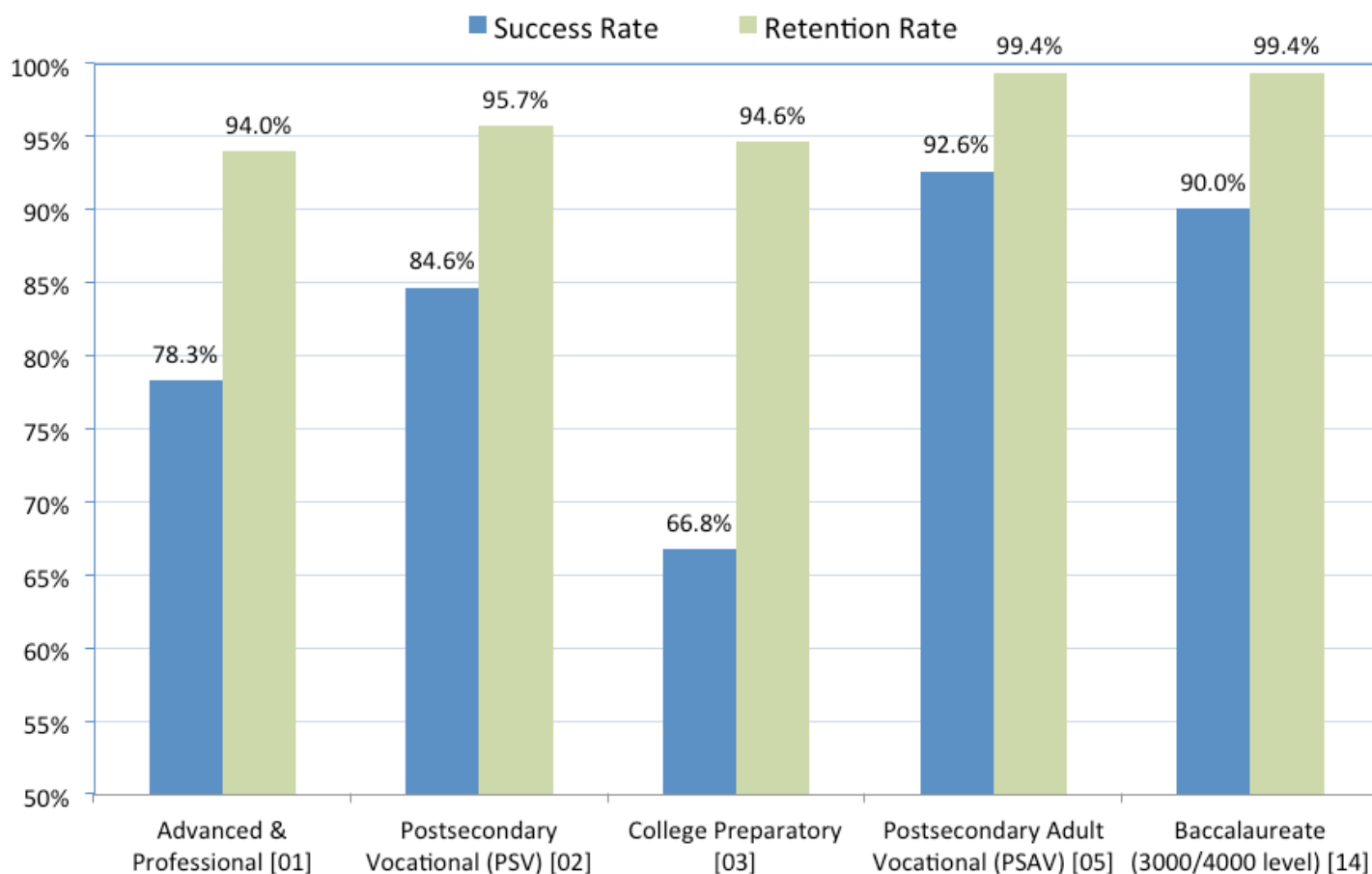


Figure 1. Average student success and retention rates across credit types (n = 717,944).

In addition to comparing success and retention by course credit type, similar comparisons can also be made using any combination of other criteria such as specific course, delivery method (classroom/face-to-face, hybrid, online/distance learning), academic period (session type, term, year), delivery location (campus/center) and others. The following sections examine differences by course, delivery method, and academic term.

## Course and Delivery Method

A list of the top 20 highest enrollment courses with success and retention by course delivery method and the overall average (for all delivery methods combined) is shown in **Table 2**.<sup>6</sup> The grade counts by delivery method as well as the combined (All) and cumulative total counts are also shown.<sup>7</sup> Campus delivery (also called classroom, face-to-face, or traditional) is defined as <30% non-face-to-face instruction; Hybrid delivery is defined as 30% to 79% non-face-to-face delivery; and Online (officially referred to as distance learning) is defined as >79% non-face-to-face delivery.<sup>8</sup> As (also) shown in **Figure 2**, students in SPC2608 (Fundamentals of Public Speaking) had the highest overall success (86%), and those in MAT0018 (Basic Mathematics) had the lowest (relative) overall success (58%). **Figure 3** contains retention results for the same courses. All courses show differences in both success and retention by course delivery method (see also **Figure 4**). For example, disaggregating the overall success rate for SPC2608, those delivered via the campus (face-to-face) method have a success rate of 89%; hybrid 84%; and online 70%. Similarly disaggregated results for MAT0018 show campus success at 51%; hybrid 62%; and online 48%. Differences are also evident in student retention rates across courses and delivery methods.

Table 2. Average Success and Retention by Course and Delivery Method for Top 20 Highest Enrollment Courses\*

Course	Student Success				Student Retention				Student Grade Count				
	Campus	Hybrid	Online	All	Campus	Hybrid	Online	All	Campus	Hybrid	Online	All	Cumulative
ENC1101	78.74%	74.68%	68.46%	76.87%	95.63%	93.62%	92.87%	95.03%	22,345	3,278	4,093	29,716	29,716
SLS1103	86.44%	77.15%	69.76%	82.39%	97.02%	96.95%	96.41%	96.90%	18,801	3,409	4,620	26,830	56,546
MAC1105	69.00%	68.70%	65.84%	68.48%	91.05%	90.69%	89.18%	90.73%	17,975	1,214	3,668	22,857	79,403
MAT0028	58.04%	64.66%	52.08%	60.40%	93.48%	94.24%	91.02%	93.53%	8,133	9,194	2,406	19,733	99,136
MAT1033	67.38%	81.41%	54.06%	65.34%	92.95%	95.51%	85.95%	91.83%	14,916	156	2,919	17,991	117,127
PSY1012	82.48%	79.04%	75.34%	79.99%	96.27%	96.45%	95.59%	96.12%	9,942	3,068	4,695	17,705	134,832
ENC1102	77.44%	74.85%	69.66%	75.43%	93.55%	91.23%	90.22%	92.55%	11,553	2,064	3,823	17,440	152,272
STA2023	81.01%	77.59%	65.66%	77.73%	94.21%	93.62%	86.98%	92.71%	10,916	580	2,956	14,452	166,724
DEP2004	85.26%	79.82%	80.23%	82.77%	96.41%	95.90%	95.63%	96.06%	6,877	1,343	5,144	13,364	180,088
HUM2210	78.10%	75.23%	76.68%	77.41%	94.91%	95.67%	94.71%	94.88%	6,225	646	3,970	10,841	190,929
BSC2085C	75.09%	73.08%	60.22%	72.29%	88.57%	88.11%	86.95%	88.24%	7,811	1,018	1,878	10,707	201,636
BSC1005	77.61%	70.43%	66.62%	72.62%	95.64%	95.82%	93.42%	94.90%	5,204	1,745	3,691	10,640	212,276
ECO2013	80.97%	81.46%	78.22%	80.08%	95.19%	94.21%	94.07%	94.77%	6,326	604	3,443	10,373	222,649
SPC2608	88.59%	83.57%	70.42%	85.82%	96.12%	96.12%	93.17%	95.75%	7,736	1,004	1,244	9,984	232,633
MAT0018	51.13%	62.23%	47.96%	57.96%	93.11%	95.06%	92.76%	94.32%	3,180	6,119	442	9,741	242,374
SYG2000	76.00%	74.62%	81.04%	77.88%	95.59%	94.39%	95.26%	95.31%	4,537	1,194	3,925	9,656	252,030
AMH2010	78.58%	89.50%	77.11%	78.36%	95.39%	97.50%	95.00%	95.32%	6,227	200	2,840	9,267	261,297
ESC1000	81.95%	79.21%	82.75%	81.62%	96.39%	95.53%	96.58%	96.26%	3,074	2,169	3,739	8,982	270,279
CGS1100	78.70%	76.15%	72.00%	75.18%	94.53%	94.05%	93.08%	93.79%	3,037	1,832	3,918	8,787	279,066
HUM2020	79.64%	81.45%	74.49%	79.36%	94.41%	94.29%	92.28%	94.13%	5,264	1,472	933	7,669	286,735

\*Note: Academic history grades for top 20 highest enrollment courses in academic terms fall 2010 through fall 2013 (credit types 01, 02, 03, 05, 14); courses are sorted by total grade count (descending)

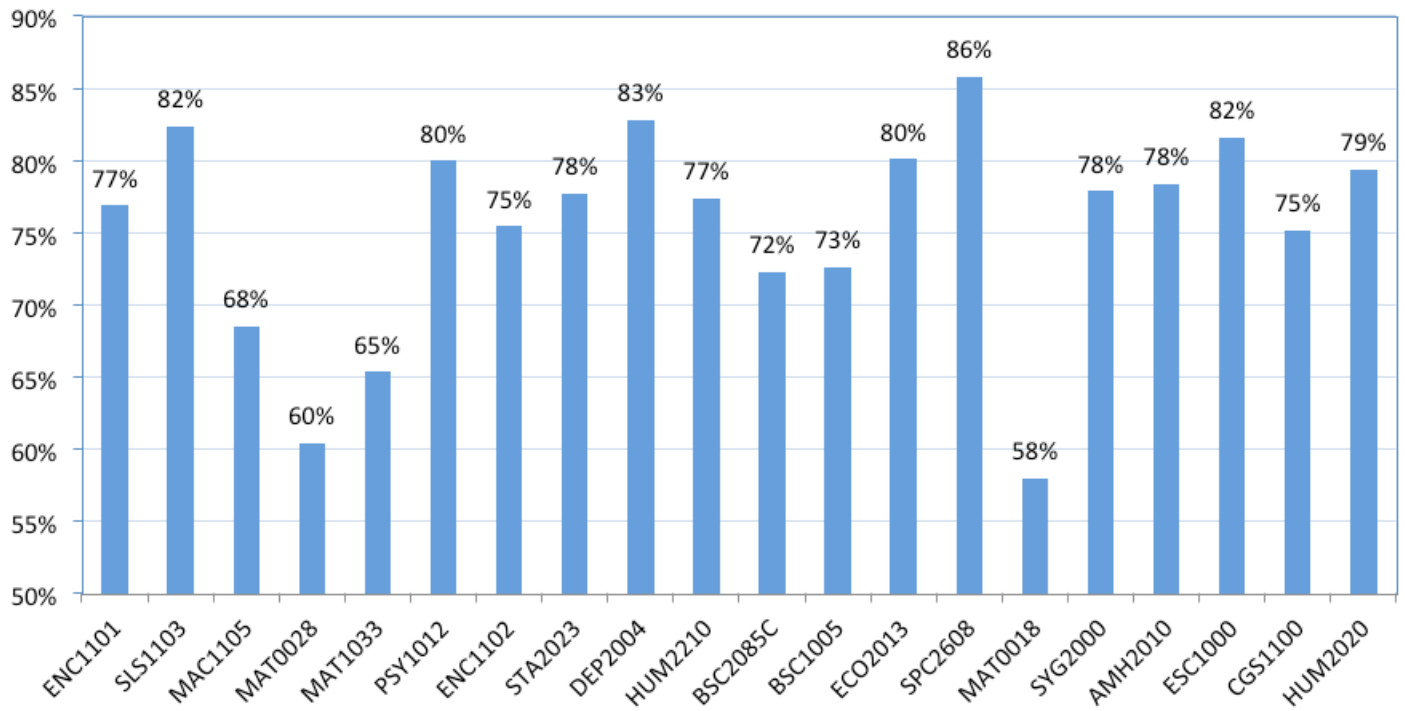


Figure 2. Average success by course for top 20 highest enrollment courses.<sup>9</sup>

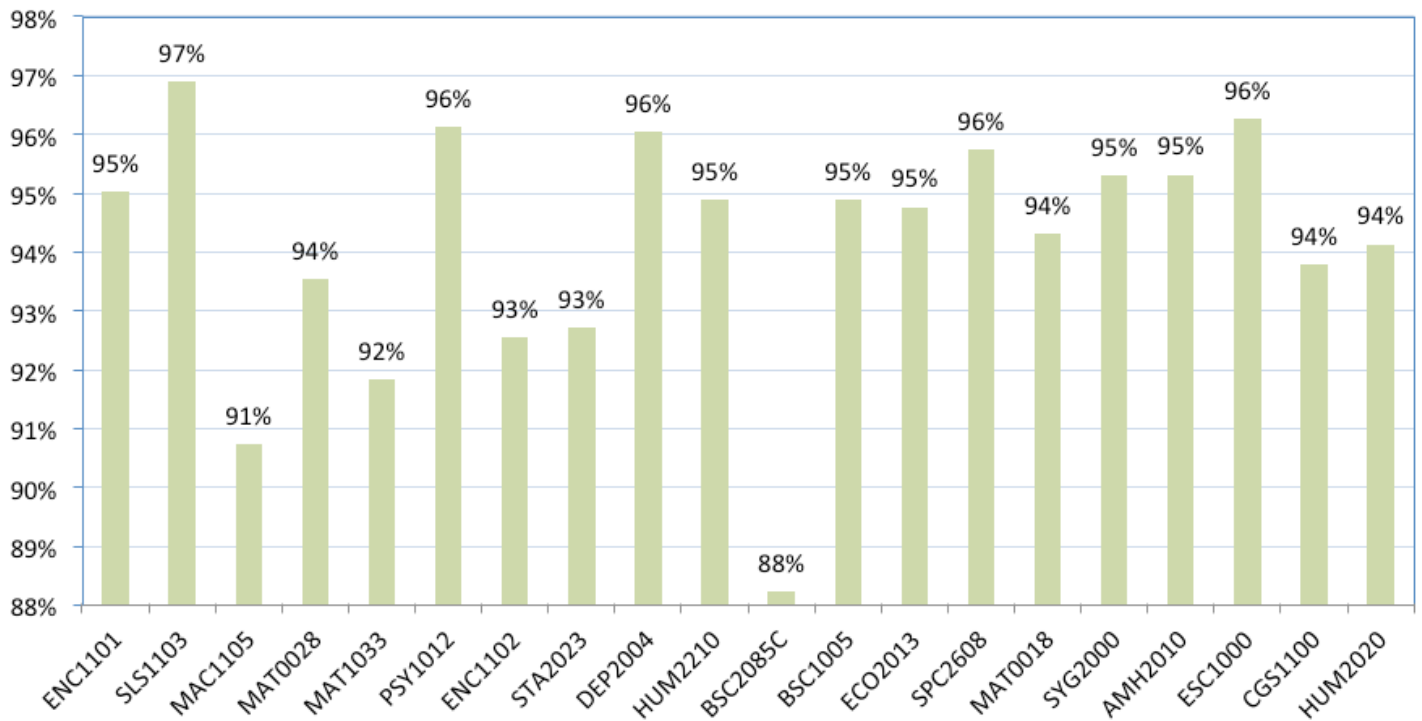


Figure 3. Average retention by course for top 20 highest enrollment courses.<sup>10</sup>

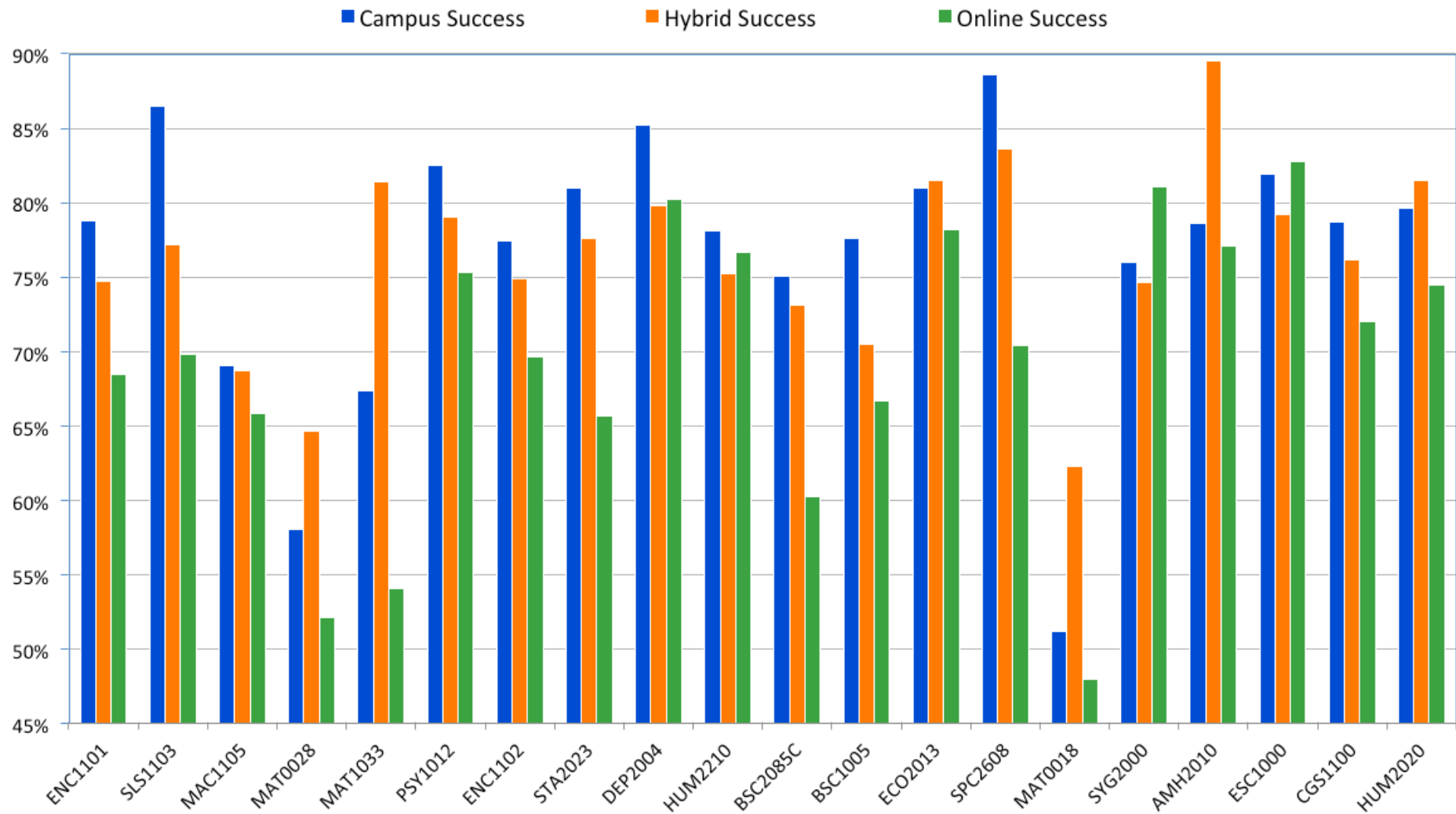


Figure 4. Average success by course and delivery method for top 20 highest enrollment courses.

# Academic Term and Delivery Method

Figure 4 shows average student success in the top 20 highest enrollment courses, term-by-term, for each delivery method.<sup>11</sup> For all delivery methods, the highest success generally occurs in the summer term, followed by the fall and spring terms. The grand average for all terms, all courses, and all delivery methods combined is 80% (red line). For campus delivery, the average success is 81% (blue line) as compared to 79% for hybrid (orange line), and 77% (green line) for online courses. Trend analyses of these data show a positive (upward) and statistically significant linear trend for campus-delivered courses (only). The linear trend for hybrid-delivered courses is negative (but not statistically significant), and for online-delivered courses the linear trend is positive (but not statistically significant).<sup>12</sup>

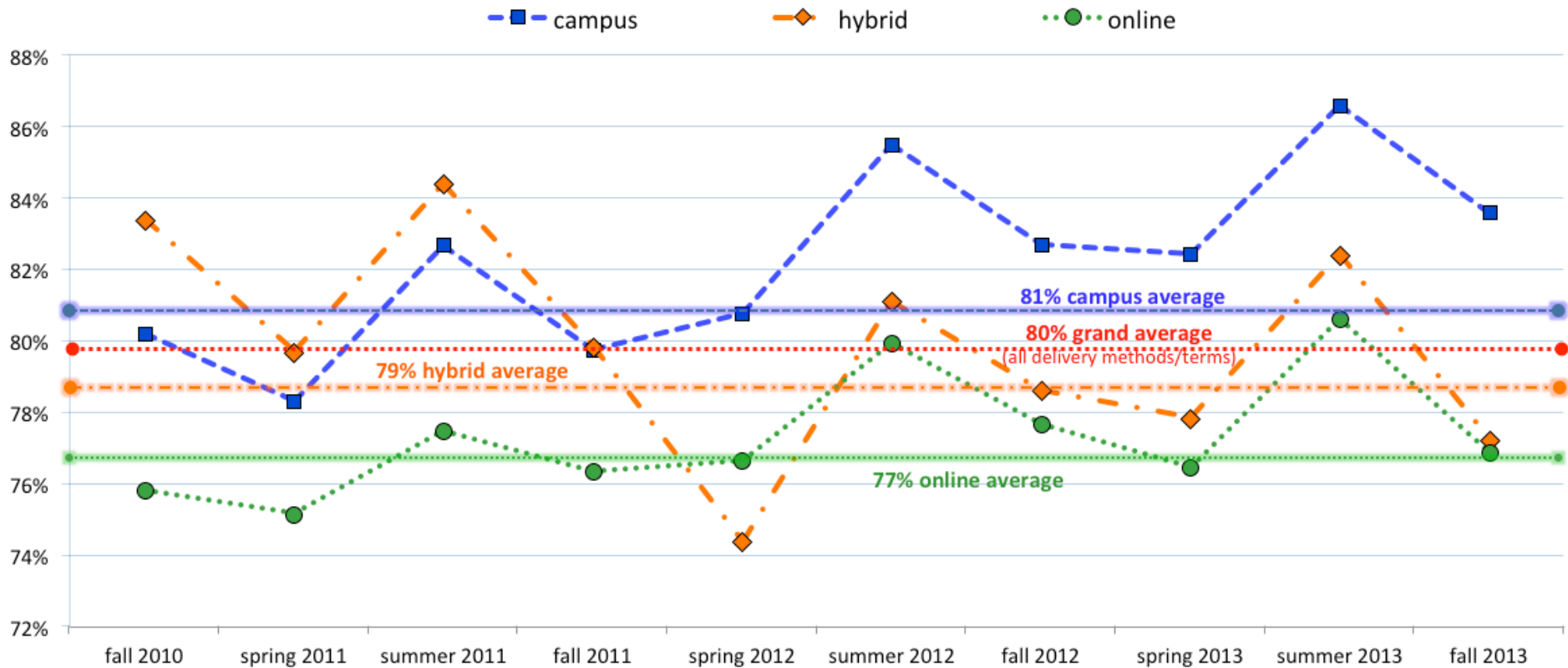


Figure 4. Term-by-term average student success broken out by course delivery method (with reference lines for each delivery method).

## End Notes

- <sup>1</sup> The calculations follow a common methodology used by the National Community College Benchmarking Project (NCCBP) and others. The specific grades used in all calculations include A, B, C, D, F, FN, and W. Source: FSCJ ORION via SSMS, data refreshed on 2/10/2014. SRMISI Import Tables include ST\_ACDMC\_HIST\_A\_154, ST\_ADDRESSES\_A\_153, ST\_CLASS\_A\_151, ST\_STDNT\_A\_125, ST\_STDNT\_A\_RACE\_125. The master data file (SAN-386 Crs Data 20111-20141\_01) contains 732,328 records for all FSCJ student enrollments, in all credit types (01, 02, 03, 05, 06, 07, 08, 09, 10, 13, 14, 15), at all campus/center locations as extracted from Orion academic history for academic terms fall 2010 (20111) through fall 2013 (20141). Note--264 records with no course delivery method specified were excluded from the analysis leaving n=732,064 records in final (working) data set. Success is calculated as  $\Sigma ABC / \Sigma ABCDFFNW$  using the NCCBP definition for Enrollee Success. Retention is calculated as  $\Sigma ABCDFFN / \Sigma ABCDFFNW$  using the NCCBP definition for Retention Rate. Because a student can take the same course more than once, both success and retention calculations may include some duplication.
- <sup>2</sup> Credit type codes correspond with specific instructional areas used by the FLDOE/Florida College System for reporting purposes.
- <sup>3</sup> Arranged alphabetically, these include ACG1943, ACG2021, through, ZOO3713C.
- <sup>4</sup> Note—A, B, C, D, F, FN letter grades are not used for all credit types (e.g., 07, 09, 10).
- <sup>5</sup> The complement of the retention rate is the withdrawal rate. Therefore, a course with a 95% retention rate would have a withdrawal rate of 5%. Conceptually, this means, for example, that of 100 student grades, five were "W" grades and the rest were any of A, B, C, D, F, FN. Note, a student who receives a grade of either F or FN (failure for non-attendance) is considered to have, nonetheless, completed the course.
- <sup>6</sup> All courses are classified as credit type 01 with the exception of MAT0018, MAT0028 (credit type 03), and CGS1100 (credit type 02).
- <sup>7</sup> The cumulative top 20 course grade count (n = 286,735) represents 39% of all grades in all credit types, and 40% of all grades in the top-5 highest enrollment credit types.
- <sup>8</sup> These definitions are consistent with the FLDOE, Florida College System, Personnel Database descriptions as described in the 2013 volume, section 6.2 - Data Element Dictionary; Version 17.0, page 90; 6/1/2013.
- <sup>9</sup> fall 2010 through fall 2013 combined for credit types 01, 02, 03, 05, 14
- <sup>10</sup> n = 286,735 student grades
- <sup>11</sup> Top 20 highest enrollment courses (n =286,735)
- <sup>12</sup> Trend line/regression analysis (with statistical significance defined as  $p < \alpha = .05$ ) was performed for each delivery method. For linear regression/trend analysis, statistical significance ( $p < \alpha$ ) indicates that the overall trend is not likely due to sample variation alone but reflects a true change (increase or decrease) over time. Results are as follows: campus ( $p = .0194$ ;  $r^2 = .515$ ); hybrid ( $p = .2549$ ;  $r^2 = .158$ ); online ( $p = .172$ ;  $r^2 = .278$ ).

## Further Information

The comprehensive 2012-2013 Edition of the College Fact Book (FACTOR) is currently available on FSCJ's website at <http://www.fscj.edu/discover-fscj/about-us/>. The 2013-2014 Edition of FACTOR to be published fall of 2014, will provide additional summaries and comparisons. For additional information, please contact [Student Analytics and Research](#).

### Prepared by the Office of Institutional Effectiveness and Accreditation

**Dr. Lynne Crosby** - Associate Vice President, Institutional Effectiveness and Accreditation

**Dr. Gregory V. Michalski** - Director, Student Analytics and Research

**Karen Stearns** - Senior Research Analyst

**Steve Kruszewski** - Assistant Research Analyst