



Equity Reports Supporting ARC's Equity Action Institute Supporting Data & Analyses

This document serves as a general introduction to the various reports ARC's Office of Institutional Research produces in support of instructional departments' student equity and disproportionate impact efforts, as well as to participants of ARC's Equity Action Institute. Four different reports are included in this set, each of which examines student equity topic from a somewhat different perspective. Data from multiple fall and spring semesters are merged to produce these reports.

While using this approach means the results of very recent changes to curriculum or pedagogy must be assessed a different way, it provides far more reliable and comparable performance metrics by normalizing to a large extent the variation in class performance that can exist from one semester to the next. That is, it improves the statistical reliability of the rates shown, which means that what they convey to the reader (e.g., that broad course grading variability exists, or that a very low percentage of African American students earn an 'A') are more likely to be stable and accurate reflections of what has occurred over time.

The following describes the four reports in this set.

Equity: Instructor Grade Metrics Comparison (for an individual instructor's courses)

Originally created in support of ARC's Equity Action Institute, this report compares an instructor's grade metrics (success, mastery and drop rates) for each of the courses they've taught over the last three years (excluding summers) to those of all faculty (including themselves) teaching the same courses.

Equity: Grade Distribution, by Race/Ethnicity (by course, or by course & instructor)

Produced for each requesting faculty member's highest enrolled course and, as a point of comparison, the all-faculty-average version for the same course. The intent is to reveal possible disproportionate impacts that may exist within established grade oriented metrics. An example is where the 3 year average percent of African American students earning an A is a fraction of that of all other groups.

Equity: Grading Variability (by course, or by course & instructor)

Produced for each requesting faculty member's highest enrolled course, this report compares the 3 year average success, mastery and drop rates of all faculty that have taught a given course. The requesting instructor can see which data points are theirs but all others are masked. This report reflects a very different but just as important equity perspective as it demonstrates the dramatic impact on student progression and completion that large differences in faculty grading philosophies for a specific course have on students.

Equity: Disproportionate Impact (by Course)

Originally developed in support of ARC's Program Review and Annual Unit Planning processes, this report has been included in this set of reports to provide context for the others and to show the results of applying the State's disproportionate impact methodologies to their department's data.



Report Detail, Interpretation Guide & FAQ

Equity: Instructor Grade Metrics Comparison (formerly known as the EAI Report)

This report is available only at the instructor level of detail. While each faculty member will have access to only their own report, there may be value in sharing their report with other faculty, particularly those teaching the same courses, in order to facilitate conversations about equity and compare gap-closing strategies. While the following image provides some assistance in the interpretation of this report, the research team would be happy to walk you, or your department, through its logic and potential uses.

The in this report compares an instructor's grade metrics (success, mastery and drop rates) for each of the courses they've taught over the last three years (excluding summers) to those of all faculty (including themselves) teaching the same courses over the same time period. Success (% A, B, C, Cr, P), Mastery (% A, B), and Drop (% W) rates are shown for each of ARC's primary race/ethnicity and gender groups. The right most columns reflect the difference between African American and Hispanic/Latino rates, and those of either Asian or white students, whichever is that metric's high performing group (HPG).

EAI report for [REDACTED]
American River College - Office of Institutional Research
Fall 2015 - Spring 2018, Run Date: 2019-05-07

ARC Equity Action Institute - Requested Faculty Data

The following information has been assembled in support of ARC's Equity Action Institute and in response to your request for course level data. The intent behind sharing this information is threefold.

First, it is to inform you as to whether any gender or ethnic groups appear to be disproportionately impacted in the courses you've taught, which may be contributing to the historically unchanged institutional performance gaps experienced primarily by African American and Hispanic/Latino student groups.

Second, is to provide information that can be used to help departments, and perhaps individual faculty members, justify requests for new resources and professional development aimed at closing departmental and therefore institutional performance gaps.

And third, it is to provide you an abassadorial opportunity to share with your colleagues the methodology used to derive these values averages all of the to "average out" the unusually high and low performing classes you've had (to in results).

The requesting faculty member's 3 year average Mastery (% A, B grades), Success (% A, B, C, Cr, P grades), and Drop (% W) Rates, here masked, are shown for each of the courses they taught over the prior three years and are compared to the rates of all faculty (including themselves) teaching all class sections of the courses over the same time period.

Total ENGRD 116 enrollment over this reporting period was 171 for the requesting instructor and 4531 for all class sections of this course over the same time period.

The two columns at far right show the difference between the two largest historically disproportionately impacted populations at ARC compared to the high performing group (HPG), here defined as the rate for Asian or white students, whichever is higher. In this example we see that there is a Mastery Rate gap of 28 percentage points overall, but a 38 point gap for the instructor in ENGRD 15.

Three performance metrics are shown to provide student equity alone.

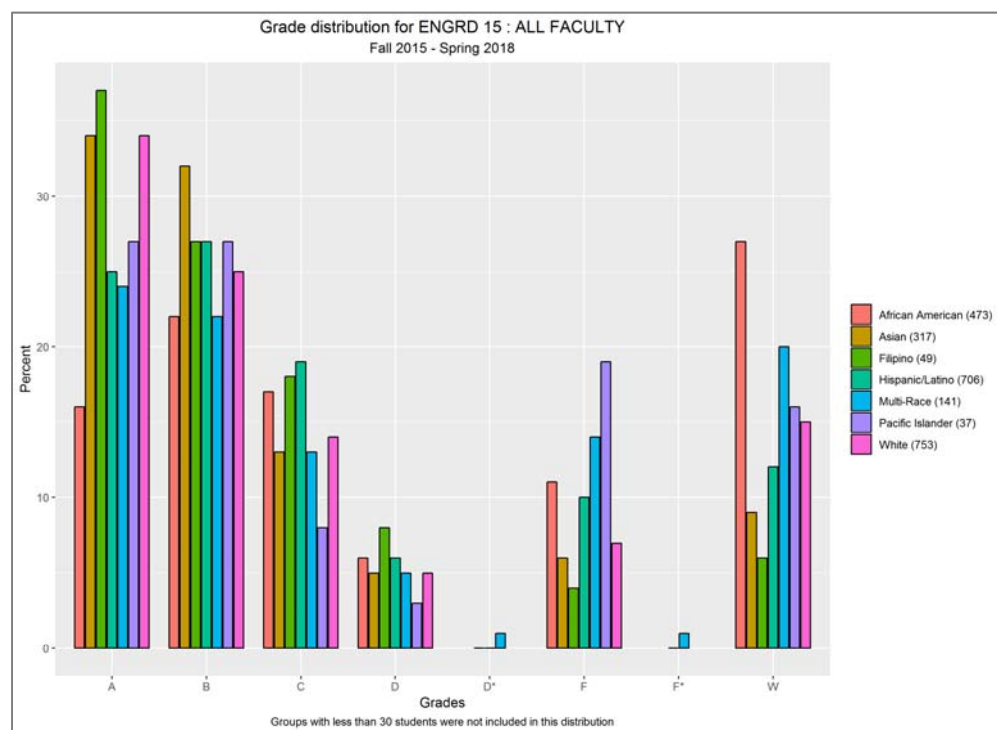
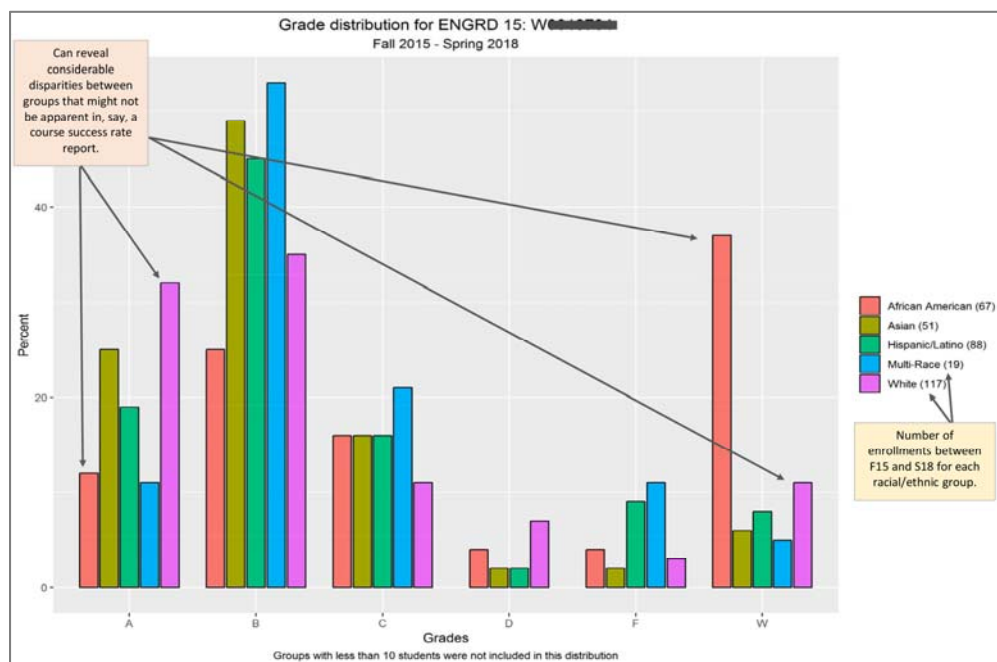
Here, the percent of African American students that were awarded an A or B grade (Mastery rate) are provided for the requesting instructor and for all faculty that taught ENGRD 116.

Course	Measure	Instructor	Enrollment	F	M	U	Afr. Am.	Asian	Filipino	Hisp./ Lat.	Multi-Race	Nat. Am.	Oth. NWht.	Pac. Isl.	White	Unk.	Difference: AfrAm & HiPerfGro	Difference: Hisp/Lat & HiPerfGro
ENGRD 116	Mastery	[REDACTED]	171	4%	62%	---	67%	71%	---	58%	---	---	---	---	72%	---	-5	-14
	All Faculty		4531	56%	47%	49%	41%	57%	69%	48%	46%	39%	41%	60%	50%	52%	-18	-11
	Success	[REDACTED]	171	82%	75%	---	72%	86%	---	69%	---	---	---	---	84%	---	-14	-17
	All Faculty		4531	72%	69%	70%	60%	77%	85%	68%	67%	61%	76%	75%	75%	67%	-17	-9
ENGRD 15	Drop	[REDACTED]	171	11%	11%	---	11%	---	---	13%	---	---	---	---	11%	---	N/A	N/A
	All Faculty		4531	16%	16%	17%	21%	10%	11%	16%	17%	22%	---	18%	14%	26%	7	2
	Mastery	[REDACTED]	358	66%	60%	---	37%	75%	---	---	---	---	---	---	68%	---	-38	-10
ENGRD 15	All Faculty		3574	61%	46%	56%	41%	69%	---	---	---	---	---	---	56%	60%	-28	-16
	Success	[REDACTED]	358	75%	79%	---	54%	90%	---	---	---	---	---	---	79%	---	-36	-9
	All Faculty		3574	74%	64%	78%	57%	81%	---	---	---	---	---	---	65%	74%	-24	-10
ENGRD 15	Drop	[REDACTED]	358	18%	10%	---	37%	6%	---	8%	5%	---	---	---	11%	---	26	-3
	All Faculty		3574	16%	16%	17%	21%	10%	11%	16%	17%	22%	---	18%	14%	26%	7	2

An additional page shows the 'N' (denominator) used to derive these rates. This is important information because rates based on small numbers of students are very likely to vary, in some cases considerably, from one year's report to another's (see previous notations regarding statistical reliability).

Equity: Grade Distribution, by Race/Ethnicity

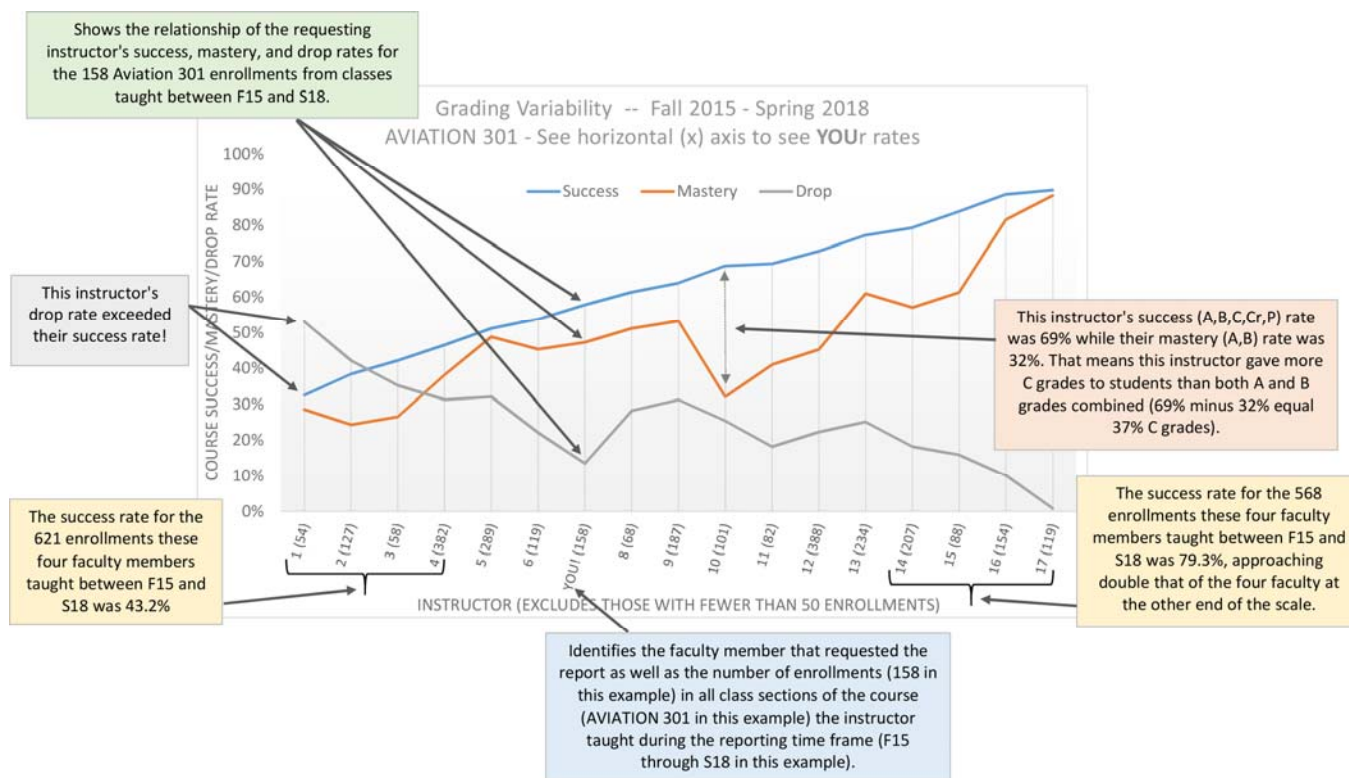
This report compares the 3 year average grade distributions (excludes summers) of ARC's primary racial/ethnic groups. While this report set includes this report for only the requesting instructor's highest enrolled course (over the last three years), faculty may request it for their other courses, as well. To provide a point of comparison for the instructor specific report, the 'All Faculty' version of the report for the same course has also been included.



Equity: Grading Variability

In addition to the more traditional methods, grading variability can also be used to reveal equity gaps, as different grading philosophies and practices in a given course can impact students' ability to move through the course sequence and achieve their academic goals in a timely manner. Three years of data are merged (excluding summers) in this analysis to increase the statistical reliability of the rates shown. This is because the success rate of a faculty member having taught 12 class sections over three years provides rates that are more stable and comparable. However, it may include some faculty that may no longer be teaching the course.

The equity question driving the development of this report is whether it's equitable to students that their likelihood of passing a given course is dependent on grading philosophies and practices that can differ so dramatically between faculty teaching what is, at least from a curriculum perspective, the same course. Broad variability can reinforce the poor grades of marginalized, at-risk students, as they are more likely to register late and therefore less likely to be able to register for the easier graded classes (that typically fill early in the registration cycle). This analysis demonstrates just how much the individual grading philosophies and practices of faculty teaching the very same curriculum can impact students' success and completion. Note in the following chart that instructor #s 1-4 and instructor #s 14-17 each taught about 600 students (F15 through S18, excluding summers) with success rates of 43% and 79%, respectively. Mathematically, this means that 225 students that weren't awarded an A, B, C, Cr, or P grade in instructor #s 1-4s' classes would have successfully completed the course if they'd taken it from instructor #s 14-17.



Graph Interpretation: Each of the paired-values appearing along the horizontal (x) axis represents an individual full-time or adjunct faculty member that taught ENGWR 300 between F15 and S18. The first of each pair of values is an arbitrarily assigned integer used to sort success rates, from low to high. The second value, in parentheses, reflects the total enrollment of all class sections an individual instructor taught during the reporting period (F15 through S18 in this example). Each vertical line from the x-axis labels identifies that faculty member's 3 year average success, mastery and drop rates. Showing all three metrics on the same graph allows the reader to consider their relationship to one another. For instance, we see that instructor #10 awarded 'C' grades to 37% of their F15-to-S18 students, whereas instructor #s 5 and 17 awarded almost none.



Equity: Disproportionate Impact

This Excel workbook includes multiple tabs in order to show the results of applying the State Chancellor's Office Disproportionate Impact (DI) methodologies to three different grade metrics (success, mastery, and drop rate) for 1) race/ethnicity, 2) gender, and 3) gender within race/ethnicity. The state's DI methodologies applied here (Proportionality Index, 80% Index, Percentage Point Method, and Percentage Point Gap Method with Margin of Error) each assess DI from a different perspective and are considered complementary. DI is therefore shown in these reports for any course and student group that's flagged by any of the four methodologies. Using a traffic light metaphor, 1) red indicates clear DI, 2) yellow suggests possible DI but for which there is too little data to be sure, and 3) green indicates no DI. Please note that the DI assessment methodologies are complex and sometimes return counterintuitive results. That is, you may find DI for male African American students, but not for African American students overall (irrespective of gender).

Race/Ethnicity:

Course	Race	Enrollments	Success (A,B,C,Cr,P)	Group Success Rate	Average Course Success Rate	DI
ACCT 101	African American	115	46	40.0%	56.2%	Yes
ACCT 101	Asian	126	83	65.9%	56.2%	No
ACCT 101	Filipino	31	19	61.3%	56.2%	No
ACCT 101	Hispanic/Latino	238	119	50.0%	56.2%	Yes
ACCT 101	Multi-Race	58	29	50.0%	56.2%	Yes
ACCT 101	Native American	10	4	40.0%	56.2%	Yes
ACCT 101	Other Non-White	13	6	46.2%	56.2%	Yes
ACCT 101	Pacific Islander	16	10	62.5%	56.2%	No
ACCT 101	Unknown	16	12	75.0%	56.2%	No
ACCT 101	White	515	312	60.6%	56.2%	No
ACCT 103	African American	38	27	71.1%	78.8%	Yes
ACCT 103	Asian	130	113	86.9%	78.8%	No
ACCT 103	Filipino	19	13	68.4%	78.8%	Yes
ACCT 103	Hispanic/Latino	69	52	75.4%	78.8%	No
ACCT 103	Multi-Race	15	11	73.3%	78.8%	Yes
ACCT 103	Native American	1	---	---	78.8%	---
ACCT 103	Other Non-White	5	---	---	78.8%	---
ACCT 103	Pacific Islander	9	---	---	78.8%	---
ACCT 103	Unknown	9	---	---	78.8%	---
ACCT 103	White	177	135	76.3%	78.8%	No
ACCT 104	African American	32	22	68.8%	83.3%	Yes
ACCT 104	Asian	130	108	83.1%	83.3%	No
ACCT 104	Filipino	14	14	100.0%	83.3%	No

Gender within Race/Ethnicity:

Course	Race/Gender	Enrollments	Success (A,B,C,Cr,P)	Group Success Rate	Average course Success Rate	DI
ACCT 101	African American F	77	33	42.9%	56.2%	Yes
ACCT 101	African American M	36	13	36.1%	56.2%	Yes
ACCT 101	African American U	2	---	---	56.2%	---
ACCT 101	Asian F	81	56	69.1%	56.2%	No
ACCT 101	Asian M	40	23	57.5%	56.2%	No
ACCT 101	Asian U	5	---	---	56.2%	---
ACCT 101	Filipino F	22	13	59.1%	56.2%	No
ACCT 101	Filipino M	9	---	---	56.2%	---
ACCT 101	Hispanic/Latino F	152	78	51.3%	56.2%	Yes
ACCT 101	Hispanic/Latino M	82	39	47.6%	56.2%	Yes
ACCT 101	Hispanic/Latino U	4	---	---	56.2%	---
ACCT 101	Multi-Race F	45	26	57.8%	56.2%	No
ACCT 101	Multi-Race M	13	3	23.1%	56.2%	Yes
ACCT 101	Native American F	7	---	---	56.2%	---
ACCT 101	Native American M	2	---	---	56.2%	---



Frequently Asked Questions

Q: Why are the race/ethnicity groups shown in these reports not disaggregated further into the subgroups we know are collected in CCCApply?

A: Further disaggregation of LRCCD's primary race/ethnic groups was not performed in the interest of improving the statistical reliability of LRCCD's primary groups, while at the same time minimizing the number of semesters merged so that at least some change might be seen in year-to-year reports. Many of the Asian subgroups are so small that we would not have had sufficient data to produce meaningful success, mastery and drop rates without adding many more semesters of data into the analysis. Merging more years of data would have eventually provided sufficient counts, but at the expense of seeing little, if any, change in year-to-year versions of the report (e.g., the F10-thru-S18 report would look essentially identical to the F11-to-S19 report).

Q: On the **Equity: Grading Variability** report, why is there no identifier for Full-Time versus Adjunct faculty?

A: The focus of this report is on the number of students impacted, rather than which faculty are responsible. Recall that the values appearing in parentheses along the bottom of the chart represent the enrollment each faculty member taught over this time period. While the magnitude of these enrollment values can, at least to some degree, help the reader distinguish between full-time and adjunct faculty, it is the number of students being impacted at each end of the scale that this report seeks to call out. A dynamic version of this report may at some point be developed to allow users to select Full-Time versus Adjunct options, as well as Day versus Eve, and F2F versus online options.

Q: How may I request **Equity: Grade Distribution, by Race/Ethnicity** and **Equity: Grading Variability** reports for my other courses?

A: Simply request them using the [ARC Research Request form](#). Please specify on the form the 1) name of the report(s) you wish to request, 2) the course you want it for, and 3) your EMPLID.

Q: On the **Equity: Disproportionate Impact** report, how is it possible that there's DI for a group with a success (or mastery, or drop) rate of 65%, when there's no DI for a different group's success rate of 60% (a lower rate)?

A: The CCCCO DI assessment methodologies we've operationalized at ARC are complex and sometimes return counterintuitive results. The example provided here may be the result of a small sample size that, accordingly, has a large margin of error. If you'd like, the research team would be happy to talk you through the interpretation of this report.

Q: Why do the reports include other metrics besides course success rates? Why complicate them by adding mastery and drop rates?

A: As may be seen in the **Equity: Grade Distribution, by Race/Ethnicity** and **Equity: Disproportionate Impact** reports included in this packet, the course success rate metric can very easily hide achievement gaps and significant disproportionate impacts. Since "student success" is measured many ways (not just the percent of A, B, C, Cr, or P grades), there is value in assessing whether DI exists for other success metrics, as well. While the research team is now assessing DI for mastery and drop rates, the intent is to also apply DI methodologies to degree/certificate rates, transfer-ready rates, etc.