Disproportionate Impact Reports
Interpretation Guide

This document serves as a general introduction to the two different Disproportionate Impact reports ARC's Office of Institutional Research produces in support of instructional departments' planning processes, including those related to Program Review and Annual Unit Planning. Disproportionate impact exists when the outcomes of a given group differ beyond a mathematically derived threshold from the outcomes of other groups. *Just because one group has a lower success rate than another does not mean that disproportionate impact exists.*

The methodologies used to assess DI in ARC's DI reports align with the four methodologies in use by the California Community College Chancellor's Office. Each (Proportionality Index, 80% Index, Percentage Point Method, and Percentage Point Gap Method with Margin of Error) assesses DI from a different perspective and are considered complementary. Please note that the DI assessment methodologies are complex and sometimes return results that seem counterintuitive. For instance, it's possible for DI to exist for a group with a success rate of 65%, when DI isn't shown to exist for a different group with a success rate of 60% (a lower rate). *A lower rate doesn't necessarily mean that DI exists.* Or, you may find DI for male African American students, but not for African American students overall (i.e., irrespective of gender).

The following two DI reports exist in ARC's Integrated Planning Portal (IPP).

1) The DI web reports appearing as a part of the Standard Data Set found in both Program Review and Annual Unit Planning processes. This report provides a given planning unit's DI results, disaggregated by course and student race/ethnicity for each of three grade metrics (Success Rate, A-B Rate, and Drop Rate).

2) The Department DI Detail Spreadsheets (available from a link embedded in the web reports described above, as well as under the Resources tab of the IPP) is a downloadable 9-tab spreadsheet. It provides DI results for a given planning unit at the course level of detail, disaggregated by race only, by gender only, and by gender within race. These statistics are provided for each of the three different grade metrics.

Please consider the following when using either report:

- A color gradient has been added to ARC's DI report to aid in interpreting the results. **Red** indicates where measurable DI exists (i.e., the group's outcome, such as success rate, falls below the computed DI threshold). **Light red** indicates where potential DI may exist. That is, where a group's outcome exceeds the DI threshold by less than three percentage points. Rates for courses with anything less than a fairly large number of students are likely to bounce around from one reporting period to another due to a lack of statistical reliability – meaning that DI may exist even though the current rate is temporarily a bit above the DI threshold. **Yellow** indicates where DI may possibly exist but where too little data is available to be certain. **Green** indicates where no DI exists.

- To increase the statistical reliability of the results (particularly important when breaking results out by race, and especially gender within race), the analysis is performed on three years (less summers) of grade data. The more students in any given group, particularly relevant to groups with relatively few students, the more likely the results will be stable and accurate reflections of what has occurred over time. That is, more data reduces the likelihood that the rates are reflecting some fluke occurrence (e.g., a particularly good or poor performing class), and the more likely they are to provide a stable and accurate reflection of racial/ethnic groups' performance.

- DI methodologies are applied to three grade metrics in these reports because the Success Rate can very easily hide achievement gaps and significant disproportionate impacts. That is, 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 also assessing DI for A-B and Drop rates, the intent is to eventually apply DI methodologies to retention rates, degree/certificate rates, transfer-ready rates, etc.