

# Disaggregation of Course SLOs: IEPI\* Pilot Study



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**IEPI TEAM**

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# IEPI Pilot Study



- **GOAL:** To determine the feasibility and potential uses of disaggregation of SLOs on a student by student basis.
- SLOs were disaggregated by course modality, student educational plan, student ethnicity, and student age.
- SLO success was also compared to course success.

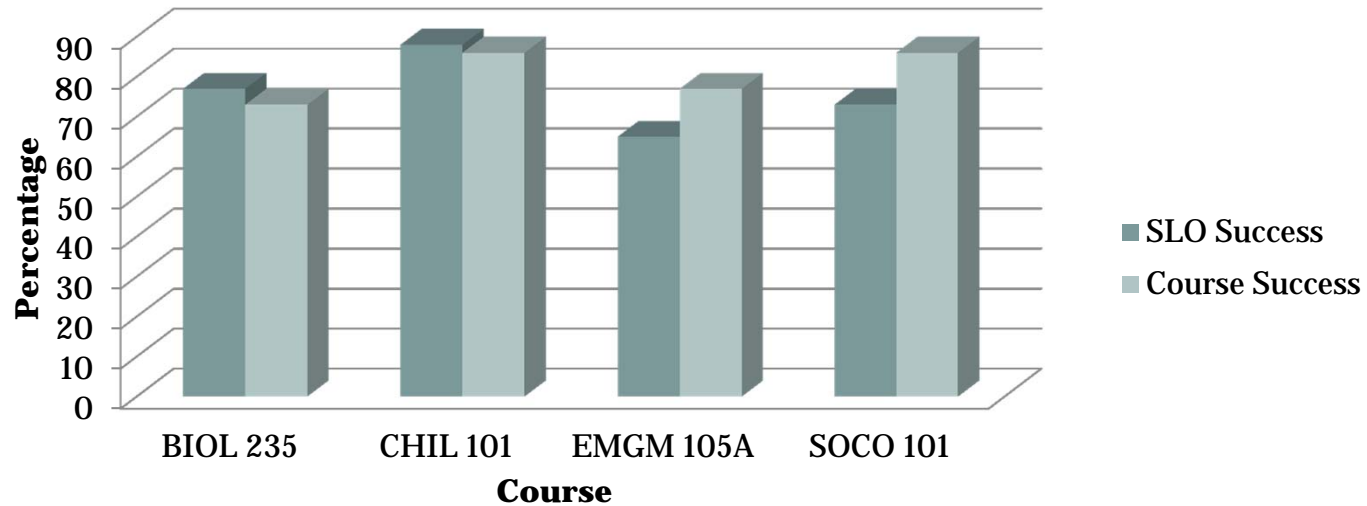
# Overview and Definitions

- The Pilot Study was performed using a sample course from each instructional school; SLO assessment data per student was collected for each section of the course in Spring 2017
- Definitions:
  - Course Success Count: Number of students who completed the course with a grade of A, B, C, or P.
  - SLO Success Count : Number of students who achieved a minimum standard for the SLO assessment

| Course                                 | Enrollment | # Sections |
|--|------------|------------|
| BIOL 235: Physiology                   | 131        | 5          |
| CHIL 101: Human Growth and Development | 90         | 4          |
| EMGM 105A: EMT- National Registry      | 192        | 9          |
| SOCO 101: Principles of Sociology      | 197        | 7          |

# I. Overall Course and SLO Success Rates

**Course and SLO Success Rates**



| Course (n of students) | SLO Success Count | SLO Success Rate | Course Success Count | Course Success Rate |
|------------------------|-------------------|------------------|----------------------|---------------------|
| <b>BIOL 235 (131)</b>  | 101               | 77%              | 96                   | 73%                 |
| <b>CHIL 101 (90)</b>   | 79                | 88%              | 77                   | 86%                 |
| <b>EMGM 105A (192)</b> | 125               | 65%              | 147                  | 77%                 |
| <b>SOCO 101 (197)</b>  | 144               | 73%              | 170                  | 86%                 |

## Observations: SLO and Course Success Rates



- **Discrepancy between SLO success and Course success in some courses and between some sections.**
- **Because ACCJC Standard II.A.9 states “institution awards course credit... based on student attainment of learning outcomes,” SLO success rates should match or exceed course success rates.**
- **Analysis could be used for improvement of assessment and alignment of outcomes with course success.**

## II. Disaggregation by Educational Plan Status

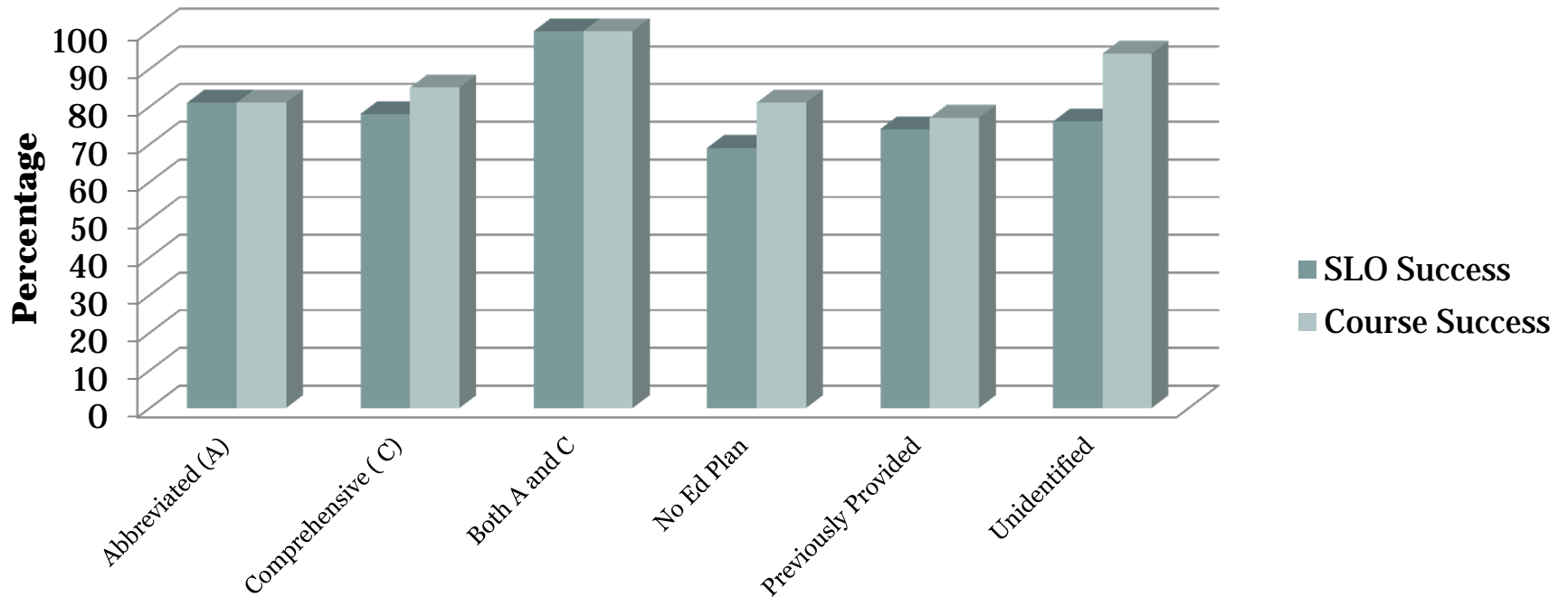
Title 5, section 55524 defines two types of Student Educational Plans (SEP):

- **Abbreviated SEP-** which are one to two terms in length and designed to meet immediate scheduling needs or for students for whom a comprehensive plan is not appropriate. For example, abbreviated plans may be completed prior to course enrollment for students who are completing a short-term certificate program or new students who have not declared an educational goal or course of study.

## II. Disaggregation by Educational Plan Status

- **Comprehensive SEP**- which must cover all of the terms needed for students to achieve their course of study. The comprehensive plan addresses the educational goal and course of study requirements, “such as the requirements for the major, transfer, certificate, program applicable course prerequisites or co-requisites, the need for basic skills, assessment for placement results, and the need for referral to other support and instructional services as appropriate. The comprehensive SEP is tailored to meet the individual needs and interests of the student and may include other elements to satisfy participation requirements for programs such as EOPS, DSPS, CalWORKs, veterans’ education benefits, athletics and others.”

# Course and SLO Success Rates by Educational Plan



| Ed Plan (n of students)          | SLO Success Count | SLO Success Rate | Course Success Count | Course Success Rate |
|----------------------------------|-------------------|------------------|----------------------|---------------------|
| <b>Abbreviated (16)</b>          | 13                | 81%              | 13                   | 81%                 |
| <b>Comprehensive (82)</b>        | 64                | 78%              | 70                   | 85%                 |
| <b>A and C (8)</b>               | 8                 | 100%             | 8                    | 100%                |
| <b>No Ed Plan (202)</b>          | 139               | 69%              | 163                  | 81%                 |
| <b>Previously Provided (285)</b> | 212               | 74%              | 220                  | 77%                 |
| <b>Unidentified (17)</b>         | 13                | 76%              | 16                   | 94%                 |



# Observations: Ed Plan Status



- Those with both Abbreviated and Comprehensive Ed. Plans had the highest SLO and Course success rates. However, the (n) for this group is 8 out of 610 total students (less than 2% of cohort).
- Those with no Ed. Plan had the lowest SLO success rate and 2<sup>nd</sup> lowest Course success rate.

| Ed. Plan (n of students)         | SLO Success Count | SLO Success Rate | Course Success Count | Course Success Rate |
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# Observations: Ed Plan Status



- 80% Rule methodology compares the percentage of each disaggregated subgroup attaining an outcome to the percentage attained by a reference group.

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**Green**= Identified as highest performing group for 80% rule

**Red**= less than 80 % of success rate of highest performing group

# Observations: Ed Plan Status



- 80% Rule methodology compares the percentage of each disaggregated subgroup attaining an outcome to the percentage attained by a reference group
- Remove “A and C” subgroup and reapply 80% rule → very different picture of disproportionate impact.

| Ed. Plan (n of students)         | SLO Success Count | SLO Success Rate | Course Success Count | Course Success Rate |
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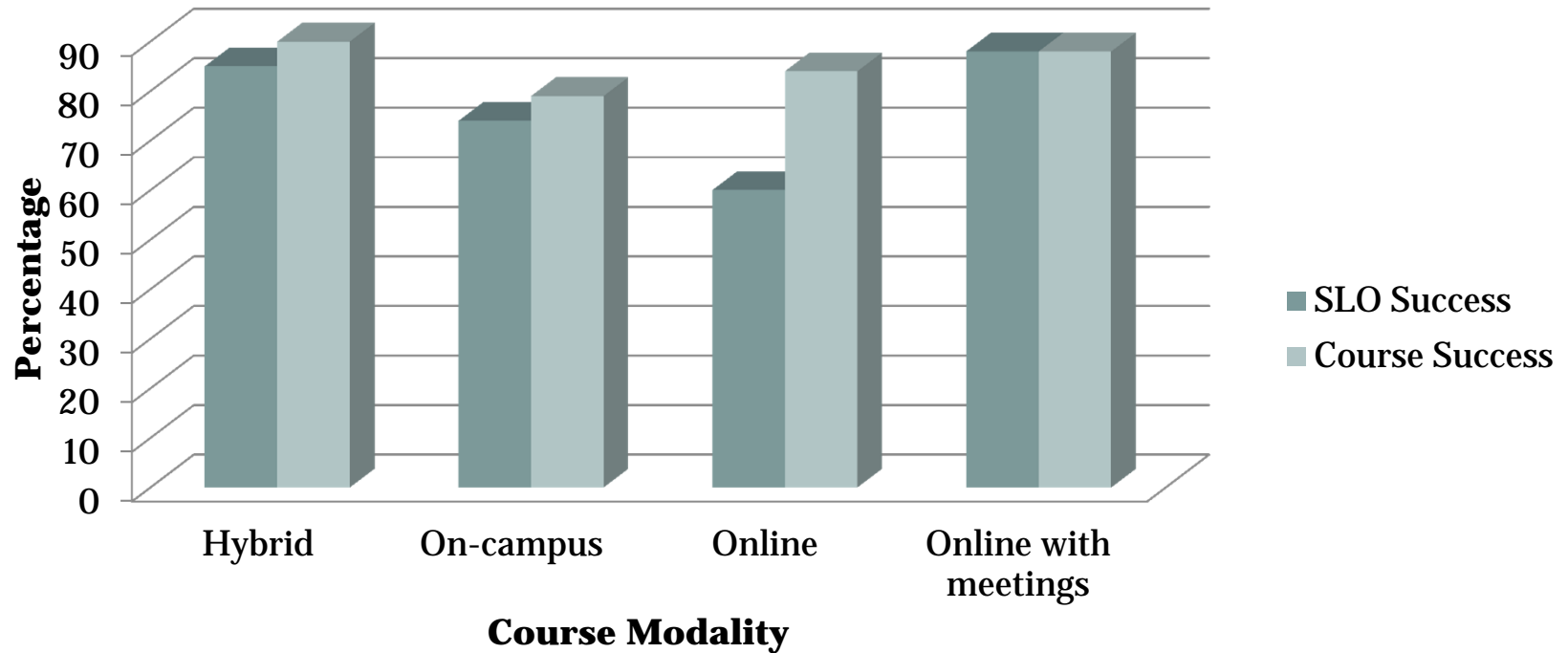
- **NOTE:** The Research and Planning Analyst informed the team that this data is actually not valid. Data was collected from the District and is incorrect. The Office of PRIE reported that they are unable to collect reliable data at this time.
- With emphasis on Guided Pathways and Educational Plans- this could be very important information and should be accessible through Counseling.

## III. Disaggregation by Course Modality

- Distance Education is major focus of strategic enrollment management strategies.
- Student success in these courses is imperative for developing successful online enrollment.
- Course Modalities include:
  - On Campus- 100% of classes offered on campus
  - Hybrid- 51% of classes offered on campus
  - Online- 51% of classes offered online
  - Online with Meetings- one or two meetings on campus and the rest offered online



# Course and SLO Success Rates by Modality



| Course Modality (n of students)  | SLO Success Count | SLO Success Rate | Course Success Count | Course Success Rate |
|----------------------------------|-------------------|------------------|----------------------|---------------------|
| <b>Hybrid (20)</b>               | 17                | 85%              | 18                   | 90%                 |
| <b>On-campus (501)</b>           | 371               | 74%              | 396                  | 79%                 |
| <b>Online (63)</b>               | 38                | 60%              | 53                   | 84%                 |
| <b>Online with Meetings (26)</b> | 23                | 88%              | 23                   | 88%                 |

# Observations: Course modality



- Students who take courses online show the largest discrepancy between SLO and Course success rates.
- Based on percentages, it appears that students generally do better online (in some modality)
- Not a valid comparison- need to see direct comparison of online vs. on-campus for same course.

| Course Modality (n)       | SLO Success Count | SLO Success Rate | Course Success Count | Course Success Rate |
|---------------------------|-------------------|------------------|----------------------|---------------------|
| Hybrid (20)               | 17                | 85%              | 18                   | 90%                 |
| On-campus (501)           | 371               | 74%              | 396                  | 79%                 |
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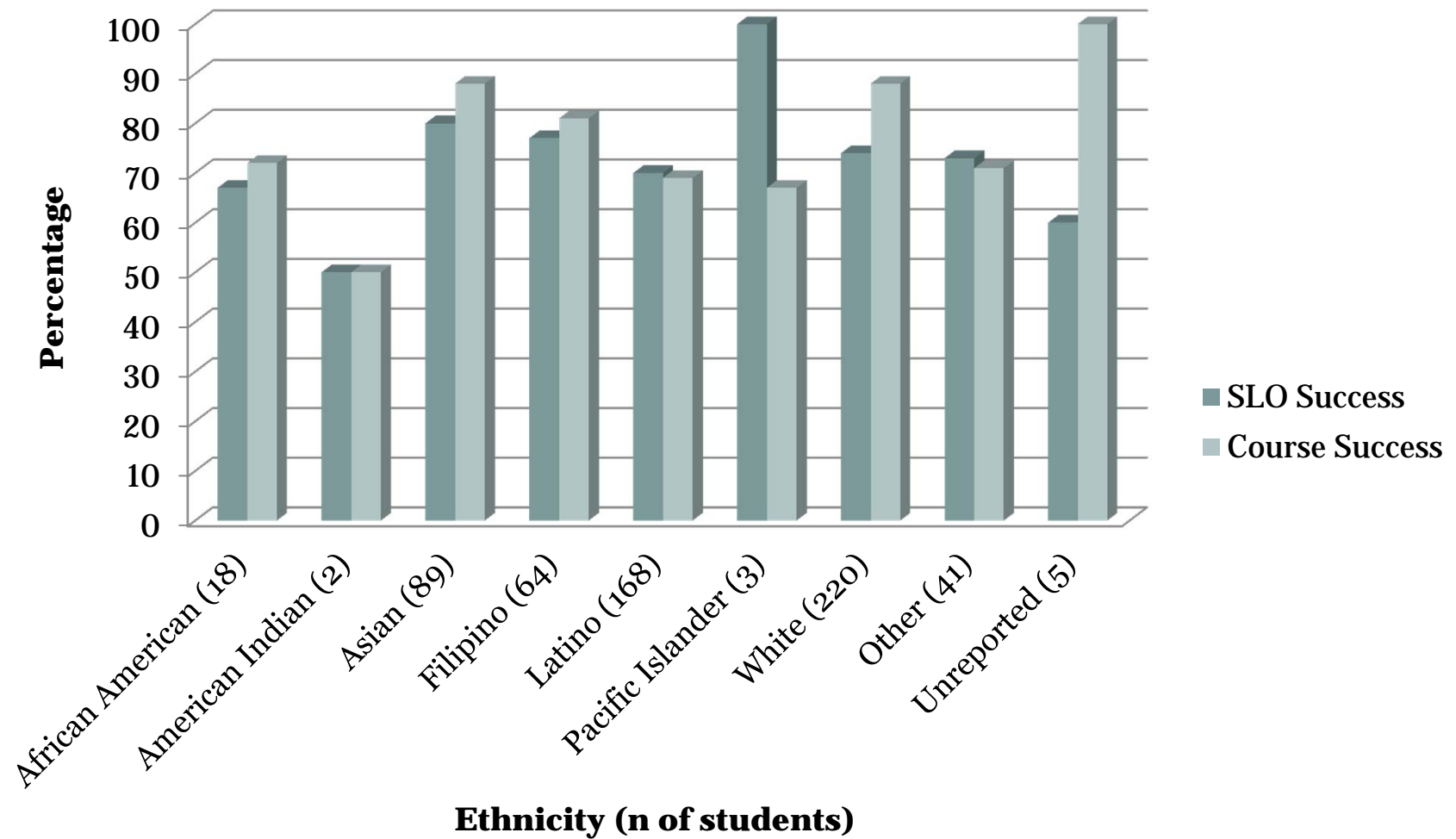


### III. Disaggregation by Ethnicity

- **Ethnicity is a common subgroup used to determine disproportionate impact:**

Disproportionate impact occurs when “the percentage of persons from a particular racial, ethnic, gender, age or disability group who are directed to a particular service or placement based on an assessment instrument, method, or procedure is significantly different from the representation of that group in the population of persons being assessed, and that discrepancy is not justified by empirical evidence demonstrating that the assessment instrument, method or procedure is a valid and reliable predictor of performance in the relevant educational setting. [Title 5 Section 55502(d)]

# Course and SLO Success Rates by Ethnicity



# Observations: Ethnicity



- Discrepancies between SLO and Course success rates.
- “Top performers” were subgroups that represent less than 2% of cohort.

| <b>Ethnicity (n)</b>         | <b>SLO Success Count</b> | <b>SLO Success Rate</b> | <b>Course Success Count</b> | <b>Course Success Rate</b> |
|------------------------------|--------------------------|-------------------------|-----------------------------|----------------------------|
| <b>African American (18)</b> | 12                       | <b>67%</b>              | 13                          | <b>72%</b>                 |
| <b>American Indian (2)</b>   | 1                        | <b>50%</b>              | 1                           | <b>50%</b>                 |
| <b>Asian (89)</b>            | 71                       | 80%                     | 78                          | 88%                        |
| <b>Filipino (64)</b>         | 49                       | <b>77%</b>              | 52                          | 81%                        |
| <b>Latino (168)</b>          | 118                      | <b>70%</b>              | 116                         | <b>69%</b>                 |
| <b>Pacific Islander (3)</b>  | 3                        | <b>100%</b>             | 2                           | <b>67%</b>                 |
| <b>White (220)</b>           | 162                      | <b>74%</b>              | 194                         | 88%                        |
| <b>Other (41)</b>            | 30                       | <b>73%</b>              | 29                          | <b>71%</b>                 |
| <b>Unreported (5)</b>        | 3                        | <b>60%</b>              | 5                           | <b>100%</b>                |

# Observations: Ethnicity



- Discrepancies between SLO and Course success rates.
- Adjust subgroups and reapply 80% rule → very different picture of disproportionate impact.

| Ethnicity (n)                | SLO Success Count | SLO Success Rate | Course Success Count | Course Success Rate |
|------------------------------|-------------------|------------------|----------------------|---------------------|
| <b>African American (18)</b> | 12                | 67%              | 13                   | 72%                 |
| <b>American Indian (2)</b>   | NA                | NA               | NA                   | NA                  |
| <b>Asian (89)</b>            | 71                | <b>80%</b>       | 78                   | <b>88%</b>          |
| <b>Filipino (64)</b>         | 49                | 77%              | 52                   | 81%                 |
| <b>Latino (168)</b>          | 118               | 70%              | 116                  | <b>69%</b>          |
| <b>Pacific Islander (3)</b>  | NA                | NA               | NA                   | NA                  |
| <b>White (220)</b>           | 162               | 74%              | 194                  | <b>88%</b>          |
| <b>Other (41)</b>            | 30                | 73%              | 29                   | 71%                 |
| <b>Unreported (5)</b>        | NA                | NA               | NA                   | NA                  |

# Addition of Proportionality Methodology for SLO Success



- Proportionality methodology compares the percentage of a disaggregated subgroup in an initial cohort to its own percentage in the resultant outcome group

| Ethnicity (n)                | SLO Success Count | SLO Success Rate | Proportionality index |
|------------------------------|-------------------|------------------|-----------------------|
| <b>African American (18)</b> | 12                | 67%              | 0.900                 |
| <b>American Indian (2)</b>   | NA                | NA               | NA                    |
| <b>Asian (89)</b>            | 71                | <b>80%</b>       | <b>1.082</b>          |
| <b>Filipino (64)</b>         | 49                | 77%              | 1.100                 |
| <b>Latino (168)</b>          | 118               | 70%              | .939                  |
| <b>Pacific Islander (3)</b>  | NA                | NA               | NA                    |
| <b>White (220)</b>           | 162               | 74%              | 1.000                 |
| <b>Other (41)</b>            | 30                | 73%              | 1.000                 |
| <b>Unreported (5)</b>        | NA                | NA               | NA                    |

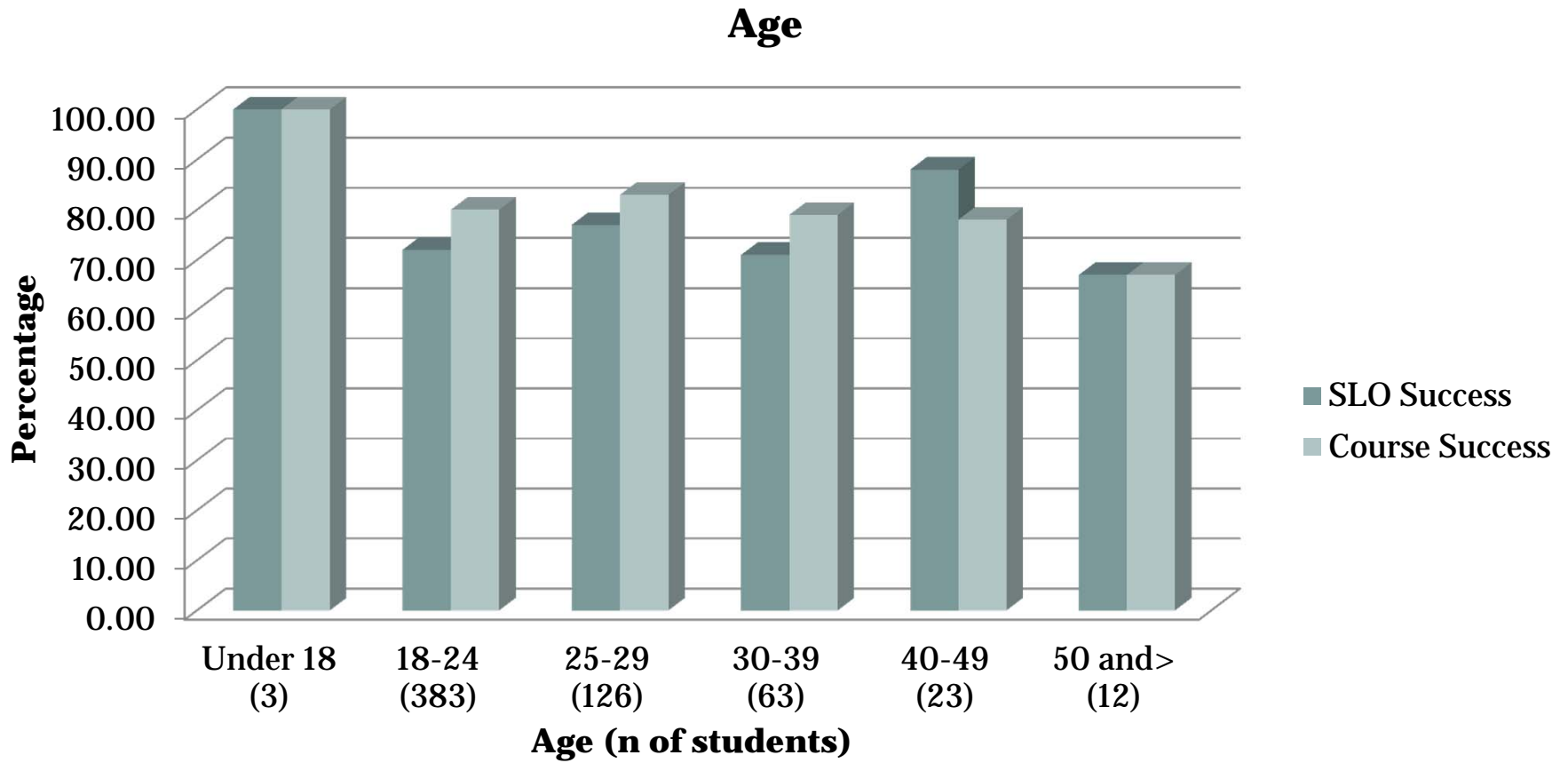
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|------------------------------|----------------------|---------------------|-----------------------|
| <b>African American (18)</b> | 13                   | 72%                 | 0.900                 |
| <b>American Indian (2)</b>   | NA                   | NA                  | NA                    |
| <b>Asian (89)</b>            | 78                   | <b>88%</b>          | <b>1.096</b>          |
| <b>Filipino (64)</b>         | 52                   | 81%                 | 1.060                 |
| <b>Latino (168)</b>          | 116                  | <b>69%</b>          | <b>.857</b>           |
| <b>Pacific Islander (3)</b>  | NA                   | NA                  | NA                    |
| <b>White (220)</b>           | 194                  | 88%                 | 1.083                 |
| <b>Other (41)</b>            | 29                   | 71%                 | 0.881                 |
| <b>Unreported (5)</b>        | NA                   | NA                  | NA                    |

# IV. Disaggregation by Age





# Observations: Age



- Discrepancies between SLO and Course success rates for some groups.
- “Under 18” subgroup was top performer but only contained 3 students (less than 2% of cohort).

| Age (n)                | SLO Success Count | SLO Success Rate | Course Success Count | Course Success Rate |
|------------------------|-------------------|------------------|----------------------|---------------------|
| <b>Under 18 (3)</b>    | 3                 | <b>100%</b>      | 3                    | <b>100%</b>         |
| <b>18-24 (383)</b>     | 277               | <b>72%</b>       | 307                  | <b>80%</b>          |
| <b>25-29 (126)</b>     | 97                | <b>77%</b>       | 104                  | <b>83%</b>          |
| <b>30-39 (63)</b>      | 45                | <b>71%</b>       | 50                   | <b>79%</b>          |
| <b>40-49 (23)</b>      | 19                | <b>88%</b>       | 18                   | <b>78%</b>          |
| <b>50 and &gt;(12)</b> | 8                 | <b>67%</b>       | 8                    | <b>67%</b>          |



# Observations: Age



- Discrepancies between SLO and Course success rates for some groups.
- “Under 18” subgroup was top performer but only contained 3 students (less than 2% of cohort).
- Remove “Under 18” subgroup and reapply 80% rule.

| Age (n)                    | SLO Success Count | SLO Success Rate | Course Success Count | Course Success Rate |
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| <b><i>Under 18 (3)</i></b> | NA                | NA               | NA                   | NA                  |
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| <b>50 and &gt;(12)</b>     | 8                 | <b>67%</b>       | 8                    | 67%                 |

# Summary of Observations



- SLO success and Course success did not always align.
- General trends of SLO success mirrored trends for course success in disaggregated subpopulations.
- Disaggregation by course modality should only be done by comparing sections of courses that offer multiple modalities.
- 80% rule should be applied after the removal of subgroups that make up less than 2% of population

# Recommendations



- **Do not recommend continued disaggregation of SLOs on a student by student basis.**
  - Evidence does not show that there is any additional benefit over the disaggregation of course success on a student by student basis.
  - Process results in significantly higher workload for faculty and staff.
  - Potential changes in the ACCJC Standard language regarding disaggregation of SLOs might change requirements.
- **Recommend that the Office of PRIELT determine how to collect and begin collecting reliable Educational Plan data to be used for disaggregation of course success.**

# Recommendations



- Recommend that SLO success and course success be disaggregated by course modality to better inform our strategic enrollment management plans in the increased offering of online courses.
- Recommend that the faculty be provided with SLO success and course success data for comparison to improve outcomes and assessment and align outcomes with successful course completion.
  - **Success Story:** The EMT faculty used the results of this SLO disaggregation pilot study to make significant changes in their instruction, to better emphasize key outcomes in order to ensure students were competent when leaving the course.